## **Academic Bulletin** 2016 - 2020

**SEVENTEENTH EDITION** 



### **UNIVERSITY OF EASTERN AFRICA, BARATON**

A Chartered Seventh-day Adventist Institution of Higher Learning

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The University of Eastern Africa, Baraton, is a Seventh-day Adventist institution of higher learning. It is located at Baraton, Nandi County, approximately 50 kilometers from Eldoret or 35 kilometers from Eldoret International Airport.

Though it is a private university, UEAB is open to any student regardless of religion, gender, or race provided he/she is willing to abide by the policies of the university.

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### **Academic Calendar**

### 2016/2017 ACADEMIC YEAR

### FIRST SEMESTER 2016/2017

FIRST SEMESTER 2016/2017		
<ul> <li>New students arrive</li> </ul>	-	Sept 4, 2016
<ul> <li>Orientation and payment of fees</li> </ul>	-	Sept 4-5, 2016
<ul> <li>Registration</li> </ul>	-	Sept 5-6, 2016
Classes begin	-	Sept 7, 2016
<ul> <li>Late registration fee in effect</li> </ul>		Sept 7, 2016
<ul> <li>Last day to Add and Drop a course</li> </ul>		
without entry on permanent		
academic record		Sept 16, 2016
	_	-
Last day to enter class	-	Sept 16, 2016
Last day to change from		0 10 0010
audit to credit	-	
Heritage Week	-	
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Oct 7, 2016
<ul> <li>Last day to change from credit to audit</li> </ul>	-	Oct 7, 2016
<ul> <li>End-of-Semester Senate</li> </ul>	-	Oct 26, 2016
<ul> <li>Semester Examinations</li> </ul>	-	Dec 7-13, 2016
<ul> <li>National Holiday (Jamhuri Day)</li> </ul>	_	Dec 12, 2016
, . , , , , , , , , , , , , , , , , , ,		,
SECOND SEMESTER 2016/2017		
Registration	_	Jan 3-4, 2017
Classes begin	_	
<ul> <li>Late registration fee in effect</li> </ul>	_	Jan 11, 2017
<ul> <li>Last day to Add and Drop a course without</li> </ul>		Jun n, 2017
entry on permanent academic record	_	Jan 20, 2017
<ul> <li>Last day to enter class</li> </ul>	_	
<ul> <li>Last day to change from audit to credit</li> </ul>	_	
Week of Spiritual Emphasis	_	
Last day to drop a course with a "W"	-	
Last day to change from credit to audit		Feb 10, 2017
End-of-Semester Senate	-	
Semester Examinations	-	
<ul> <li>Public Holiday (Good Friday)</li> </ul>	-	
<ul> <li>Public Holiday (Easter Monday)</li> </ul>	-	
<ul> <li>National Holiday</li> </ul>	-	May 1, 2017
<ul> <li>Semester Examinations for</li> </ul>		
Nursing Students	-	May 15-19, 2017
INTER-SEMESTER 2016/2017		
<ul> <li>Pre-Registration</li> </ul>	-	Apr 24-28, 2017
<ul> <li>Registration</li> </ul>	-	Apr 30-May 1, 2017
<ul> <li>First Session classes begin</li> </ul>	-	May 2, 2017
<ul> <li>Last day to enter class</li> </ul>	-	May 2, 2017
• Last day to Add and Drop a course without		
entry on permanent academic record	-	May 2, 2017
• Last day to change from audit to credit	_	
<ul> <li>Last day to drop a course with "W"</li> </ul>	_	May 10, 2017
Last day to change a course from		,, <b></b>
credit to audit	_	May 10, 2017
<ul> <li>First Session Examinations</li> </ul>	_	May 25-26, 2017
<ul> <li>Outreach Sabbath</li> </ul>		May 27, 2017
	-	
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	May 28-Jun 3, 2017

- Registration for Second Session
- Second Session classes begin
- National Holiday (Madaraka Day)
- Last day to drop a course with "W"
- Last day to change a course from credit to audit
- Second Session Examinations
- Graduation

### 2017/2018 ACADEMIC YEAR

### FIRST SEMESTER 2017/2018

<ul> <li>New students arrive</li> </ul>	-	Aug 20, 2017
<ul> <li>Orientation and payment of fees</li> </ul>	-	Aug 21-22, 2017
Classes begin	-	Aug 23, 2017
<ul> <li>Late registration fee in effect</li> </ul>	-	Aug 23, 2017
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Sept 1, 2017
<ul> <li>Last day to enter class</li> </ul>	-	Sept 1, 2017
• Last day to change from Audit to Credit	-	Sept 1, 2017
Heritage Week	-	Sept 18-23, 2017
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Sept 22, 2017
• Last day to change from Credit to Audit	-	Sept 22, 2017
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Oct 1-7, 2017
<ul> <li>Mashujaa Day</li> </ul>	-	Oct 20, 2017
<ul> <li>End-of-Semester Senate</li> </ul>	-	Oct 25, 2017
<ul> <li>Semester Examinations</li> </ul>	-	Dec 3-13, 2017
<ul> <li>National Holiday (Jamhuri Day)</li> </ul>	-	Dec 12, 2017

### SECOND SEMESTER 2017/2018

<ul> <li>Registration</li> </ul>	-	Jan 8-9, 2018
<ul> <li>Classes begin</li> </ul>	-	Jan 10, 2018
<ul> <li>Late registration fee in effect</li> </ul>	-	Jan 10, 2018
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Jan 19, 2018
<ul> <li>Last day to enter class</li> </ul>	-	Jan 19, 2018
• Last day to change from Audit to Credit	-	Jan 19, 2018
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Feb 4-10. 2018
<ul> <li>Last day to drop a class with a "W"</li> </ul>	-	Feb 9, 2018
• Last day to change from Credit to Audit	-	Feb 9, 2018
Camp Meeting	-	Mar 21-24, 2018
Good Friday	-	Mar 30, 2018
<ul> <li>Easter Monday</li> </ul>	-	Apr 2, 2018
<ul> <li>End-of-Semester Senate</li> </ul>	-	Apr 18, 2018
<ul> <li>Semester Examinations</li> </ul>	-	Apr 15-25, 2018
<ul> <li>Labor Day</li> </ul>	-	May 1, 2018
INTED_SEMESTED 2017/2019		

### INTER-SEMESTER 2017/2018

•	Registration for First Session	-	May 14, 2018
•	First Session classes begin	-	May 14, 2018
•	Late Registration fee in effect	-	May 15, 2018
•	Last day to enter class	-	May 15, 2018
•	Last day to Add and Drop a course without		
	entry on permanent academic record	-	May 15, 2018

. . . .

- May 29, 2017
- May 29, 2017
- June 1, 2017
- June 6, 2017
- June 6, 2017
- June 22-23, 2017
- July 6-9, 2017

|--|--|--|--|--|--|

• Last day to change a First Session class		
from audit to credit	-	May 15, 2018
<ul> <li>Last day to drop a First Session</li> </ul>		
course with "W"	-	May 23, 2018
• Last day to change from credit to audit	-	May 23, 2018
<ul> <li>National Holiday (Madaraka Day)</li> </ul>	-	June 1, 2018
<ul> <li>First Session examinations</li> </ul>	-	June 7-8, 2018
<ul> <li>Registration for Second Session</li> </ul>	-	June 11, 2018
<ul> <li>Second Session classes begin</li> </ul>	-	June 11, 2018
<ul> <li>Late Registration fee in effect</li> </ul>	-	June 12, 2018
<ul> <li>Last day to enter class</li> </ul>	-	June 12, 2018
• Last day to Add and Drop a course without		
entry on permanent academic record	-	June 12, 2018
• Last day to change from audit to credit	-	June 12, 2018
<ul> <li>Last day to drop a Second Session</li> </ul>		
course with "W"	-	June 19, 2018
<ul> <li>Last day to change a Second Session</li> </ul>		
course from credit to audit	-	June 19, 2018
<ul> <li>Second Session Examinations</li> </ul>		
Session classes	-	July 5-6, 2018
Graduation	-	July 12-15, 2018

### 2018/2019 ACADEMIC YEAR

### FIRST SEMESTER 2018/2019

<ul> <li>Registration for new students</li> </ul>	-	Aug 19-21, 2018
<ul> <li>New Student Orientation</li> </ul>	-	Aug 22-24, 2018
<ul> <li>Registration for continuing students</li> </ul>	-	Aug 27-28, 2018
Classes begin	-	Aug 29, 2018
<ul> <li>Late registration fee in effect</li> </ul>	-	Aug 29, 2018
• Last day to Add and Drop a course without		•
entry on permanent academic record	-	Sept 7, 2018
Last day to enter class	-	Sept 7, 2018
• Last day to change from Audit to Credit	-	
Heritage Week	_	0 47 00 0040
<ul> <li>Last day to drop a course with a "W"</li> </ul>	_	
• Last day to change from Credit to Audit	_	
Week of Spiritual Emphasis	-	Oct 7-13, 2018
<ul> <li>End-of-Semester Senate</li> </ul>	-	Oct 31, 2018
<ul> <li>Semester Examinations</li> </ul>	-	Nov 25-Dec 5, 2018
SECOND SEMESTER 2018/2019		
<ul> <li>Registration</li> </ul>	-	Jan 7-8, 2019
<ul><li> Registration</li><li> Classes begin</li></ul>	-	Jan 7-8, 2019 Jan 9, 2019
	- - -	
Classes begin	-	Jan 9, 2019
<ul><li>Classes begin</li><li>Late registration fee in effect</li></ul>	-	Jan 9, 2019 Jan 9, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without</li> </ul>	-	Jan 9, 2019 Jan 9, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> </ul>	-	Jan 9, 2019 Jan 9, 2019 Jan 18, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> </ul>	-	Jan 9, 2019 Jan 9, 2019 Jan 18, 2019 Jan 18, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> <li>Last day to change from Audit to Credit</li> </ul>	-	Jan 9, 2019 Jan 9, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Feb 3-9, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> <li>Last day to change from Audit to Credit</li> <li>Week of Spiritual Emphasis</li> </ul>	-	Jan 9, 2019 Jan 9, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Feb 3-9, 2019 Feb 8, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> <li>Last day to change from Audit to Credit</li> <li>Week of Spiritual Emphasis</li> <li>Last day to drop a course with a "W"</li> </ul>		Jan 9, 2019 Jan 9, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Feb 3-9, 2019 Feb 8, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> <li>Last day to change from Audit to Credit</li> <li>Week of Spiritual Emphasis</li> <li>Last day to drop a course with a "W"</li> <li>Last day to change from Credit to Audit</li> </ul>		Jan 9, 2019 Jan 9, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Feb 3-9, 2019 Feb 8, 2019 Feb 8, 2019 Mar 20-23, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> <li>Last day to change from Audit to Credit</li> <li>Week of Spiritual Emphasis</li> <li>Last day to drop a course with a "W"</li> <li>Last day to change from Credit to Audit</li> <li>Camp Meeting</li> </ul>		Jan 9, 2019 Jan 9, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Feb 3-9, 2019 Feb 8, 2019 Feb 8, 2019 Mar 20-23, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> <li>Last day to change from Audit to Credit</li> <li>Week of Spiritual Emphasis</li> <li>Last day to drop a course with a "W"</li> <li>Last day to change from Credit to Audit</li> <li>Camp Meeting</li> <li>End-of-Semester Senate</li> </ul>		Jan 9, 2019 Jan 9, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Feb 3-9, 2019 Feb 8, 2019 Feb 8, 2019 Mar 20-23, 2019 Mar 27, 2019
<ul> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> <li>Last day to change from Audit to Credit</li> <li>Week of Spiritual Emphasis</li> <li>Last day to drop a course with a "W"</li> <li>Last day to change from Credit to Audit</li> <li>Camp Meeting</li> <li>End-of-Semester Senate</li> <li>Semester Examinations</li> </ul>		Jan 9, 2019 Jan 9, 2019 Jan 18, 2019 Jan 18, 2019 Jan 18, 2019 Feb 3-9, 2019 Feb 8, 2019 Feb 8, 2019 Mar 20-23, 2019 Mar 27, 2019 Apr 14-25, 2019

### **INTER- SEMESTER 2018/2019**

INTER- SLIVILSTER 2010/2019		
<ul> <li>Registration for First Session</li> </ul>	-	May 13, 2019
<ul> <li>First Session Classes begin</li> </ul>	-	May 13, 2019
Late registration fee in effect	-	May 14, 2019
<ul> <li>Last day to enter class</li> </ul>	-	May 14, 2019
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	May 14. 2019
<ul> <li>Last day to change a course from</li> </ul>		
audit to credit	-	May 14, 2019
• Last day to drop a course with "W"	-	May 22, 2019
• Last day to change a course from		-
credit to audit	-	May 22, 2019
<ul> <li>National Holiday (Madaraka Day)</li> </ul>	-	June 1, 2019
First Session Examinations	-	June 5 & 7, 2019
<ul> <li>Probable day for Eid al Fitr</li> </ul>	-	June 6, 2019
Registration for Second Session	-	June 10, 2019
<ul> <li>Second Session classes begin</li> </ul>	-	June 10, 2019
• Late Registration Fee in effect	-	June 11, 2019
<ul> <li>Last day to enter class</li> </ul>	-	June 11, 2019
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	June 11, 2019
• Last day to change from audit to credit	-	June 11, 2019
• Last day to drop a course with "W"	-	June 19, 2019
<ul> <li>Last day to change a course from</li> </ul>		
credit to audit	-	June 19, 2019
<ul> <li>Second Session Examinations</li> </ul>	-	July 4-5, 2019
Graduation	-	Aug 15-18, 2019

### 2019/2020 ACADEMIC YEAR

### FIRST SEMESTER 2019/2020

<ul> <li>Registration for New Students</li> </ul>	-	Aug 21-23, 2019
<ul> <li>New Student Orientation</li> </ul>	-	Aug 26-27, 2019
<ul> <li>Registration for continuing students</li> </ul>	-	Aug 26-27, 2019
Classes begin	-	Aug 28, 2019
Late registration fee in effect	-	Aug 28, 2019
• Last day to Add and Drop a course withou	t	
entry on permanent academic record	-	Sept 6, 2019
Last day to enter class	-	Sept 6, 2019
• Last day to change from audit to credit	-	Sept 6, 2019
<ul> <li>Heritage Week</li> </ul>	-	Sept 16-21, 2019
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Sept 27, 2019
• Last day to change from credit to audit	-	Sept 27, 2019
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Oct 6-12, 2019
<ul> <li>End-of-Semester Senate</li> </ul>	-	Oct 30, 2019
<ul> <li>Semester Examination</li> </ul>	-	Nov 24-Dec 4, 2019
SECOND SEMESTER 2019/2020		
Registration	-	Jan 6-7, 2020
Classes begin		lon 9 2020

<ul> <li>Classes begin</li> </ul>	-	Jan 8, 2020
<ul> <li>Late registration fee in effect</li> </ul>	-	Jan 8, 2020
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Jan 17, 2020
<ul> <li>Last day to enter class</li> </ul>	-	Jan 17, 2020
• Last day to change from Audit to Credit	-	Jan 17, 2020
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Feb 2-8, 2020
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Feb 7, 2020



<ul> <li>Camp</li> <li>End-</li> <li>Publi</li> <li>Publi</li> <li>Semo</li> </ul>	day to change from Credit to Audit p Meeting of-Semester Senate ic Holiday (Good Friday) ic Holiday (Easter Monday) ester Examinations	- - -	Feb 7, 2020 Mar 18-21, 2020 Apr 8, 2020 Apr 10, 2020 Apr 13, 2020 Apr 14-24, 2020	•	ECOND SEMESTER 2020/2021 Registration Classes begin Late registration fee in effect Last day to Add and Drop a course with entry on permanent academic record Last day to enter class
	R-SEMESTER 2019/2020		May 11 2020		Last day to change from audit to cred Week of Spiritual Emphasis
•	stration for First Session	-	May 11, 2020		Last day to drop a course with a "W"
	Session classes begin registration fee in effect	-	May 11, 2020 May 12, 2020		Last day to change from credit to aud
	day to enter class	-	May 12, 2020 May 12, 2020		End-of-Semester Senate
	day to Add and Drop a course without		May 12, 2020		Public Holiday (Good Friday)
	on permanent academic record	· _	May 12, 2020		Public Holiday (Easter Monday)
	day to change from audit to credit	-	May 12, 2020		Semester Examinations
	day to drop a course with "W"	-	May 20, 2020		
<ul> <li>Last</li> </ul>	day to change from credit to audit	-	May 20, 2020	I	NTER-SEMESTER 2020/2021
	able day for Eid al-Fitr	-	May 25, 2020	•	Registration for First Session
	onal Holiday (Madaraka Day)	-	June 1, 2020	•	First Session classes begin
	Session examinations	-	June 4-5, 2020		Late registration fee in effect
•	stration for Second Session		June 8, 2020		Last day to enter class
	nd Session classes begin		June 8, 2020	•	Last day to Add and Drop a course with
	Registration Fee in effect		June 9, 2020		entry on permanent academic record
	day to enter class day to Add and Drop a course without		June 9, 2020		Last day to change from audit to cred
	on permanent academic record		June 9, 2020		Probable day for Eid al-Fitr Last day to drop a course with "W"
	day to change from audit to credit		June 9, 2020		Last day to change from credit to aud
	day to drop a course with "W"		June 17, 2020		National Holiday (Madaraka Day)
	day to change from credit to audit		June 17, 2020		First Session examinations
	eral Conference Session	-	June 25-Jul 4, 2020		Registration for Second Session
<ul> <li>Seco</li> </ul>	nd Session examinations	-	Jul 2-3, 2020		Second Session classes begin
• Grad	uation	-	Aug 13-16, 2020	•	Late registration fee in effect
				•	Last day to enter class

### 2020/2021 ACADEMIC YEAR

### FIRST SEMESTER 2020/2021

<ul> <li>New Student Registration</li> <li>New Student Orientation</li> <li>Registration for continuing students</li> <li>Classes begin</li> </ul>	- -	Aug 18-20, 2020 Aug 24-25, 2020 Aug 24-25 2020 Aug 26, 2020
Late registration fee in effect		Aug 26, 2020 Aug 26, 2020
<ul> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to enter class</li> </ul>		Sept 4, 2020 Sept 4, 2020
• Last day to change from audit to credit	-	Sept 4, 2020
<ul> <li>Heritage Week</li> <li>Last day to drop a course with "W"</li> </ul>	-	Sept 14-19, 2020 Sept 25, 2020
<ul> <li>Last day to change from credit to audit</li> <li>Week of Spiritual Emphasis</li> </ul>	-	Sept 25, 2020 Oct 4-10, 2020
<ul><li>End-of-Semester Senate</li><li>Semester Examinations</li></ul>	-	Oct 29, 2020 Nov 29-Dec 9, 2020
<ul> <li>National Holiday (Jamhuri Day)</li> </ul>	-	Dec 12, 2020

0	LCOND SLIVILSTEN ZUZU/ZUZT		
•	Registration	-	Jan 4-5, 2021
•	Classes begin	-	Jan 6, 2021
•	Late registration fee in effect	-	Jan 6, 2021
•	Last day to Add and Drop a course without		
	entry on permanent academic record	-	Jan 15, 2021
•	Last day to enter class	-	Jan 15, 2021
•	Last day to change from audit to credit	-	Jan 15, 2021
•	Week of Spiritual Emphasis	-	Jan 31-Feb 6, 2021
•	Last day to drop a course with a "W"	-	Feb 5, 2021
•	Last day to change from credit to audit	-	Feb 5, 2021
•	End-of-Semester Senate	-	Mar 31, 2021
•	Public Holiday (Good Friday)	-	Apr 2, 2021
•	Public Holiday (Easter Monday)	-	Apr 5, 2021
•	Semester Examinations	-	Apr 11-21, 2021
	NTER-SEMESTER 2020/2021		
•	Registration for First Session	-	May 10, 2021
•	First Session classes begin	-	May 10, 2021
•	Late registration fee in effect	-	May 11, 2021
•	Last day to enter class	-	May 11, 2021
•	Last day to Add and Drop a course without		
	entry on permanent academic record	-	May 11, 2021
•	Last day to change from audit to credit	-	May 11, 2021
•	Probable day for Eid al-Fitr	-	May 14, 2021
•	Last day to drop a course with "W"	-	May 19, 2021
•	Last day to change from credit to audit	-	May 19, 2021
•	National Holiday (Madaraka Day)	-	June 1, 2021

• Last day to Add and Drop a course without entry on permanent academic record

• Second Session Examinations

• Graduation

• Last day to change from audit to credit - June 8, 2021

- June 3-4, 2021 - June 7, 2021 - June 7, 2021 - June 8, 2021 - June 8, 2021

- June 8, 2021

- July 1-2, 2021

- Aug 12-15, 2021

### **Academic Calendar for Nursing Students**

### 2016/2017 ACADEMIC YEAR

### FIRST SEMESTER 2016/2017

<ul> <li>New students arrive</li> </ul>	-	Sept 4, 2016
<ul> <li>Orientation and payment of fees</li> </ul>	-	Sept 4-5, 2016
Registration	-	Sept 5-6, 2016
Classes begin	-	Sept 7, 2016
<ul> <li>Late registration fee in effect</li> </ul>	-	Sept 7, 2016
• Last day to Add and Drop a course without		
entry on permanent academic record	-	Sept 16, 2016
<ul> <li>Last day to enter class</li> </ul>	-	Sept 16, 2016
• Last day to change from audit to credit	-	Sept 16, 2016
Heritage Week	-	Sept 12-17, 2016
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Oct 2-8, 2016
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Oct 7, 2016
• Last day to change from credit to audit	-	Oct 7, 2016
<ul> <li>End-of-Semester Senate</li> </ul>	-	Oct 26, 2016
Compoter Examinations		Doo 7 17 2016

 Semester Examinations - Dec 7-13, 2016 • National Holiday (Jamhuri Day) - Dec 12, 2016

### SECOND SEMESTER 2016/2017

SECOND SEMESTER 2016/2017						
<ul> <li>Registration</li> </ul>	-	Jan 3-4, 2017				
<ul> <li>Classes begin</li> </ul>	-	Jan 5, 2017				
<ul> <li>Late registration fee in effect</li> </ul>	-	Jan 11, 2017				
• Last day to Add and Drop a course with	out					
entry on permanent academic record	-	Jan 20, 2017				
<ul> <li>Last day to enter class</li> </ul>	-	Jan 20, 2017				
• Last day to change from audit to credit	-	Jan 20, 2017				
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Feb 5-11, 2017				
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Feb 10, 2017				
• Last day to change from credit to audit	-	Feb 10, 2017				
<ul> <li>End-of-Semester Senate</li> </ul>	-	Mar 22, 2017				
<ul> <li>Semester Examinations</li> </ul>	-	Apr 5-12, 2017				
<ul> <li>Public Holiday (Good Friday)</li> </ul>	-	Apr 14, 2017				
<ul> <li>Public Holiday (Easter Monday)</li> </ul>	-	Apr 17, 2017				
National Holiday	-	May 1, 2017				
<ul> <li>Semester Examinations for</li> </ul>						
Nursing Students	-	May 15-19, 2017				
INTER-SEMESTER 2016/2017						
<ul> <li>Pre-Registration</li> </ul>	-	Apr 24-28, 2017				
Registration	-	Apr30-May 1, 2017				
<ul> <li>First Session classes begin</li> </ul>	-	May 2, 2016				
<ul> <li>Last day to enter class</li> </ul>	-	May 2, 2017				
• Last day to Add and Drop a course without	t	•				
entry on permanent academic record	-	May 2, 2017				
• Last day to change from audit to credit	-	May 2, 2017				
• Last day to drop a course with "W"	-	May 10, 2017				
• Last day to change from credit to audit	-	May 10, 2017				
First Session Examinations	-	May 25-26, 2017				
<ul> <li>Outreach Sabbath</li> </ul>	-	May 27, 2017				
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-					

• Second Session classes begin

- National Holiday (Madaraka Day)
- Last day to drop a course with "W" June 6, 2017
- Last day to change from credit to audit June 6, 2017
- Second Session Examinations
- Graduation

- June 1, 2017

- June 22-23, 2017 - July 6-9, 2017

### **2017/2018 ACADEMIC YEAR**

### FIRST TRIMESTER 2017/2018

<ul> <li>New students arrive</li> </ul>	-	Aug 20, 2017
<ul> <li>Orientation and payment of fees</li> </ul>	-	Aug 21-22, 2017
Registration	-	Aug 21-22, 2017
Classes begin	-	Aug 23, 2017
<ul> <li>Late registration fee in effect</li> </ul>	-	Aug 23, 2017
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Sept 1, 2017
<ul> <li>Last day to enter class</li> </ul>	-	Sept 1, 2017
• Last day to change from audit to credit		Sept 1, 2017
Heritage Week	-	Sept 18-23, 2017
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Sept 22, 2017
• Last day to change from Credit to Audit	-	Sept 22, 2017
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Oct 1-7, 2017
<ul> <li>Mashujaa Day</li> </ul>	-	Oct 20, 2017
<ul> <li>End-of-Semester Senate</li> </ul>	-	Oct 25, 2017
<ul> <li>Trimester Examinations</li> </ul>	-	Nov 19-24, 2017

### SECOND TRIMESTER 2017/2018

<ul> <li>Registration</li> </ul>	_	Jan 8-9, 2018
Classes begin	_	Jan 10, 2018
<ul> <li>Late registration fee in effect</li> </ul>	_	Jan 10, 2018
<ul> <li>Last day to Add and Drop a course without</li> </ul>	ıt	Jan 10, 2010
	JL I	lon 10, 2010
entry on permanent academic record	-	Jan 19, 2018
Last day to enter class	-	Jan 19, 2018
<ul> <li>Last day to change from audit to credit</li> </ul>	- 1	,
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Feb 4-10. 2018
<ul> <li>Last day to drop a class with a "W"</li> </ul>	-	Feb 9, 2018
• Last day to change from credit to audit	: -	Feb 9, 2018
Camp Meeting	-	Mar 21-24, 2018
Good Friday	-	Mar 30, 2018
Easter Monday	-	Apr 2, 2018
Trimester Examinations	_	Apr 8-13, 2018
End-of-Semester Senate		Apr 18, 2018
	-	
<ul> <li>National Holiday</li> </ul>	-	May 1, 2018
THIRD TRIMESTER 2017/2018		
<ul> <li>Registration</li> </ul>	-	Apr 23-24, 2018
<ul> <li>Classes begin</li> </ul>	-	Apr 25, 2018
<ul> <li>Late Registration in effect</li> </ul>	-	Apr 25, 2018
Labor Day	-	May 1, 2018
• Last day to Add and Drop a course withou	Jt	2 ·
entry on permanent academic record	-	May 4, 2018
<ul> <li>Last day to onter class</li> </ul>	_	May / 2018

- May 29, 2017

- Last day to change from audit to credit May 4, 2018
- Last day to drop a class with a "W"
- Last day to change from credit to audit May 25, 2018
- National Holiday (Madaraka Day)
- Graduation
- Trimester Examinations
  - **2018/2019 ACADEMIC YEAR**

May 25, 2018

- June 1, 2018

- July 12-15, 2018

- July 22-27, 2018

### EIDST TRIMESTER 2019/2010

<ul> <li>New students registration</li> </ul>	-	Aug 19-21, 2018
<ul> <li>New Student Orientation</li> </ul>	-	Aug 22-24, 2018
<ul> <li>Registration for continuing students</li> </ul>	-	Aug 27-28, 2018
Classes begin	-	Aug 29, 2018
<ul> <li>Late registration fee in effect</li> </ul>	-	Aug 29, 2018
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Sept 7, 2018
<ul> <li>Last day to enter class</li> </ul>	-	Sept 7, 2018
• Last day to change from audit to credit	-	Sept 7, 2018
Heritage Week	-	Sept 17-22, 2018
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Sept 28, 2018
• Last day to change from credit to audit		Sept 28, 2018
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Oct 7-13, 2018
<ul> <li>End-of-Semester Senate</li> </ul>	-	Oct 31, 2018
<ul> <li>Trimester Examinations</li> </ul>	-	Nov 18-23, 2018
<ul> <li>National Holiday (Jamhuri Day)</li> </ul>	-	Dec 12, 2018

### SECOND TRIMESTER 2018/2019

<ul> <li>Registration</li> </ul>	-	Jan 7-8, 2019
<ul> <li>Classes begin</li> </ul>	-	Jan 9, 2019
<ul> <li>Late registration fee in effect</li> </ul>	-	Jan 9, 2019
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Jan 18, 2019
<ul> <li>Last day to enter class</li> </ul>	-	Jan 18, 2019
• Last day to change from audit to credit	-	Jan 18, 2019
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Feb 3-9, 2019
• Last day to drop a course with a "W"	-	Feb 8, 2019
• Last day to change from credit to audit	-	Feb 8, 2019
Camp Meeting	-	Mar 20-23, 2019
End-of-Semester Senate	-	Mar 27, 2019
<ul> <li>Trimester Examinations</li> </ul>	-	Apr 7-12, 2019
THIRD TRIMESTER 2018/2019		
THIRD TRIMESTER 2018/2019	_	Apr 10, 2010
• Public Holiday (Good Friday)	-	Apr 19, 2019
<ul><li>Public Holiday (Good Friday)</li><li>Public Holiday (Easter Monday)</li></ul>	-	Apr 22, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> </ul>	- - -	Apr 22, 2019 Apr 23, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> <li>Classes begin</li> </ul>	-	Apr 22, 2019 Apr 23, 2019 Apr 24, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> <li>Classes begin</li> <li>Late registration fee in effect</li> </ul>	- - -	Apr 22, 2019 Apr 23, 2019 Apr 24, 2019 Apr 24, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to enter class</li> </ul>	-	Apr 22, 2019 Apr 23, 2019 Apr 24, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to enter class</li> <li>Last day to Add and Drop a course without</li> </ul>	- - -	Apr 22, 2019 Apr 23, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to enter class</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> </ul>	- - -	Apr 22, 2019 Apr 23, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to enter class</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to change from audit to credit</li> </ul>	- - -	Apr 22, 2019 Apr 23, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to enter class</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to change from audit to credit</li> <li>Labor Day</li> </ul>	- - -	Apr 22, 2019 Apr 23, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 May 1, 2019
<ul> <li>Public Holiday (Good Friday)</li> <li>Public Holiday (Easter Monday)</li> <li>Registration</li> <li>Classes begin</li> <li>Late registration fee in effect</li> <li>Last day to enter class</li> <li>Last day to Add and Drop a course without entry on permanent academic record</li> <li>Last day to change from audit to credit</li> </ul>	- - -	Apr 22, 2019 Apr 23, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019 Apr 24, 2019

- National Holiday (Madaraka Day)
- Probable day for Eid al Fitr
- Trimester Examinations
- Graduation
  - **2019/2020 ACADEMIC YEAR**

### FIRST TRIMESTER 2019/2020

<ul> <li>Registration for New Students</li> </ul>	-	Aug 21-23, 2019
<ul> <li>New Student Orientation</li> </ul>	-	Aug 26-27, 2019
Registration for continuing students	-	Aug 26-27, 2019
Classes begin	-	Aug 28, 2019
<ul> <li>Late registration fee in effect</li> </ul>	-	Aug 28, 2019
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Sept 6, 2019
<ul> <li>Last day to enter class</li> </ul>	-	Sept 6, 2019
• Last day to change from audit to credit	-	Sept 6, 2019
Heritage Week	-	Sept 16-21, 2019
<ul> <li>Last day to change from "W"</li> </ul>	-	Sept 27, 2019
• Last day to change from credit to audit	-	Sept 27, 2019
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Oct 6-12, 2019
<ul> <li>End-of-Semester Senate</li> </ul>	-	Oct 30, 2019
<ul> <li>Trimester Examinations</li> </ul>	-	Nov 17-22, 2019

#### SECOND TRIMESTER 2019/2020

Registration	-	Jan 6-7, 2020
Classes begin	-	Jan 8, 2020
<ul> <li>Late registration fee in effect</li> </ul>	-	Jan 8, 2020
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Jan 17, 2020
<ul> <li>Last day to enter class</li> </ul>	-	Jan 17, 2020
• Last day to change from audit to credit	-	Jan 17, 2020
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Feb 2-8, 2020
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Feb 7, 2020
• Last day to change from credit to audit	-	Feb 7, 2020
<ul> <li>Camp Meeting</li> </ul>	-	Mar 18-21, 2020
<ul> <li>Trimester Examinations</li> </ul>	-	Apr 5-9, 2020
<ul> <li>Public Holiday (Good Friday)</li> </ul>	-	Apr 10, 2020
<ul> <li>Public Holiday (Easter Monday)</li> </ul>	-	Apr 13, 2020
<ul> <li>End-of-Semester Senate</li> </ul>	-	Apr 15, 2020

### THIRD TRIMESTER 2019/2020

Registration	-	Apr 20-21, 2020
Classes begin	-	Apr 22, 2020
<ul> <li>Late registration fee in effect</li> </ul>	-	Apr 22, 2020
<ul> <li>Last day to enter class</li> </ul>	-	Apr 30, 2020
• Last day to Add and Drop a course without	t	
entry on permanent academic record	-	Apr 30, 2020
• Last day to change from audit to credit	-	Apr 30, 2020
<ul> <li>Last day to drop a course with "W"</li> </ul>	-	May 22, 2020
Last day to change from credit to audit	-	May 22, 2020
<ul> <li>Probable day for Eid al-Fitr</li> </ul>	-	May 25, 2020
<ul> <li>National Holiday (Madaraka Day)</li> </ul>	-	June 1, 2020
Trimester Examinations	-	July 19-24, 2020
Graduation	-	Aug 13-16, 2020

- June 1, 2019
- June 6, 2019
- July 21-26, 2019
- Aug 15-18, 2019

### 2020/2021 ACADEMIC YEAR

- Aug 18-20, 2020

- Aug 26, 2020

- Sept 4, 2020

- Sept 4, 2020

- Sept 4, 2020

- Sept 25, 2020

- Sept 25, 2020

- Oct 4-10, 2020

- Nov 15-20, 2020

- Oct 29, 2020

- Dec 12, 2020

- Sept 14-19, 2020

### FIRST TRIMESTER 2020/2021

- Registration for new students
- Orientation and payment of fees - Aug 24-25, 2020 - Aug 24-25 2020
- Registration for continuing students
- Classes begin
- Late registration fee in effect
- Last day to Add and Drop a course without entry on permanent academic record - Sept 4, 2020
- Last day to enter class
- Last day to change from audit to credit
- Heritage Week
- Last day to drop a course with "W"
- Last day to change from credit to audit
- Week of Spiritual Emphasis
- End-of-Semester Senate
- Trimester Examinations
- National Holiday (Jamhuri Day)

### SECOND TRIMESTER 2020/2021

Registration	-	Jan 4-5, 2021
Classes begin	-	Jan 6, 2021
Late registration fee in effect	-	Jan 6, 2021
• Last day to Add and Drop a course witho	ut	
entry on permanent academic record	-	Jan 15, 2021
<ul> <li>Last day to enter class</li> </ul>	-	Jan 15, 2021
• Last day to change from audit to credit	-	Jan 15, 2021
<ul> <li>Week of Spiritual Emphasis</li> </ul>	-	Jan 31-Feb 6, 2021
<ul> <li>Last day to drop a course with a "W"</li> </ul>	-	Feb 5, 2021
• Last day to change from credit to audit	-	Feb 5, 2021
<ul> <li>Public Holiday (Good Friday)</li> </ul>	-	Apr 2, 2021
<ul> <li>Public Holiday (Easter Monday)</li> </ul>	-	Apr 5, 2021
<ul> <li>Trimester Examinations</li> </ul>	-	Apr 6-9, 2021
- End of Somostor Sonato		Apr 1/1 2021

 End-of-Semester Senate - Apr 14, 2021

### THIRD TRIMESTER 2020/2021

Registration	-	Apr 19-20, 2021
Classes begin	-	Apr 21, 2021
<ul> <li>Late registration fee in effect</li> </ul>	-	Apr 21, 2021
<ul> <li>Last day to enter class</li> </ul>	-	Apr 30, 2021
• Last day to Add and Drop a course without	ut	
entry on permanent t academic record	-	Apr 30, 2021
Last day to change from audit to credit	-	Apr 30, 2021
<ul> <li>Labor Day</li> </ul>	-	May 1, 2021
<ul> <li>Probable day for Eid al-Fitr</li> </ul>	-	May 14, 2021
<ul> <li>Last day to drop a course with "W"</li> </ul>	-	May 21, 2021
Last day to change from credit to audit	-	May 21, 2021
<ul> <li>National Holiday (Madaraka Day)</li> </ul>	-	June 1, 2021
<ul> <li>Trimester Examinations</li> </ul>	-	July 18-23, 2021

- Aug 12-15, 2021

Graduation



### Vice-Chancellor's Message for the 2016-2020 Academic Bulletin

Welcome to the University of Eastern Africa, Baraton (UEAB).

We congratulate you for having chosen UEAB for your University education. This is a clear demonstration of your confidence in the quality of the Adventist education system which seeks to develop your mental, physical and spiritual attributes, to prepare you for excellent service to God and mankind.

This academic bulletin outlines the academic programmes for the guidance of the student. It does not constitute a contract between the University and the student. However, unless a change is made, which change will be communicated, the curriculum indicated under the various departments comprises the courses that one needs to take for the specific degree desired.

Students are advised to take courses strictly as per the specified course sequence. For purposes of advising and monitoring, student check-lists are provided by departments to assist students monitor their own progress. Ensure that you have a copy of your check-list.

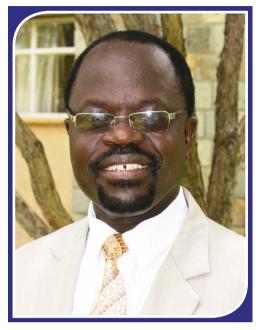
While at UEAB, always remember that time is a golden opportunity freely given by God to all mankind, equally. Managing your time wisely is therefore of essence if you have to complete your studies at the stipulated time, or even earlier. Learn to set priorities and deadlines on a daily basis in order to redeem time. The Bible aptly admonishes us in Ephesians 5:15-16 to "live life, then, with a due sense of responsibility, not as men who do not know the meaning and purpose of life but as those who do. Make the best use of your time, despite all the difficulties of these days." (Phillips Translation)

As our mission-statement will show elsewhere in this academic bulletin, we are a Christian institution committed to the ideals of Christianity, as espoused by the Seventh-day Adventist Church. Thus, we are committed to sharing with you the good news of salvation.

The Administration, faculty, and staff are committed to the fulfillment of the goals and objectives outlined in this academic bulletin. We pledge to live up to your expectations

It is our hope that you will find this academic bulletin helpful.

Once again, welcome to UEAB.



Prof. Phillip Maiyo

### **1.0 Introduction**

### **1.1 PHILOSOPHY**

The University of Eastern Africa, Baraton (UEAB) operates on the Seventh-day Adventist worldview, which holds that God is the Creator and Sustainer of the universe and life and is the source of true knowledge. The entrance of sin caused man's alienation from God; therefore, the restoration of man's relationship with God is the foundation of Christian education through a process of integration of faith and learning. This leads students into self-actualization and to discover and understand the truth through critical thinking.

### **1.2 MISSION**

To provide and advance a wholistic quality Christian education, which develops men and women to be earnest seekers of truth and equips them with appropriate knowledge, skills, and attitudes for service to God and humanity.

### **1.3 VISION**

To be a leading center of excellence in higher education and research producing world-class professionals equipped with moral virtues.

### **1.4 CORE VALUES**

- 1. Integrity
- 2. Excellence
- 3. Teamwork
- 4. Professionalism

### **1.5 NATURE OF KNOWLEDGE**

All true knowledge has its source in God and is made available to man through a variety of channels. This knowledge enables human beings to appreciate life and its challenges. This knowledge is derived from the past as well as from continuing research. The University seeks to provide opportunities for developing proficiency in discovering knowledge that is relevant to life.

### **1.6 THE ROLE OF THE UNIVERSITY**

The institution is founded on principles which address the needs of the society in which it functions; and to inculcate the institution's philosophy of education. This is achieved through programs aimed at developing educated citizens who can meet the needs of their respective communities and the Seventh-day Adventist church.

### **1.7 OBJECTIVES**

Based forgoing statements, the University of Eastern Africa, Baraton is committed achieving the following objectives:

- 1. Provide a balanced educational program that gives each student the opportunity to develop spiritually, mentally, physically, and socially.
- 2. Encourage the student to understand, appreciate, and adopt a Christian lifestyle and value system by:
  - a. Providing appropriate religious instruction and integrating faith and learning in the classroom.

- b. Providing a variety of religious services and activities.
- c. Fostering an atmosphere where Christian principles find practical expression in all relationships.
- 3. Help the student to strive for mental excellence by:
  - a. Providing qualified faculty to guide the student in the pursuit of knowledge.
  - b. Developing intellectual curiosity, engaging in reflective thought, and maintaining the desire to reach the highest level of professional growth.
  - c. Refining mental abilities to enhance self-reliance.
- 4. Assist the student to achieve and maintain physical health by:
  - a. Guiding the student to attain a better understanding of healthful living.
  - b. Helping the student to appreciate the dignity of labor and recognize the value of manual work.
  - c. Providing appropriate sports activities and encouraging the adoption of a personal exercise program.
  - d. Providing healthful food and living quarters.
- Prepare the student to become a useful member of society by:
  - a. Promoting understanding and acceptance of persons from various backgrounds in the university community.
  - b. Helping to develop social skills that make for harmonious relationships with other people.
  - c. Emphasizing selfless service as the goal of life.
  - d. Encouraging the application of knowledge within the students' societal context.
- 6. Equip the student for:
  - a. An active role in the mission of the Seventh-day Adventist Church.
  - b. Service-centered vocations and professions which contribute to the betterment of society.
- Provide adequate facilities and infrastructure for quality education, such as library, internet, laboratories, research facilities, classrooms, and buildings to support the various curricula and syllabi.

### **1.8 HISTORY**

Before 1980, there was no Adventist University in East Africa and for this reason, students desiring to pursue higher education in an Adventist institution had to go outside Eastern Africa. During the 1970's, the Middle East College in Beirut, Lebanon, served many such students. Thus, there was a great need for a full-fledged university in Eastern Africa. Consequently, in October 1978, the Afro-Mideast Division of Seventh-day Adventists took an action to establish such an institution in Kenya on December 21, 1978. The Kenya Government allotted 339 acres of the then Baraton Animal Husbandry Research Station in Nandi District to the Seventh-day Adventist Church for the purpose of founding what is now known as the University of Eastern Africa, Baraton. Classes began in September, 1979, in the temporary farm structures. Some of these structures have since been replaced with modern buildings.

### **1.9 ACCREDITATION**

The University of Eastern Africa, Baraton, is a fully accredited institution of higher learning accredited by the Commission for University Education and the Adventist Accrediting Association of the Seventh-day Adventist Schools, Colleges and Universities, and was chartered by the Government of the Republic of Kenya on March 28, 1991. It is also a member of the Commonwealth Association of Universities, and the Inter-University Council for East Africa.

### **1.10 GOVERNANCE**

The University is owned and operated by the Seventhday Adventist Church. The University Chancellor is the President of the East-Central Africa Division of the General Conference of the Seventh-day Adventist Church. It is governed by the Board of Trustees and the University Council, which does their work through the Administrative Board, chaired by the Vice-Chancellor, who is the Chief Executive Officer of the University.

### **1.11 SUPPORT**

The University of Eastern Africa, Baraton, is supported by the Seventh-day Adventist Church. The University welcomes gifts and bequests from philanthropists for the purpose of providing student aid and scholarships, and for developing and improving its facilities and programs.

#### **1.12 SISTER INSTITUTIONS**

The University is a unit in a comprehensive system of the Seventh-day Adventist institutions throughout the world operating under the auspices of the Seventh-day Adventist World Church (General Conference of Seventhday Adventists). The system includes more than 5500 primary schools and more than 1500 secondary schools. The church also operates more than 100 colleges and universities worldwide. Some of these are:

- 1. Adventist University of Africa, Kenya
- 2. Adventist University of Central Africa, Rwanda
- 3. Adventist University of the Philippines, Philippines
- 4. Andrews University, United States of America
- 5. Avondale College, Australia
- 6. Babcock University, Nigeria
- 7. Bugema University, Uganda
- 8. Burman University, Canada
- 9. Ethiopia Adventist College, Ethiopia
- 10. Helderberg College, South Africa
- 11. Loma Linda University, United States of America
- 12. Malawi Adventist University, Malawi
- 13. Newbold College, England
- 14. Oakwood University, United States of America
- 15. Sahmyook University, South Korea
- 16. Saniku Gakuin College, Japan
- 17. Seminaire Adventiste du Saleve, France
- 18. Solusi University, Zimbabwe
- 19. Spicer Adventist University, India
- 20. Universidad Adventista de Chile, Chile
- 21. Univerisdad Adventista del Plata, Argentina

22. University of Arusha, Tanzania 23. Valley View University, Ghana

#### **1.13 ADMISSIONS**

Since the University of Eastern Africa, Baraton, is owned and operated by the Seventh-day Adventist Church, it has a special responsibility to serve its constituency. Admission into the University, however, is open to any student desiring quality education and willing to abide by the policies and culture of the University. Admitted students are required to co-operate with the leadership of the University.

Formal application is made on an official form supplied by the University. This is returned to the University along with transcripts, certificates, diplomas, references and other relevant documents as may be required by the Office of Admissions to show academic aptness. The University acts only on those applications which are complete with all supporting documents including references. Only those applicants who meet the academic and character requirements of the University and who express willingness to comply with its policies and regulations are considered for admission.

### 1.14 COURSES OF INSTRUCTION

The University of Eastern Africa, Baraton, offers a variety of courses listed under the various schools and departments either as a major or minor area:

### **1. SCHOOL OF BUSINESS**

### a. Department of Accounting

- i. BBA Accounting
- ii. BBA Finance
- iii. Minor in Accounting
- iv. Minor in Finance

#### b. Department of Information Systems and Computing

- i. Bachelor of Business Information Technology (BBIT)
- ii. BSc Software Engineering
- iii. BSc Networking and Communication Systems

### c. Department of Management

- i. BBA Management
- ii. BBA Marketing
- iii. BBA Office Administration
- iv. Minor in Economics
- v. Minor in Management
- vi. Minor in Marketing

### 2. SCHOOL OF EDUCATION, HUMANITIES AND SOCIAL SCIENCES

### a. Department of Education

 BEd (Arts) in the following Secondary School/ College teaching subjects: English Language; Literature; Kiswahili; Religion; History; Geography.

- ii. BEd (Sciences) in the following Secondary School/College teaching subjects: Mathematics; Biology; Home Science; Chemistry; Agriculture; Physics.
- iii. Upgrading P1 to Bachelor of Education (BEd)

#### b. Department of Humanities and Social Sciences

- i. BA Counseling Psychology
- ii. BA Development Studies
- iii. BA English
- iv. BA French
- v. BA/BSc Geography
- vi. BA History
- vii. BA Kiswahili
- viii. BA Journalism and Mass Communication
  - 1. Print Media Specialization
  - 2. Electronic Media Specialization
  - 3. Public Relations and Advertising
- ix. BA Music Performance
- x. Bachelor of Music in Music Education (BMus.Mus.Ed)
- xi. Minor in Counseling Psychology
- xii. Minor in Development Studies
- xiii. Minor in Electronic Media
- xiv. Minor in English
- xv. Minor in Environmental Studies
- xvi. Minor in French
- xvii. Minor in Geographic Information Systems (GIS)
- xviii. Minor in Geography
- xix. Minor in Health Psychology
- xx. Minor in History
- xxi. Minor in Kiswahili
- xxii. Minor Literature
- xxiii. Minor Music
- xxiv. Minor Political Science
- xxv. Minor Print Media
- xxvi. Minor in Psychology
- xxvii. Minor Public Relations and Advertising
- xxviii. Minor in Social Work

### c. Department of Theology and Religious Studies

- i. BA Theology
- ii. BA Religion
- iii. Minor in Religion

### **3. SCHOOL OF HEALTH SCIENCES**

- a. Department of Medical Laboratory Science
  - i. BSc Medical Laboratory Science

### b. Department of Public Health

- i. BSc Public Health
- ii. Minor in Public Health

### **4. SCHOOL OF NURSING**

- a. Department of Nursing
  - i. BSN Nursing

### 5. SCHOOL OF SCIENCE AND TECHNOLOGY

### a. Department of Biological Sciences and Agriculture

- i. BSc Agriculture
- ii. BSc Agri-business
- iii. BSc in Biology with options:
  - 1. Bio-Medical Science
  - 2. Biotechnology
  - 3. Conservation Biology
  - 4. General Biology
- iv. Minor in Agriculture
- v. Minor in Biology

### b. Department of Foods, Nutrition and Dietetics

- i. BSc Hotel Management
- ii. BSc Clothing and Textile
- iii. BSc Foods, Nutrition and Dietetics
- iv. Minor in Hotel Management
- v. Minor in Foods, Nutrition and Dietetics
- vi. Minor in Clothing and Textile
- c. Department of Mathematics, Chemistry and Physics
  - i. BSc in Chemistry with options:
    - 1. Analytical Chemistry
    - 2. Analytical Chemistry with Management
    - 3. Biochemistry
    - 4. Industrial Chemistry
    - 5. Industrial Chemistry with Management
    - 6. General Chemistry
  - ii. BSc Mathematics
  - iii. Minor in Analytical Chemistry
  - iv. Minor in Biochemistry
  - v. Minor in General Chemistry
  - vi. Minor in Industrial Chemistry
  - vii. Minor in Mathematics
  - viii.Minor in Physics

### d. Department of Technology and Applied Sciences

- i. BSc Automotive Technology
- ii. BSc Electronics Technology
  - 1. Communication Electronics
  - 2. Industrial Electronics
- iii. Minor in Electronics Technology

### **1.15 BULLETIN DEFINITIONS**

### 1.15.1 CORE COURSES

These are specific compulsory courses within an academic program or specialization designed to provide the basic skills, knowledge, understanding and expertise in the field of study.

### 1.15.2 COGNATE COURSES

These are courses which are related or allied to the courses that support or provide some knowledge in understanding or applying the core courses. They are usually courses from other areas of study other than the major field of study.

### **1.15.3 ELECTIVE COURSES**

These are courses that are in addition to the core requirements of a program from which a student chooses a number of credits as specified in a given program.

### 1.15.4 SPECIALIZATION

These are courses that are in addition to the core that apply to a specific option in a particular degree program.

### **1.15.5 PREREQUISITES**

Courses that must be successfully taken prior to registration in another course.

### **1.15.6 COREQUISITES**

This is a related course that must be taken at the same time as another related course e.g. Science theory and Science lab.

### 1.15.7 SEMESTER

A period of sixteen (16) weeks which includes registration, instruction and examinations.

### 1.15.8 TRIMESTER

A period of fourteen (14) weeks which includes registration, instruction, and examinations. The trimester system is used only by the School of Nursing.

### 2.0 Degree General Information

The University of Eastern Africa, Baraton offers academic programs leading to Bachelor of Arts (BA), Bachelor of Business Administration (BBA), Bachelor of Business Information Technology (BBIT), Bachelor of Education (BEd) Arts, Bachelor of Education (BEd) Sciences, Bachelor of Science (BSc), Bachelor of Science, Nursing (BScN), Master of Education (MEd), Master of Science (MSc), Master of Science, Nursing (MScN) and Doctor of Philosophy (PhD) in Education with specializations in Educational Administration and in Curriculum and Teaching degrees.

The University also offers a Post Graduate Diploma in Education (PGDE).

In addition to concentrating on his/her field of special interest, the student pursuing any degree also takes a broad range of basic courses, referred to as general education requirements.

### 2.1 GENERAL EDUCATION REQUIREMENTS

### 2.1.1 Philosophy/Rationale

The General Education program is intended to give students a broad view of knowledge and certain useful skills which are common to liberal arts education. The program affirms a wholistic approach to the development of the student by cultivating the intellectual, the spiritual, the physical and the social abilities.

It is hoped that the program will assist the student to construct a thoughtfully conceived worldview that recognizes the roles of Scripture, and nature as sources of truth.

### **212 General Education Goals**

Goals of the program will be achieved through the following General Undergraduate Curriculum:

- 1. **Religion** From the study of faith, ethics, doctrine, students will gain an experiential understanding of God's divine plan for their lives.
- 2. Language and Communication Through practice, students will develop strategies for effective oral and written communication.
- **3. Arts and Humanities** These will help students understand how civilization expresses itself.
- 4. Social Sciences The Social Sciences will help students understand different facets of human behavior.
- 5. Natural Sciences Through Natural Sciences students will experience the scientific method of studying the natural universe and the current way of understanding it.
- Mathematics and Computer Science Will help students to develop the logical, mathematical, and computer skills vital to life in a modern world.
- 7. Vocational Skills These will assist students acquire skill necessary for vocation.
- 8. Health Principles Students will apply the principles of health and fitness to their lives.
- Environmental Awareness This will assist the students to understand environmental problems and what can be done to avoid them.
- **10. Keyboarding** The students will develop basic typing skills useful in the academic world.

Note: Nursing, Public Health and Medical Laboratory Sciences students should take the course INSY108 instead of INSY107.

### 2.1.3 General Education Requirements - 41 Credits

Every student of UEAB is required to take the following General Courses in addition to the required courses listed under the student's major area of study:

LANGUAGE	S	6
ENGL 105 Writing Skills		3
ENGL 106	Speech Communication	1
<b>KISW 114</b>	Language Use in Kiswahili Or	2
FREN 103 Beginning French II		1
ARTS		2
GCAS 107	Music Appreciation Or	2
LITE 151	Literature Appreciation	2

|--|--|--|--|

DUONICOO		0
BUSINESS		2
MGMT 103	Basic Management and Entrepreneurial Skills	2
0FTE 120	Keyboarding	0
EDUCATIO		3
EDUC 215	Introduction to Philosophy of	2
DE 4.0 407	Christian Education	
PEAC 107	Physical and Recreational Activities	1
HEALTH S		1
HLED 110	Health Principles	1
	AND APPLIED SCIENCES	14
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physical Sciences	3
ENVIRON	IENT	2
ENVI 227	Environment and Society Or	2
CHEM 200	Environmental Chemistry Or	2
TCED 231	Safety Education	2
RELIGION		9
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2
SOCIAL SO	CIENCES	4
HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2
VOCATION	IAL SKILLS	1
Any one of	the following:	
AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto Care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation & Cake Decoration	1
W00D 100	Woodwork	1
Total Gene	ral Requirements 41 Credit	S

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### 2.1.4 Guidelines for Meeting General Education Requirements

- 1. A religion class is to be taken each year in residence until the General Education Requirement for religion is met. Students attending UEAB for less than four years must take all required religion General Education Requirements
- 2. Other than the two religion classes to be taken during the third and fourth year, all General Education Requirements are to be taken during the first two years of residence.
- 3. No student will be allowed to register for any project or research classes without taking ENGL 105

### 2.2 CONCENTRATION, MAJOR, MINOR AND COGNATES

A Major is the student's area of specialization covering basic material. A Concentration is similar to a Major but covers a broader range of subjects and often incorporates a number of professional and practical experience type of courses.

Extensive as that of a Major. NOTE: In the Summary section of each degree program that has a minor, the minor is listed as 30 credits. This is an average of the number of credits in a minor. The minor the student chooses may have more or less credits, so the total number of credits for the degree will have to be adjusted according to the number of credits in the chosen minor.

Cognates are courses closely related to and or supportive of a student's Major. Several departments require certain Cognates to be taken in connection with the Major.

The specific requirements for areas of Concentration, Majors, Minors and Cognates, are listed under the respective departments in the section entitled Courses of Instruction.

### 2.3 SELECTION OF MAJOR OR CONCENTRATION

For better planning every student who is not sure what he/she wants to take is required to select his/her major area of concentration by the time he/she completes the sophomore year (second year) and before beginning the junior or third year. For better planning every student must choose his/her major at the time of joining the university. In case he/she wants to change his/her major area of concentration, he/she should do so by the end of sophomore year (second year). This will give the students ample time to concentrate on their major areas during their last two years of study. Students are also advised to complete all general education requirements during their first and second years.

### 2.4 CREDIT HOURS REQUIRED FOR DEGREE

A bachelor's degree requires 120 to 144 semester credit hours except for those programs regulated by professional bodies. For a student who presents no transfer credits, this will require about four regular academic years to complete a bachelor's degree as shown in the typical example below:

School Year	Credits/ Semester	No. of Semester	Total for Year
1st	18	2	36
2nd	18	2	36
3rd	18	2	36
4th	18	2	36
Total Sem	144		

If a student for some reason is unable to carry the normal load of classes for one or more semesters, or fails to complete required courses when scheduled, the course may be prolonged beyond the four years.

### **3.0 Academic Information**

### **3.1 CREDIT HOURS AND THE SEMESTER**

The University of Eastern Africa, Baraton, except for the School of Nursing, operates on the semester system, each semester being approximately 16 weeks in length. The value of each course offered is expressed in terms of semester credit hours. One semester credit hour is equivalent to 15 contact hours in a semester. The student is expected to spend a minimum of two hours of outside preparation for each class period.

Every academic year consists of two regular semesters of sixteen weeks running between the end of August and May, and an eight- week inter-semester. One day is equivalent to one week in inter-semester sessions which usually run from the second week of May up to the last week of June.

### **3.2 CREDIT HOURS AND THE TRIMESTER**

Due to the nature of the program, the School of Nursing operates on the trimester system with each trimester being approximately 14 weeks in length. However, the value of each course offered is expressed in terms of semester credit hours. One semester credit hour is equivalent to 15 contact hours. The student is expected to spend a minimum of two hours of outside preparation for each class period.

Every academic year consists for three trimesters running between the end of August and the end of July.

### **3.3 CLASS SIZE**

The minimum class size for any undergraduate course shall be as follows:

1. Regular instructor20 students2. Adjunct instructor20 students

Any exception requires approval of the Academic Standards Committee.

Dividing a class into sections for larger classes will be approved by the Academic Standards Committee.

### **3.4 COURSE NUMBERS**

100-199	Courses usually taken during freshman
	year: lower division
200-299	Courses usually taken during sophomore
	year: lower division
300-399	Courses usually taken during junior year:
	upper division
400-499	Courses usually taken during senior year:
	upper division
Courses end	ing with numbers 1 or 2 for example CHEN

Courses ending with numbers 1 or 2 for example CHEM 121 and CHEM 122 are sequence courses and must be taken in that order. Upper-division requirements for the degree are met by courses numbered 300 and above. Students are expected to follow this order in their course progression in tandem with the degree four-year course offering.

Generally, odd numbered courses are to be taken during the first semester and even-number courses are to be taken during the second semester.

### **3.5 STUDENT'S GOVERNING BULLETIN**

A student will normally graduate either under the Bulletin in force when he/she first entered the University of Eastern Africa, Baraton, or a subsequent Bulletin if the student chooses it and the department approves. A student must meet all the requirements of the Bulletin in force or the subsequent Bulletin he/she chooses. However, if there are changes in the course code, course credit hours, and graduation requirements, the student must follow the current bulletin. When the course requires a passing grade which was not stipulated in the student's governing bulletin, the requirement in the current bulletin must be adhered to. Similarly, if a course appearing in the previous student's bulletin has been deleted, the student should follow the requirement as stipulated in the current bulletin. If, as a result of some changes made, a student lacks the stipulated minimum credit hours for graduation, the student must take the extra hours from the relevant area(s) of his/her choice, in consultation with the academic advisors.

A student whose enrollment lapses for more than one academic year (two semesters or more) is required to re-enter under the bulletin in effect at the time of them re-joining the UEAB program.

### 3.6 BULLETIN REGULATIONS AND ANNOUNCED CHANGES

The stipulations in this Bulletin should not be considered as a final contract between the student and the University. The University reserves the right to make any changes it deems necessary at any time. All such changes adopted or made by the University administration, and then communicated to the University community, have the same force as the regulations published in the University hours earned

3.7 ACADEMIC ADVISORS/CURRICULUM LEADERS

bulletin.

A student will be assigned an academic advisor who will chart the student's progress until he/she is ready for graduation. Officially, the chairperson/curriculum leader is the principal academic advisor. The chairperson is also expected to assign qualified teachers to advise students. A student will also be assigned a second advisor if he/she is doing a double major or a minor.

One of the functions of the academic advisor is to review the student's academic progression during each semester and advise the student accordingly.

At the beginning of each semester the student must see his/her advisor who will verify the courses on the student's check sheet to be taken for the semester and advise accordingly. Students who do double majors are advised by both advisors of their respective degree programs. Students who would like to do a double major should apply before the end of their second year of study using the forms from the UEAB website.

### 3.8 CURRICULUM CHECKLIST AND FOUR-YEAR COURSE OFFERINGS

A curriculum checklist is a list of courses a student is required to take to graduate. This checklist lists and categorizes courses as General Requirements, Core, Concentration, Major, Specialization, Cognates and Electives. The second list the student is given is the proposed four-year course offerings timetable. Checklists and proposed four-year course offerings timetables are issued by the respective departments upon admission.

### **3.9 ACADEMIC PROGRESS**

- It is the responsibility of every student to check their grades/academic performance online as soon as the grades are released.
- 2. Any student with a failing grade must retake the course the next time it is offered.
- Students should process the completion letters of their degree studies immediately after the results of the courses of their last semester are out.
- 4. Students should apply for graduation at least two semesters (one academic year) before completion using application forms available from the UEAB website. Graduation in absentia is not allowed except by Senate approval on request under special circumstances.

### **310 CLASSIFICATION OF STUDENTS**

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- 1. Freshman: A beginning student in the University.
- Sophomore: A second year student with at least 36 credit hours earned or accepted.
- **3. Junior:** A third year student with at least 72 credit hours earned or accepted.
- 4. Senior: A fourth year student with at least 108 credit

hours earned or accepted and with all graduation requirements completed or properly planned as to be completed during the fourth year.

### **3.11 DURATION OF PROGRAM**

The duration of completion of a degree program will not exceed eight years. In the event that eight years elapse before the student completes the requirements of the degree, the student must seek readmission.

A student who has no more than one semester to complete his/her studies may use the bulletin under which they were previously studying. All others must re-enter under the bulletin in place when study recommences

A student who is readmitted must complete the degree in no more than 10 academic years of enrollment.

### **3.12 RESIDENCE REQUIREMENTS**

A student transferring from another recognized institution to UEAB must take all his/her upper division courses at UEAB. Any departure from this must be approved by the Academic Standards Committee.

### **3.13 TRANSCRIPTS**

The Registrar's Office issues transcripts of the student's academic record on written request by the student, but no transcript can be issued until all financial obligations to the University are met. The first transcript is free. There is a fee for all subsequent transcripts.

### **4.0 Entrance Requirements**

### **4.1 DIRECT ENTRY**

The minimum entrance requirements for the first degree under direct entry qualifications are:

- Kenya Certificate of Secondary Education (KCSE) or equivalent:
  - A minimum mean grade of C+ (plus) or its equivalent.
  - b. A minimum grade of C+ in English. Any student who does not meet this requirement must take the English Placement Test.
  - c. Meeting the entrance requirements for the preferred area of study.
- Advanced Certificate of Secondary Education (A-Level Certificate):
  - a. A minimum of two principal passes and one subsidiary pass.
  - b. Meet the consideration for the area of study.

### **4.2 DIPLOMA HOLDERS**

Candidates who do not meet the minimum requirements for direct entry but have completed a diploma program may be admitted if they meet the following requirements:

 Applicants with at least a credit pass in a diploma program from recognized institutions and with a mean grade of C- (minus) at the KCSE or its equivalent may be admitted into undergraduate programs.

 Applicants with at least a credit pass in a certificate program from a recognized institution and have done a diploma program from a recognized institution with a minimum grade of D (Plain) at the KCSE or its equivalent may be admitted.

### 4.3 ADMISSION OF INTERNATIONAL STUDENTS

The University welcomes students from different countries on its campus. International students must meet all admission requirements for the programs they wish to enter. Official transcripts should be mailed to the Assistant Registrar of Admissions. If the transcripts are in a language other than English, official translations must be provided. Detailed information about the admission of international students to UEAB may be obtained from the Assistant Registrar of Admissions, University of Eastern Africa, Baraton, P.O. BOX 2500-30100, Eldoret, Kenya, or the official University website (www.ueab.ac.ke).

The offer of admission is valid for one year, after which reapplication is required.

### 4.4 ENGLISH PROFICIENCY REQUIREMENT

Since English is the language of instruction at UEAB, proof of proficiency in it is required of all applicants. Students whose language of instruction has not been English will be required to take a placement test in English.

The University of Eastern Africa, Baraton offers remedial English courses for students whose English proficiency is low.

### 4.5 DOCUMENTS SUBMITTED FOR ADMISSION

All documents which are submitted by a student seeking admission to the University become the property of the University of Eastern Africa, Baraton, and are kept in the student's permanent file. Certified copies are acceptable if the student wishes to keep the originals, but in such cases, the originals must be presented at the time of registration, graduation, and at any other time as may be required by the Registrar or other officials of the University. Both the original and certified copies must be presented together at the time of registration. The University will retain the certified copy in the student's permanent file.

### 4.6 CATEGORIES OF SPECIAL STUDENTS

A special student is one who is not a regular student of UEAB. The following categories of special students are identified:

- Persons, who qualify for regular standing for university programs but do not wish to register for a full degree program, but wish to take some courses as in audit. Such persons should complete application forms as required for regular students.
- Persons who are already university students elsewhere but would like to take some classes at UEAB. Such

students should fill the "Special Student Application Form" from the Registrar's Office.

- Persons who already possess degree qualifications but wish to broaden their knowledge by taking particular courses at UEAB. Such students should fill the "Special Student Application Form" from the Registrar's Office.
- 4. Mature individuals who may not qualify for regular admission to the university, but who may wish to benefit from university classes, may on rare occasions be admitted into certain courses and be classified as "special students". Students in this category will not be required to do quizzes, tests or examinations; but they are expected to attend all lecture sessions and do the assignments in order to get a certificate of attendance at the end of the semester. Their work does not count toward a degree. Should a degree be required, the student must acquire admission requirements and seek regular admission. Once admitted, all courses taken under special student status must be repeated for credit.
- 5. The University of Eastern Africa, Baraton, welcomes local and international students who may wish to take courses on short term basis (one or two semesters) with the intention of transferring the earned credits to their regular institutions, or elsewhere. However, like regular students, they must meet all admission and financial requirements. Such students must abide by the policies and regulations of the University which govern the behavior, conduct and character of students. More information about visiting students may be obtained from the Assistant Registrar for Admissions or the University website (www.ueab. ac.ke).

Students in categories under 1, 2, and 3 above will be expected to do all the work, quizzes and examinations together with regular students. The credits they acquire at UEAB may be credited towards a degree program if they so wish.

### **5.0 Registration**

### 5.1 REGISTRATION PROCEDURE

Students are expected to register during the time specified in the Academic Calendar. Registration is not official until all procedures specified are completed. Students shall attend only those classes for which they are registered. It is illegal to attend a class for which registration has not been done. The procedure for the registration exercise is as follows:

- Obtain your password at the Registrar's Office (new students and continuing students who have ID and password problems).
- Go to the library for ID photograph. (new or continuing students who have lost their ID).
- 3. Go to the student finance accountant for the activation of your student account (new students only).
- Go to Jeremic Hospital for your medical check-up. (New students only).

- 5. Go to your advisor or the head of department for advice on course selection.
- 6. Go to any of the designated online registration stations to make course selections.
- 7. Log on to your window using your ID number and password then make selections as follows:
  - a. Select the semester
  - b. Select your residence (and room number for boarders)
  - c. Select your Sabbath school class.
- 8. Carefully select courses in accordance to the course checklist to avoid changes in selection and then close registration by clicking on the button "Close Registration". All approvals will be indicated on your end. Any unapproved selection should be resolved with the designated approval personnel e.g. residence with the Residence Dean, Course with your Major Advisor etc.
- 9. Your registration is complete when all the approvals read "yes."
- 10. Confirm the courses you have registered for on your window. You are required to print and retain a hard copy to confirm registration completion.
- 11. If you are not financially cleared, contact the student finance accountant for clearance.

Note: If you have any problem, contact your Academic Advisor and the Registrar.

### **5.2 LATE REGISTRATION**

A student who fails to register during the stipulated time must obtain permission from the Registrar in order to register later. A late registration fee will be charged. No student will be permitted to register after the date published in the Academic Calendar as the "Last day to enter any class" without the authorization of the Registrar in special cases.

### **5.3 CHANGES IN REGISTRATION**

- A student who wishes to make changes in course selection after completing registration will seek assistance at the Registrar's Office. A fee may be charged for changes. Registration will be re-opened for the same student, who will be required to go through the registration process for course selection at the risk of finding some classes already full.
- When courses are dropped after the last date to enter any class but before the published "Last day to drop a class with W", a W will be recorded.
- If any course is dropped after this date (2. above), an F is recorded.

The procedure for dropping a course is as follows:

- a. Download the Add/Drop form from the UEAB website at www.ueab.ac.ke
- After the forms have been properly signed, return them to the Registrar's Office for processing.
- Courses cannot be added after the deadline to add courses, i.e. eight instructional days from the date of registration

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 Students who withdraw from any or all of the classes and from the boarding section during the semester will receive some refunds on charges for tuition, room and board. For details, see "Refunds" under Financial Information.

### 5.4 COURSE LOAD FOR REGULAR STUDENTS (FULL-TIME)

The normal course load for regular students is 18 credit hours for a 16-week regular semester. For nursing students, the normal load is 14 credit hours.

### **5.5 COURSE LOAD FOR PART-TIME STUDENTS**

Students who enroll for the school-based classes and those pursuing their study programs through evening classes will be allowed to register for a maximum of 12 credits as follows;

- 1. School-based students 9-12 credits
- 2. Evening classes students 9-12 credits
- 3. Inter-semester 9-12 credits

### **5.6 CRITERIA FOR OVERLOAD**

- Students can take up to 20 credits during a regular semester if their cumulative GPA is at least 3.00. Overload for students who have a 3.00 GPA is automatically approved by the online system. Exceptions require the approval of the School Dean and the Registrar.
- 2. Seniors who have completed 110 hours and have a GPA of 2.67 may be allowed to take up to 21 credits in a regular semester if the remaining credits do not exceed 34 credits.
- Credit hours for fieldwork courses which are taken before or after each semester can be applied to the subsequent semester without invoking student's overload requirement.

### **5.7 WORK AND STUDY LOAD**

Students on work program will be asked to adjust the class load as follows:

Hours of work per week	Maximum credit hours
10 - 20	16
21 - 30	12

### **6.0** Attendance

### **6.1 ATTENDANCE REGULATIONS**

Absences are counted from the first day of class, and are classified as excused or unexcused. Excused absences involve reasons of illness, authorized trips or circumstances beyond the student's control. Absences for health reasons should be cleared through the University doctor and the signature of the doctor on the proper form must be obtained. Absences for any reason other than those mentioned above are considered unexcused. Class work such as quizzes and tests missed during an excused absence may be made up through arrangements with the lecturers involved. Class work missed during an unexcused absence may not be made up. If a student's total number of absences excused and/or unexcused exceeds 15% of the total class meetings in a course, the student will not be allowed to sit for the final examination and a grade of F may be recorded. If such student sits for the final examination without settling the absence issues, that examination will be null and void, and the student still receives an F grade. Such an F grade can be removed only by repeating the course. If warranted by special circumstances, the Academic Standards Committee may grant permission to make up the missed class work and allow the student to sit for the final examination.

### **6.2 TARDINESS**

Three incidences of tardiness are counted as an absence, and entering after 15 minutes have passed, or missing 15 minutes or more from a class is considered an absence.

### **6.3 ASSEMBLY ATTENDANCE REGULATIONS**

The weekly assembly is considered to be an important part of the student's academic experience, and attendance is therefore required. More than three absences from assembly in a given semester may result in suspension.

### 7.0 Examinations

### **7.1 FINAL EXAMINATIONS**

The last week and a half in the semester and the last week in the trimester are reserved for writing final examinations. During this period no off-campus field trips may be scheduled. The period should be devoted to the completion of course projects and final examinations only.

All final examinations carry 50% of the final grade and continuous assessment carries the remaining 50%. No student will be permitted to write final examinations without an exam pass. All required fees must be settled one month before the end of a semester.

### 7.2 SESSIONS FOR FINAL EXAMINATIONS

All final examinations are held in a specified venue. The length of the exam is determined by the number of credits for a class.

- 1. One credit class one hour final exam.
- 2. Two credit class two hour final exam.
- 3. Three credits or more three hour final exam.

Students are urged to read the examination schedule carefully and correctly to avoid missing any examination. An F shall be assigned for any examination missed due to misreading the examination schedule or failing to take the examination for any other reason without prior official approval.

### **7.3 SPECIAL EXAMINATIONS**

A special examination is for students who missed their final examinations due to lack of school fees. Special Examinations are given at the beginning of the semester and at the end of the semester after the final examination period. Special Examinations will cover the same content of the examination that was missed, but will not be the same exam. A fee will be charged for each Special Exam taken during days for special Examinations. A student can choose to take a special examination during the final examination period with students who are registered for the same class during a subsequent semester. There is no charge for Special Examinations taken during the final examination period. Special Examinations must be taken within one year of missing the exam.

During the days for Special Examinations at the beginning of the semester, the student can take up to 18 credits of Special Examinations. At the end of the semester students are limited to a combined total of 22 credits of classes registered and Special Examinations.

### 7.3.1 Procedure for Special Examinations

- 1. Clear any outstanding school fees.
- 2. Obtain the Special Exam form from the UEAB website.
- 3. Complete the form with all the signatures and return to the Registrar's Office.
- 4. Pay for the exam if taking it during the days for special examinations.
- 5. Take the exam.

### 7.3.2 Submission of Change of Grade after Special Examinations

- After the exam the lecturer submits a Change of Grade form along with a copy of the Special Examination form, proof of payment for the special exam if the exam was taken during the days for special exam or the attendance list from final exam if the exam was taken during the final examination period, and the mark book for the class to the Registrar's Office.
- 2. The Registrar submits the Change of Grade form and supporting documents to the Academic Standard Committee for approval.
- 3. After the Change of Grade has been approved by the Academic Standards, the grade is changed to the grade earned by the student by the Registrar's Office.

### 7.4 SUPPLEMENTARY EXAMINATIONS

A Supplementary Exam is an additional examination for a student who has not attained a passing grade in a course. This is a second chance to pass the course, and students must pass the supplementary exam to pass the course.

Supplementary Examinations are scheduled after the formal exam period and may not be available for all courses, or for all examination types. Both examinations shall be similar in length and degree of difficulty and shall be moderated.

Supplementary examination will be allowed for courses which have written final examinations.

### 7.4.1 Eligibility for Supplementary Examinations

Academic Standards Committee may allow a student to take a supplementary examination based on the following criteria:

- 1. Be an undergraduate student
- 2. Score between F and C on the final exam.
- 3. Have an overall grade of between C and D in major courses.
- 4. Have a percentage of between 35 and 39 in General Education Requirements.

### 74.2 Application for Supplementary Examinations

- Students apply for the supplementary examination through the department chair and school dean using the prescribed forms available on the website.
- Students must apply for the supplementary examination within one week of the release of grades.
- 3. Supplementary examinations are to be done in the next semester after the course was taken.
- 4. Students are allowed to take a supplementary examination for a course only once.
- 5. The date for supplementary examinations is the Monday after the start of class only.
- 6. A supplementary exam fee will be charged which is 1/3 of the cost of per credit and is payable before the examination date.
- 7. A student who fails a supplementary examination must repeat the course.
- 8. Those involved in administration of the Supplementary Exam will be eligible to payment of a fee.

### 74.3 Supplementary Examination Grading

- 1. The maximum grade that can be earned from a supplementary examination is C+.
- 2. The supplementary examination grade will replace the original grade and be used to compute the students GPA.

### 7.5 REMARK OF FINAL EXAMINATION

Any student who feels that his/her final examination paper was not fairly marked has a right to request for a remark of the examination. The procedure for requesting for a remark of an examination shall be as follows:

- 1. A request for remarking a final examination must be made within two weeks of releasing the grade or within the first two weeks of the next semester.
- 2. A student completes the Remark of Examination form from the UEAB website. The student pays the amount required for the remark before the remark is done.
- 3. The form is submitted to the Department Chairperson who submits it to the School Dean and then to the Registrar with a list of three approved examiners.

- 4. The Registrar takes the Remark of Examination form to Academic Standards Committee for approval.
- 5. After approval from the Academic Standards Committee, the Registrar will select one examiner and send the papers for remarking. For practical reassessment a minimum of two examiners will be appointed to reassess the student.
- 6. The marks of the remark are computed together with that of continuous assessment to arrive at the final grade to be awarded to the student as per the University policy.
- 7. The marks of the remarked work and the final grade awarded to the student as stipulated are presented to Academic Standards Committee for ratification.
- 8. The final grade resulting from the remark shall be the grade awarded to the student.

### 7.6 CHALLENGE EXAMINATIONS

A challenge examination is a specially designed examination in a subject area for those students who wish to challenge certain courses to which they have been exposed at an acceptable level. A challenge examination will not be given for a failed/repeated course. The challenge examination is prepared and marked by two instructors appointed by the department chairperson in consultation with the dean of the school.

No grade of less than a B will be accepted for challenge examinations, and no more than 10 credits can be earned through challenge examinations.

Applications for challenge examinations must be approved by the Academic Standards Committee.

### 7.6.1 Procedure for Challenge Examination

- 1. Check with the department chairperson to see if you are qualified to do the challenge examination.
- 2. Obtain a Challenge Examination Form from the UEAB website.
- 3. Complete the form with all the signatures in the order that they appear.
- 4. Return the completed form with all the required signatures to the Registrar's Office.
- 5. The Registrar will present the request to the Academic Standards Committee for consideration.
- 6. Aletter of approval or denial will be sent to the student by the Registrar with copies to the chairperson of the student's department, chairperson of the department where the examination will be written, the dean of the student's school and the Deputy Vice-Chancellor, Academics.
- 7. If approved, the student should proceed to pay the challenge examination fee which is two thirds of the tuition for the course. This money must be fully paid before the exam is administered.
- 8. The examination will be administered and the grade will be sent on the appropriate forms by the Department Chairperson to the Registrar's Office.

9. The Challenge Examination grade must be presented to the Academic Standards Committee for approval before it is entered onto the student's permanent record.

### **8.0 Grades**

### 8.1 GRADING SYSTEM

The grading scale (in percentage and equivalent letter grade), which is a composite of 50% grade from continuous assessment and 50% grade from final examination, is as follows:

Percentage	Grade	Points
92 -100	А	4.00 (Superior)
89 - 91	A-	3.67
85 - 88	B+	3.33
80 - 84	В	3.00 (Above Average)
75 - 79	B-	2.67
70 - 74	C+	2.33
65 - 69	С	2.00 (Average)
60 - 64	C-	1.67
50 - 59	D	1.00 (Below Average)
0 - 49	F	0.00 (Failure)

Effective first semester/trimester 2017/2018 the grading scale will be as follows:

Percentage	Grade	Points
85 -100	А	4.00 (Superior)
80 - 84	A-	3.67
75 - 79	B+	3.33
70 - 74	В	3.00 (Above Average)
65 - 69	B-	2.67
60 - 64	C+	2.33
55 - 59	С	2.00 (Average)
50 - 54	C-	1.67
40 - 49	D	1.00 (Below Average)
0 - 39	F	0.00 (Failure)

Other symbols which may appear on the grade report are as follows: AU, DG, IW, NG, S, U, W, AW, and UE.

### 8.1.1 AU - Auditing Course

A student may wish to attend a class, but not receive credit for it. To audit a course, the student needs the permission of the Department and the Registrar of Admissions. He/she must attend class regularly. If credit is desired the course must be repeated at another time, during which time the student will be required to meet all the requirements for the course. All changes from audit to credit or vice versa must be made by the dates indicated in the academic calendar.

### 8.1.2 DG - Deferred Grade

A DG is assigned in certain courses that are of such a nature that they may not be completed within one semester and are so designated beforehand. A DG will be given each semester until the project is completed and a final grade is assigned. Courses for which a DG is used normally run over two or three semesters. Any extension of time beyond this needs the approval of the Academic Standards Committee. A DG has no effect on the Grade Point Average (GPA).

If a final grade has not been submitted to the Registrar's Office by the end of two semesters, including the semester the DG was first applied for, the DG shall be administratively turned to AW (Administrative Withdrawal) by the Registrar. The AW shall remain a permanent record in the transcript.

### 8.1.2.1 Procedure to Apply for a DG

A DG is applied for by the instructor. A student does not apply for it. The instructor must apply for DG grades for all those students taking such a course. The form is obtained from the UEAB website, and the completed form is returned to the Registrar's Office.

### 8.1.2.2 Submission of Final Grade

When the projects are completed, the final grades are then submitted by the instructor to the Registrar's Office for recording.

### 8.1.3 IW - Incomplete Work

An Incomplete Work or IW indicates that major work has not been completed because of illness or other unforeseeable circumstances, and not because of negligence, late work or low performance. An Incomplete Work is not automatically assigned but must be petitioned for in writing by the student at the time of the emergency, and requires the approval of the class instructor, the Department Chairperson, the Dean of the School, Registrar and the Deputy Vice Chancellor, Academics. The class instructor must designate what work is to be completed and the time limit which shall not be later than the end of the following semester/ trimester. Any incomplete work not removed on time will result in a grade calculated using marks earned from the work already done out of the total marks of the course.

### 8.1.3.1 Procedure to apply for an IW

It is the student's responsibility to complete the form from the download section of the UEAB website for an IW in triplicate for each IW. In the event of total inability on the part of the affected student to process the IW form, he/she may authorize someone else to complete the IW form to ensure that it is done promptly on the day of the emergency. The steps for applying for an IW are:

- 1. Download the IW form from the UEAB website and fill out the form;
- Attach the documentary proof of the reason for requesting the IW to the form;

3. Get required signatures;

4. Submit the completed form to the Registrar's Office.

If the student does not return to the University the following semester, he/she must petition the Academic Standards Committee for an extension. Failure to do so will result in calculating the grade as said before whereby the missing work is not considered.

### 8.1.3.2 Submission of Final Grade

When the incomplete work is done, the instructor computes the final grade and submits it to the Registrar's Office. It is the student's responsibility to check whether the new grade has been entered on his/her record.

### 8.1.4 NG - No Grade

No Grade or NG is automatically assigned to a student at the time he/she registers for a course at the beginning of a semester/trimester. The "NG" is removed at the end of the semester/trimester when the course instructor submits the grades to the Registrar's Office in a signed grade sheet. If by the end of a semester/trimester a course instructor does not have a grade for a student, and W, IW or DG has not been officially applied for and entered for the student, and there is no administrative action that has been taken to discontinue the student from the course to warrant him/her to be assigned AW, the course instructor is required to assign the student an F grade in the submitted grade sheet. The Registrar's Office will record an F grade for a student whose grade is missing in a grade sheet and for whom W, IW, DG, AW, or UE has not been entered.

### 8.1.5 S/U - Satisfactory/Unsatisfactory Grade

A grade of S or U may be given in certain designated courses. A grade of S indicates a pass and a grade of U signifies unsatisfactory performance. S and U carry no quality points and do not affect the GPA. S and U grades will not be converted to standard or traditional letter grade, viz: A, B, C, D, and F.

#### 8.1.6 W - Withdrawal

A W is assigned when a student officially withdraws from a course by completing the necessary forms before the date stipulated in the Academic Calendar as the last day to drop a class with a W. After this date an F is assigned if a class is dropped. To apply for a W the student downloads the Add/Drop form from the website, obtains all the necessary signatures and submits the form to the Registrar's Office..

### 8.1.7 AW - Administrative Withdrawal

An AW is awarded when a student is suspended or expelled from the university. An AW is also awarded when a student takes more than the allowed time to finish a DG.

### 8.1.8 UE – Uncleared for Examination

UE is automatically assigned to a student who has met all course requirement (attendance, tests, labs, field trips, etc.)

but fails to get an exam pass to sit the final examination because of failure to clear his/her school fees.

The UE is removed when the student sits for a special examination for the course he/she missed, upon proof of financial clearance. The grade is submitted by the Department Chairperson to the Registrar's Office.

The UE must be cleared within the next two subsequent semesters/three trimesters. Failure to do so will result in the UE being replaced with an F grade which goes to the permanent record of the student. The student will have to repeat the course as per the Repeat Policy.

### **8.2 GRADE POINT AVERAGE (GPA)**

This number is calculated by dividing the total grade points by the number of credit hours. Only A to F grades are used in computing the GPA and transfer credits are not included. If a student repeats a course, the grade obtained will be used to compute the GPA.

### **8.3 CHANGE OF GRADE**

Upon receipt of a grade report the student should review it carefully for any errors or omissions. Any change of grade should be requested within two weeks of releasing grades or in the first two weeks of the new semester. No grade change will be approved unless it involves a computation or clerical error on the part of the lecturer. Grade changes are allowed for Incomplete and Deferred Grades. Before a grade change is made on the student's record, the lecturer must download the Change of Grade form from the website. The form must be signed by the lecturer, the Department Chairperson, the Dean of the School and the Registrar. The new grade must be approved by the Academic Standards Committee except for incomplete and deferred grades.

A student is not permitted to attempt to improve the grade earned in a course by additional examinations and/ or projects. Similarly, an independent study course will not be used to make up for an unsatisfactory grade in a regularly scheduled class.

#### **8.4 REPEATING COURSES**

A course in which a student has earned a grade of C- or better may be repeated only by permission of the Academic Standards Committee except where the minimum required grade for a given course is higher than C- and a student's grade is less than the minimum acceptable grade in which case the first repeat does not require the Academic Standards Committee approval. A student who has earned a grade of F or D in a course taken for a major, minor, cognate or specialization must repeat the course. No student will be allowed to graduate with a grade of F in any required course including general education requirements except where a student takes an equivalent course and earns an acceptable grade. The F grade will then be suppressed. A course may be repeated only once. If a student wishes to repeat a course more than once, he/she must petition through

the Academic Standards Committee for approval. The Academic Standards Committee will approve a maximum of four attempts. Thereafter, the student will be advised to change major or be deregistered.

Petition forms can be obtained from the UEAB website. The completed forms with required signatures must be returned to the Registrar's Office before the registration date of the semester when the course to be repeated is intended to be taken. A student must not register to repeat a course until an approval is given in writing.

The grades earned in all attempts remain on the student's permanent record, but in computing the cumulative GPA, the credits and points of the last grade earned will be used.

In a sequence type course, a student who earns an F or W for one semester must repeat that course before being permitted to enroll or remain enrolled in subsequent part of the courses in that sequence. In some sequence courses, a grade of C- or better is required in order to register for the subsequent semester. This applies to core courses and those in the major, cognate, minor or specialization area of study. Otherwise, the student may register for the subsequent semester with a grade of D.

### **9.0 Transfers**

### 9.1 INTERDEPARTMENTAL TRANSFERS FOR ALL UNIVERSITY STUDENTS

A student wishing to transfer to another department may formally request to do so upon consultation with the chairperson of the current department and that of the new department he/she wishes to transfer to, and on getting written consent from the sponsor/parent/ guardian.

### 9.1.1 Qualifications for Interdepartmental Transfers

- Students may qualify to transfer to a department by fulfilling the department's requirements which they did not initially have when they first enrolled at the University.
- 2. The student must check with the Department Chairperson of the new department who will advise the student whether he/she is qualified to transfer to the new department or not by ensuring that the prerequisites of the department he/she wishes to transfer to have been met.

### 9.1.2 Procedure

- 1. The student obtains the interdepartmental transfer form from the University website and completes it accordingly.
- 2. When the student has completed the form, he/ she obtains the signatures of the following:
  - a. The Chairperson of the Department to which he/she intends to transfer;

- b. The Chairperson of the Department from which he/she is transferring;
- c. The Dean of the School to which he/she is transferring;
- d. The Dean of the School from which he/she is transferring from.
- 3. The student obtains a letter from his/her sponsor approving of the change of program
- 4. The student returns the form to the Registrar's Office for processing.
- 5. The Registrar effects the transfer and informs the student and the affected departments and schools.

### **9.2 TRANSFER CREDITS**

Students who have attended other accredited institutions of higher learning and want to transfer coursework into their program at UEAB must submit their complete transcripts of studies. Such transfer credit will not enter into GPA calculation but can be counted toward degree requirements. The following stipulations apply:

- 1. A grade of C+ or its equivalent or better may be accepted, and the overall GPA on all previous college work must be at least C (plain).
- All upper-division courses (300 and above) in the student's major must be taken at UEAB. Any exception must be approved by Academic Standards Committee.
- 3. The credits accepted for transfer shall not exceed 30 semester credits. Such credits will not be used to calculate the GPA.
- 4. Students transferring from sister institutions may transfer more than 30 credits upon the approval of the Academic Standards Committee.
- 5. Transfer credit may not be accepted until a student has successfully completed one semester in residence.
- If a transfer student requests a transcript from the University of Eastern Africa, Baraton before he/she graduates, credits from previous institutions attended are not listed on the transcript.
- 7. Transfer credits that are not requested for within two semesters of student's admission to UEAB may not be accepted.
- 8. All credits to be transferred must be presented to Academic Standards Committee at one time. Transfer requests presented after the initial transfer request has been voted may not be accepted.
- 9. Approval by the Academic Standards Committee is required if a student wishes to take any course in another institution while registered at the University of Eastern Africa, Baraton with the aim of transferring the credits to UEAB.
- 10. Regardless of the number of transfer credits accepted, a student must meet the general residence requirements at the University of Eastern Africa, Baraton.
- 11. No transfer of credits after a lapse of eight (8) years will be accepted.

### 9.2.1 Documents for Credit Transfer

- Each transfer student after one semester of residence at UEAB may apply to the Department Chairperson for transfer of credits by submitting the Transfer of Credits Request form from the UEAB website.
- Along with official transcripts, the student also must submit course syllabus or bulletin sections of his/her previous college or university (if not available in Registrar's Office) relevant to courses seeking transfer.

### 9.2.2 Procedures

- 1. The Department Chairperson will consult the relevant department chairpersons on course content and number of transferable credits.
- 2. The departmental committee, in consultation with the school dean recommends to the Registrar the number of credits acceptable for transfer.
- 3. Transfer of credits is effected only after the approval of the Academic Standards Committee.
- 4. The Registrar notifies the student the number of credit hours that are transferred. Copies of the letter will be sent to the relevant Department Chairpersons and School Deans.

### 9.3 CORRESPONDENCE COURSES

A student may request to take up to a total of six (6) semester credit hours from an open university. Andrews University through the School of Distance Education in Berrien Springs, Michigan, USA, offers a number of courses which fit well into the curriculum followed at the University of Eastern Africa, Baraton, and are recommended for students in need of correspondence credits. Correspondence credits are not accepted in a student's major field unless it is established that it is a course the student needs but is not offered at the University. Correspondence courses will not replace a failed course, or other low grades earned at UEAB.

The permission of the Academic Standards Committee is required before a student may enroll in a correspondence course. Upper-division courses may not be met by correspondence courses.

To apply for a correspondence course the student must:

- 1. Check with your major academic advisor to determine whether the course you wish to do through correspondence will be accepted towards the graduation requirements .
- 2. Obtain a petition blank form from the Registrar's Office.
- 3. Complete the form and obtain the required signatures in the order they appear.
- 4. Return the completed form to the Registrar's Office.
- 5. Wait for a written approval from the Academic Standards Committee before you apply for any correspondence course.
- Once approval is given, it is solely your responsibility to request the school offering the correspondence course to forward the grade directly to the Registrar.
- 7. No correspondence grades less than C will be accepted.

### **10.0** Academic Awards

The University has an Honors Convocation during the second semester that honors the academic achievement of its students.

### **10.1 DEANS LIST**

Students qualify to be on the Dean's List by meeting the following criteria:

- 1. Be registered for 16 semester/12 trimester credits or more in either of the previous two semesters/ trimesters
- 2. Earn a GPA of 3.50 or higher during that semester/ trimester
- 3. Have no grade lower than a B- during that semester/ trimester
- 4. Have no grade of IW or UE during that semester/ trimester

### **10.2 HONOR ROLL**

Students qualify to be on the Honor Roll by meeting the following criteria:

- 1. Be registered for 16 credits/12 trimester credits or more in both of the previous two semesters/trimesters
- 2. Earn a GPA of 3.50 or higher during both semesters/ trimesters
- 3. Have no grade lower than a B- during both semesters/ trimesters
- 4. Have no grade of IW or UE during both semesters/ trimesters

### **10.3 SPECIAL AWARD**

Students qualify for a Special Award by meeting the following criteria:

- 1. Be registered for 16 semester/12 trimester credits or more in each of the previous three semesters/ trimesters
- 2. Earn a GPA of 3.50 or higher during each of the previous three semesters/trimesters
- 3. Have no grade lower than a B- for all of the previous three semesters/trimesters
- 4. Have no grade of IW or UE during all three of the previous semesters/trimesters

### **11.0 Academic Dishonesty**

### 11.1 DEFINITION OF ACADEMIC DISHONESTY

Academic dishonesty includes such things as plagiarism, forging signatures, using notes or textbooks during quizzes or examinations when not authorized, copying or looking at the test or paper of another student, aiding another student, use of mobile phone or any electronic information retrieval device or any other act that may be interpreted as constituting dishonesty in an examination (formal or take-home examination). Any academic dishonesty may result in a failing grade for the course, dismissal from the University, or any other disciplinary action deemed appropriate by the University. Forging signatures may be subject to criminal prosecution.

UEAB subscribes to its core values. All violations of the policy are violations of the value of honesty but may also create questions related to trust, fairness, respect, and responsibility. The violations of policies regarded as academic dishonesty listed below are typical, but not exhaustive, examples of the acts that constitute breaches of the policy.

- 1. Cheating: Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise. Cheating includes but is not limited to unauthorized copying from the work of another student, using notes or other materials not authorized during an examination, giving or receiving information or assistance on work when it is expected that a student will do his/her own work, or engaging in any similar act that violates the concept of academic integrity. Cheating may occur in an examination, test, quiz, laboratory work report, theme, out of class assignment or any other work submitted by a student to fulfill course requirements and presented as solely the work of the student.
  - a. "Spontaneous" cheating includes such violations as copying from another student's work
  - b. "Non-Spontaneous" cheating includes the following as typical but not exclusive examples: Premeditated copying individually or in conspiracy to copy from another student's work, obtaining unauthorized copies of the examination to be administered prior to the time of examination, employing unauthorized materials during any academic exercise
- 2. Plagiarism: Representing the words of another, as one's own in any academic exercise. Plagiarism may occur on any paper, report, or other work submitted to fulfill course requirements. This includes submitting work done by another, whether a commercial or noncommercial enterprise, including websites, as one's own work.
  - a. Failure to cite references includes intentional or obvious failures to properly cite sources.
  - Submitting, as one's own, work done by or copied from another including work done by a fellow student, work done by a previous student, or work

done by anyone other than the student responsible for the assignment.

- 3. Misuse of Academic Resources: the intentional use, misuse or alterations of University materials or resources so as to make them inaccessible to other users. Such misuse includes the unauthorized use of computer accounts, alteration of passwords, violation of library procedures or other intentional misuse or destruction of educational materials.
- 4. Falsification: Intentional and unauthorized falsification or invention of any information or citation in an academic exercise. Falsification includes knowingly reporting data, research, or reports so that either the process or the product is shown to be different from what actually occurred; falsely reporting having met responsibilities of attendance or participation in class, practicum, internship, clinical, or other types of field work experience; or submission of falsified excuses for attendance or participation in such experiences. Falsification also includes submitting work to meet the requirements of one course when it was done, in whole or in part, to meet the requirements of another course.
- 5. Use of unauthorized electronic gadgets such as calculators, cell phones, etc. in examination halls.
- 6. Facilitating academic dishonesty: Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty. Facilitating academic dishonesty includes acts that may not directly benefit the accused but assist another student in violations of the Policy.

### 11.2 PROCEDURE FOR REPORTING DISHONESTY

- 1. Final. Special. Supplementary Examinations: Dishonesty in examinations shall be brought to the attention of the chief invigilator of the examination. Clear evidence must be submitted to the Academic Standards Committee through the Office of the Registrar for action. The student will be suspended for one semester or more depending on the gravity of the offense. Nursing students in the trimester system will be suspended for two trimesters or more. The decision made will be conveyed to the students by the Registrar and copied to his/her Department Chairperson, his/her Dean of the School, the Deputy Vice Chancellor Student Affairs and Services, the Deputy Vice-Chancellor Academics and the student's sponsor/parent. In case of discontinuation, the recommendations of the Academic Standards Committee are made to the Senate, through the Administrative Board.
- Continuous Assessment: Dishonesty in continuous assessment shall be handled by the instructor and be brought to attention of the Department Chairperson. Any decision made by these two shall be conveyed to the student by the Department Chairperson.
- If a faculty member catches/suspects other academic dishonesty other than listed above (1 & 2), he/she should submit an evidence in writing to the

Registrar through the school dean and head of the department concerned.

- a. Proper investigation will be done before bringing the matter to the Academic Standard Committee.
- b. The student caught/suspected of being involved in the academic dishonesty will be given a proper hearings.
- After studying the offense with the DVC Academics, the Registrar presents the matter to the Academic Standard Committee.
- Depending on the degree of offense, the Academic Standards Committee gives probation, suspension, or recommends the dismissal of the offender to the administrative board.
- If the student feels that the decision of the Academic Standards Committee is unfair, then the student can appeal to the Vice-Chancellor within 14 working days of receiving the letter of suspension.

### **12.0 Academic Probation, Suspension, and Dismissal**

### **12.1 ACADEMIC PROBATION**

- Any student whose cumulative GPA falls below 2.00 at the end of a semester is placed on academic probation.
- 2. A student who is on academic probation should normally register for 9 credits in a regular semester and six (6) credits for school-based/part-time students. Carrying a higher load may jeopardize chances of attaining the grades necessary to make proper academic progress. On the other hand, carrying a lower load may jeopardize chances to attain sufficient quality points to raise the GPA to the required level within the time limits specified. Grades earned on a lower course load also may not be significant indicators of academic ability.
- If the student's cumulative GPA is still below 2.00 after two more consecutive semesters, he/she becomes subject to suspension from the University for academic reasons for one semester or two trimesters for nursing students.

### **12.2 ACADEMIC SUSPENSION**

Students become subject to Academic Suspension for any of the following reasons:

- 1. By engaging in any form of academic dishonesty as described in 11.1.
- By obtaining a GPA of below 2.00 for two consecutive semesters/trimesters:
  - a. A student who has been suspended for scoring below required GPA may reapply after one semester/two trimesters has/have elapsed. However, he/she may reapply after one semester

of suspension if his/her GPA was 2.50 in each of the two consecutive semesters/trimesters prior to suspension.

- b. A student who is readmitted will be placed on probation and advised to limit his/her cocurricular activities.
- 3. If a student is suspended two times for scoring below GPA required reasons, he/she will be advised to change his/her major. If the same student is placed on academic suspension in the new program, he/she will be subject to dismissal.
- A student who is suspended for academic dishonesty reasons can re-register after one semester/ two trimesters or after completing the period of suspension.

### **12.3 ACADEMIC DISMISSAL**

Students become subject to academic dismissal in any one of the following ways:

- 1. By earning a grade point average of 0.5 or less during a given semester/trimester
- 2. By failure to reach a grade point average of 2.0 for two successive semesters/trimesters
- By displaying a high degree of irresponsibility in matters such as class attendance and homework assignments among other things.
- 4. By engaging in any form of academic dishonesty as described in 11.1.

The Academic Standards Committee after reviewing the student's performance will recommend the student's dismissal to the Administrative Board.

### **12.4 ACADEMIC GRIEVANCES**

- General Procedure: Any student who wishes to express concern regarding instructional matters such as perceived unfair grading, cheating or general misunderstanding, should confer with the instructor.
- 2. If the problem cannot be solved at the instructor level, the student can then go to the department chairperson. If the problem is not solved by the department chair, the student can then go to the dean of the school. If the matter is not solved by the dean, the student can appeal to the Deputy Vice-Chancellor, Academics.
- 3. Any complaint to the Deputy Vice-Chancellor, Academics, must be made in writing through the Chairperson and Dean of School, except for request for remark of examination where a form shall be used as outlined above. The complaint must be made within the first two weeks of the semester. Grievances that involve unfair grades that do not reach DVC Academics Office within the period stipulated above will not be accepted.



### **13.1 REQUEST FOR GRADUATION**

A request for graduation must be made on an official Graduation Application and Agreement form one calendar year before the expected date of graduation.

On this form the student will outline a program of study for his/her final year showing that all requirements are met by the proposed graduation date. The outline must be approved by the student's Academic Advisor, Department Chairperson, his/her Dean of School and the Registrar and will be filed in the Registrar's Office. After this, no changes may be made without the approval of the Academic Advisor, Department Chairperson, Dean of the School, and Registrar.

### **13.2 GRADUATION REQUIREMENTS**

The requirements that apply to the various bachelor's degrees may be summarized as follows:

- 1. A Core or Concentration
- 2. Cognates: If specified in the requirements of the student's major department.
- A Minor is required for Bachelor of Arts degrees unless exempted.
- 4. General requirements as outlined for the degree being sought.
- Electives: If, after having taken all specifically required classes, a student still has less than a minimum of 120 credit hours, elective courses are chosen from any area in consultation with the major advisor to fill out the minimum 120 credit hours.
- Upper-division credit hours: Among his/her courses a student must include a minimum of 30 credits of upper-division courses (courses numbered 300 and above) in the major or cognate areas.
- 7. GPA requirements are as follows:
  - a. Grades of less than C- will not apply for a Core, Concentration, Minor, Cognates or Electives. Some departments like Nursing and Medical Laboratory Sciences require higher grades than C-. It is the student's sole responsibility to check the grades required by his/her department to qualify for graduation.
  - b. A GPA of 2.25 is required for a Core and Concentration except for the programs that specify a higher GPA.
  - c. A GPA of 2.00 is required for Minors and Cognates.
  - d. A minimum cumulative GPA of 2.00 is required on a student's total credit hours to graduate.
- Finish all coursework by the end of inter-semester in order to be considered for graduation. All grades including fieldwork/attachment grades must have been received by the end of inter- semester.
- Participate in the graduation exercise. Graduation Ceremony at UEAB includes the consecration, baccalaureate and commencement services in which all graduands are required to participate.

### 13.3 PARTICIPATION IN GRADUATION EXERCISES

Before a student participates in the graduation exercise and receives his/her degree certificate, the student:

- 1. Must have a completed Graduation Application signed by the Registrar on file in the Registrar's Office;
- 2. Must have completed all relevant requirements for the degree by the end of the second semester;
- Must have official transcripts of any transfer credits, including correspondence credits, in the Registrar's Office at least three months prior to the intended date of graduation;
- 4. Must have been given financial clearance by the Business Office;
- 5. Must have been given academic clearance by the Department, School, and Senate;
- 6. Must have been cleared by the office of the Deputy Vice- Chancellor - Student Affairs and Services.
- 7. Must attain verification and clearance from the Registrar's Office and have his/her name included on the list of students cleared for graduation.

### **13.4 GRADUATION IN ABSENTIA**

All graduands are expected to attend and to participate in the graduation ceremony unless permission is granted to graduate in absentia by the Senate. Permission should be sought at least one semester before graduation. Permission will be granted only in cases of genuine reasons. Graduation fee will nevertheless be charged.

### **13.5 GRADUATION WITH HONORS**

A student is graduated with academic distinction if the following conditions are met:

- 1. At least 80 semester credits with traditional letter grades earned in residence.
- 2. A cumulative GPA of 3.75 and above: Summa Cum Laude (A golden sash to be worn on graduation day).
- 3. A cumulative GPA of 3.50 3.74: Magna Cum Laude (A silver sash to be worn on graduation day).
- 4. A cumulative GPA of 3.00 3.49: Cum Laude (A bronze sash to be worn on graduation day).

### **13.6 DEGREE CLASSIFICATION**

UEAB uses Cum Laude System in classifying its degrees as follows:

Class	GPA
Summa Cum Laude	3.75 - 4.00
Magna Cum Laude	3.50 - 3.74
Cum Laude	3.00 - 3.49
Pass	2.00 - 2.99

The equivalent in the English System is as follows:

Class	GPA
First Class	3.67 - 4.00
Second Class Upper	3.00 - 3.66
Second Class Lower	2.67 – 2.99
Pass	2.00 - 2.66

With effect from the 2017/2018 academic year, the Cum Laude System of degree classification will no longer be used. It will be replaced by the English System.

### **13.7 POSTHUMOUS DEGREE**

To recognize the hard work of students who may be deceased while studying, the University of Eastern Africa, Baraton awards a posthumous degree to such students. A student who has completed a minimum degree requirement (about 75% of the requirement) but deceased before graduation may be considered a candidate for a posthumous degree. Such student must be nominated by the chairperson of the department in which the student was enrolled at prior to his or her death. Request for the posthumous degree must reach the office of the Registrar for voting by the Senate.

If the posthumous degree is voted by the Senate:

- 1. The chairperson of the department of the deceased student contacts the relative of the student to be present on the commencement service to receive the degree/diploma or certificate.
- The student's name will be listed in the commencement program parenthetically noted "Posthumous." Posthumous degrees will not be backdated.
- 3. On the diploma, the words, "awarded posthumously" will be printed.
- 4. On the transcript, it will be noted that it is a posthumous degree.

### **13.8 SUBSEQUENT DEGREE CANDIDACY**

The University of Eastern Africa, Baraton, may grant more than one baccalaureate degree to an individual. However, a student may qualify for only one degree at a time and not more than one degree is conferred on any student on a given graduation. When a student returns after graduation with one degree to complete another major/degree, he/she may graduate with that major/ degree as follows:

- 1. All individuals seeking subsequent bachelor's degree(s) must apply and obtain approval of the Academic Standards Committee.
- 2. All requirements for subsequent bachelor's degree(s) being sought must be fulfilled.
- 3. Credits earned in General Education Requirements may apply for a subsequent bachelor's degree(s).
- 4. Electives earned in the previous Bachelor's degree will not apply in the subsequent Bachelor's degree(s).

For more details, please see any of the following: Academic Department Chairperson, Dean of School, Academic Standards Committee Chairperson, or the Registrar.

### **14.0 Course Abbreviations**

The following course abbreviations are used in the Bulletin.

ABBR	SUBJECT AREA	DEPARTMENT
ACCT	Accounting	Accounting
AGEC	Agriculture	Biological Sciences and Agriculture
AGEN	Agriculture	Biological Sciences and Agriculture
AGRI	Agriculture	Biological Sciences and Agriculture
ANSC	Animal Science	Biological Sciences and Agriculture
ARCH	Archaeology	Humanities and Social Sciences
AUBO	Automotive Engineering	Technology
AUTO	Automotive	Technology
BIBL	Biblical Languages	Theology and Religious Studies
BIOL	Biology	Biological Sciences and Agriculture
BIOT	Biotechnology	Biological Sciences and Agriculture
BOTN	Botany	Biological Sciences and Agriculture
CHEM	Chemistry	Math, Chemistry, and Physics
CLSC	Clinical Laboratory Science	Medical Laboratory Science
СММТ	Electricity and Electronics	Technology
CNST	Construction	Technology
COEM	Electronic Communication	Humanities and Social Sciences
COMM	Communication	Humanities and Social Sciences
COMP	Computer	Technology
COPA	Public Relations	Humanities and Social Sciences
СОРМ	Print Media	Humanities and Social Sciences
COSC	Computer	Information Systems and Computing
CPSC	Crop and Soil Science	Biological Sciences and Agriculture
DEST	Development Studies	Humanities and Social Sciences
DTCS	Dietetics	Foods, Nutrition and Dietetics
ECON	Economics	Management
EDAD	Educational Admin	Education
EDFO	Educational Foundations	Education
EDPC	Educational Psychology	Humanities and Social Sciences
EDTE	Teacher Education	Education
EDTM	Teaching Method	Education
EDUC	Education	Education
ELCT	Electronics	Technology
ENGL	English	Humanities and Social Sciences
ENVI	Environmental Studies	Humanities and Social Sciences
FDNT	Foods Science	Foods, Nutrition and Dietetics
FNCE	Finance	Accounting
FREN	French	Humanities and Social Sciences
FTXD	Fashion and Design	Foods, Nutrition and Dietetics
GCAS	General Studies	Humanities and Social Sciences
GEOG	Geography	Humanities and Social Sciences
HIST	History	Humanities and Social Sciences
HLED	Health Education	Nursing
HORT	Horticulture	Biological Sciences and Agriculture
HTGM	Hotel Management	Foods, Nutrition and Dietetics
INEL	Electronics	Technology
INSY	Information System	Information Systems and Computing
KISW	Kiswahili	Languages and Literature
LITE	Literature	Languages and Literature
MATH	Mathematics	Mathematics and Physics
MECT	Drafting Technology	Technology
MGMT	Management	Management
MKTG	Marketing	Management

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MTLS	Metal Technology	Technology
MUCO	Music Conducting	Music
MUCT	Music Theory	Music
MUED	Music Education	Music
MUHL	Music History and Literature	Music
MUPF	Music Performance	Music
MURE	Church Music	Music
NRSG	Nursing	Nursing
NUTR	Nutrition	Foods, Nutrition and Dietetics
OFAD	Office Administration	Management
OFTE	Secretarial Studies	Management
PEAC	Physical Education	Education
PHEH	Environmental Health	Public Health
PHEP	Epidemiology	Public Health
PHHC	Community Health	Public Health
PHNT	Health Nutrition	Public Health
PHYS	Physics	Mathematics, Chemistry, and Physics
POLS	Political Science	Humanities and Social Sciences
PSYC	Psychology	Humanities and Social Sciences
RELB	Religion-Biblical Studies	Theology and Religious Studies
RELH	Religion-Historical Studies	Theology and Religious Studies
RELP	Religion-Practical Studies	Theology and Religious Studies
RELT	Religion-Theological Studies	Theology and Religious Studies
SDEV	Electronics	Technology
SOCI	Sociology	Education
STAT	Statistics	Mathematics, Chemistry, and Physics
SWFI	Social Work	Foods, Nutrition and Dietetics
SWFC	Social Work	Foods, Nutrition and Dietetics
SWHS	Social Work	Foods, Nutrition and Dietetics
SWCA	Social Work	Foods, Nutrition and Dietetics
SWPC	Social Work	Foods, Nutrition and Dietetics
TCED	General Technology	Technology
TCEM	Engineering Mathematics	Technology
WOOD	Wood Technology	Technology
ZOOL	Zoology	Biological Sciences and Agriculture



# School of Business



### **School of Business**

DEAN – Professor C. Banaga

### **PHILOSOPHY**

The School of Business is committed to train and develop future business professionals who are fortified with spiritual and moral strength and virtues and academically prepared to enable them to function in their respective profession as managers, businessmen, entrepreneurs, treasurers, controllers, auditors, accountants, office administrators, computer professionals, information technologists, software engineers, network managers, business instructors, and other related responsibilities in denominational work, in private business industry, government service and service to humanity. They are envisioned to be effective agents for economic growth and development.

#### MISSION

The mission of the School of Business is to inculcate and impart Christian values and academic/professional competence for better service to God and humanity in this world in preparation for greater service in the world to come in all business and related fields.

#### VISION

The vision of the School of Business is to be one of the leading business schools that produce competent and committed business professionals who will make a difference in the way business is conducted in today's world.

#### **OBJECTIVES**

As the School of Business strives to accomplish the ideals expressed in the preceding philosophy, vision and mission, the following are its objectives:

1. To train high caliber business professionals with sound ethical orientation.

- 2. To influence positively the business environment through interaction and consultancies.
- 3. To prepare the students for the second coming of Jesus Christ.

### **DEGREES OFFERED BY THE SCHOOL**

### Masters

- 1. Master of Business Administration (MBA) in Accounting
- 2. Master of Business Administration (MBA) in Business Management
- 3. Master of Business Administration (MBA) in Human Resource
- 4. Master of Business Administration (MBA) in Finance
- 5. Master of Business Administration (MBA) in Management Information Systems

### **Bachelors**

- 1. Bachelor of Business Administration (BBA) in Accounting
- 2. Bachelor of Business Administration (BBA) in Finance
- 3. Bachelor of Business Administration (BBA) in Management
- 4. Bachelor of Business Administration (BBA) in Marketing
- 5. Bachelor of Business Administration (BBA) in Office Administration
- 6. Bachelor of Business Information Technology (BBIT)
- 7. Bachelor of Science (BSc) Networks and Communication Systems
- 8. Bachelor of Science (BSc) Software Engineering

### Minors

- 1. Minor in Accounting
- 2. Minor in Economics
- 3. Minor in Finance
- 4. Minor in Management
- 5. Minor in Marketing

### **DEPARTMENT OF ACCOUNTING AND FINANCE**

#### FACULTY

Bwonda, D., MBA., (Head of Department) Balyage, E MBA. Oganga, Jeff, MBA. Ongeta, J., PhD., CPA

Email: hod\_accounting@ueab.ac.ke

### PHILOSOPHY

The Department of Accounting and Finance is committed to train and develop future business professionals who are fortified with moral strength and virtues, to prepare them academically to function in their respective professions, and equip them to be effective agents for economic growth and development and yet lead them towards the restoration of their relationship with God, the Creator and Sustainer, which was estranged by sin.

### **MISSION**

The fundamental mission of the Department is the provision and advancement of a Christian educational experience for students pursuing careers in accounting and finance in order to equip them with necessary skills for service to God and humanity.

### VISION

The vision of the Department is to provide one of the best programs in accounting and finance in Africa and the rest of the world.

### DEGREE AND PROFESSIONAL COURSES OFFERED BY THE DEPARTMENT

- 1. Bachelor of Business Administration in Accounting
- 2. Bachelor of Business Administration in Finance

- - 3. Minor in Accounting
  - 4. Minor in Finance
  - 5. Certified Public Accountant

### ACCOUNTING OPTION EXPECTED LEARNING OUTCOMES

The academic programs of the Department of Accounting and Finance are particularly designed to achieve the following outcomes

- 1. Explain concepts and principles of business records used in accounting cycle; Explain the accounting principles and concepts and the accounting life cycle
- 2. Identify books of accounts including journal, ledger, income and expenditure, balance sheet and cash flows
- 3. Prepare and analyze liability and 'stockholders' equity accounts
- 4. Prepare budgets for profit making and non-profit making organizations
- 5. Design and evaluate accounting information systems
- 6. Analyze internal control systems of an organization and decision making mechanisms
- 7. Describe accounting changes and carry out error analysis
- 8. Prepare and interpret financial statements for profit and non-profit making organizations;
- 9. Discuss auditing theories, standards and ethics
- 10. Compare organizational accounting theory with practice

### FINANCE OPTION EXPECTED LEARNING OUTCOMES

By the end of the degree program in finance, the learner should be able to:

- Define such terms as finance, money, money market, stock exchange, financial market, financial instruments, financial planning, investments, insurance needs, consumer credit, balance of trade and balance of payment
- 2. Explain the process of financial planning, money management, and investment
- 3. Discuss financial portfolio theory, capital pricing models, and asset pricing models
- 4. Analyze financial statements, bond and stock valuation
- Project cash flow analysis, risks in capital budgeting, and optimal capital budget
- 6. Examine financial management issues that confront depository financial service firms
- 7. Carry out research on financial analysis, projections, and utilization of specific institutions
- 8. Demonstrate professional ethics and accountability in the process of managing financial resources
- 9. Write a proposal aimed at soliciting finance for either a public or a private institution or organization or business enterprise

### CAREER OPPORTUNITIES FOR ACCOUNTING AND FINANCE GRADUATES

A graduate in accounting and/or finance has a wide variety of career opportunities. The Department prepares, equips, trains and develops the students for career possibilities in business and industry, hospitals, schools, universities, religious and not-for-profit institutions, public accounting, proprietorship, government service, and in many other recognized organizations. It is a common observation that almost every organization has accounting and/or finance personnel among the ranks of its officers and employees. The graduate may become an accountant, controller, treasurer, manager, financial analyst, chief executive officer, investment consultant, tax advisor, purchasing or marketing officer, production supervisor, or handle any business-related position in the afore-cited organizations.

### **ENTRANCE REQUIREMENTS**

### **DIRECT ENTRY**

An applicant who scores on the KCSE a minimum of C or its equivalent, in both English and Mathematics, in addition to meeting the entrance requirements of the University, may be considered to pursue either a Bachelor of Business Administration in Accounting or Finance, or a minor in Accounting or Finance.

### INTERDEPARTMENTAL TRANSFER

A student wishing to transfer from other departments of the University, but has not met the direct entry requirements, may be allowed to transfer provided he/she has an average grade of at least C+ in MATH 113 and 114 and an average grade of at least C+ in ENGL 105 and ENGL 106.

### **GRADUATION REQUIREMENTS**

In addition to the graduation policy of the University as outlined in this bulletin, the Department of Accounting recommends a student for graduation to the School of Business Board and to the Senate upon completion of the following requirements:

- 1. A minimum overall GPA of 2.00.
- 2. A minimum GPA of 2.25 for the business core, specialization, cognate, and minor area.
- 3. A minimum GPA of 2.00 for electives.
- 4. A minimum of twelve (12) continuous weeks of practical experience in a well-established company.
- 5. A minimum average grade of B- in Practical Experience courses.

### **Course Listing**

### BACHELOR OF BUSINESS ADMINISTRATION IN ACCOUNTING

### **SUMMARY**

Total	143 Credits
Electives	6
Cognates	6
Specialization	39
Core Courses	63
General Education Requirements	29

Accounting students are exempted from the following General Education Requirements

INSY 107	Information Technology Today	2
MGMT 103	Basic Management and Entrepreneur	2
	Skills	
ENGL 106	Speech Communication	1
MATH 100	Foundations of Mathematics	3
AGRI 105	Principles of Agriculture Technology	2
ENVI 227	Environment and Society	2
	Total 12 Cro	edits

GENERAL	EDUCATION REQUIREMENTS 29 Cred	its
ENGL 105	Writing Skills	3
<b>KISW 114</b>	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
BIOL 105	Human Biology	2
<b>PHYS 100</b>	Concepts of Physical Sciences	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Any four credits from the following

HIST 111	Concepts of World Civilization Or	2	
HIST 119	Issues in Development Studies	2	
PSYC 101	Introduction to Psychology	2	
SOCI 121	Introduction to Sociology	2	
SWFI 207	Family Issues	2	

### Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE COU	JRSES 63 Credi	ts
ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
ECON 210	Principles of Microeconomics	3
ECON 211	Principles of Macroeconomics	3
ECON 310	Intermediate Microeconomics	3
ECON 315	Intermediate Macroeconomics	3
ECON 328	Money and Banking	3
FNCE 287	Principles of Finance	3
INSY 118	Introduction to Business Information Processing	3
INSY 305	Management information systems	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
MGMT 130	Fundamentals of Management	3
MGMT 141	Business Law I (Mercantile Law)	2
MGMT 142	Business Law II (Company Law)	2
MGMT 220	Business Statistics I	3
MGMT 221	Business Statistics II	3
MGMT 494	Business Research Methods	3
MKTG 115	Principles of Marketing	3
MKGT 380	Quantitative Techniques	3
OFAD 306	Business Communication	3

SPECIALIZ	ATION COURSES 39 Credits	S
ACCT 221	Intermediate Accounting I	3
ACCT 222	Intermediate Accounting II	3
ACCT 340	Cost and Managerial Accounting.	3
ACCT 360	Public Sector Accounting	3
ACCT 361	Taxation	3
ACCT 451	Advanced Accounting I	3
ACCT 452	Advanced Accounting II	3
ACCT 461	Auditing I	3
ACCT 462	Auditing II	3
ACCT 484	Practical Experience in Accounting I	1
ACCT 485	Corporate Internship in Accounting	2
ACCT 495	Accounting Research Project	3
FNCE 470	Financial Management	3
<b>INSY 318</b>	Accounting information Systems	3

### **SCHOOL OF BUSINESS**



COGNATE COURSES 6 Credit		ts
MGMT 231	Human Resource Management.	3
MGMT 475	Production and Operations Management	3

ELECTIVE COURSES 6 Credits		S
FNCE 291	Personal Finance	3
FNCE 467	Investment Analysis and Portfolio	3
	Management	
INSY 210	Database Management Systems	3
<b>INSY 305</b>	Management Information Systems	3
MGMT 358	Risk Management	3

# BACHELOR OF BUSINESS ADMINISTRATION IN FINANCE

## **SUMMARY**

General Education Requirements	27
Core Courses	63
Specialization	41
Cognates	6
Electives	6
Total	143 Hours

Students in finance are exempted from the following General Education Requirements:

INSY 107	Information Technology Today	2
MGMT 103	Basic Management and Entrepreneur Skills	2
ENGL 106	Speech communication	1
MATH 100	Foundations of Math	3
AGRI 105	Principles of Agriculture Technology	2
ENVI 227	Environment and Society	2
HIST 111	Concepts of World Civilization	2
	Total Exempted Credits	14

GENERAL EDUCATION REQUIREMENTS 27 Credits		its
ENGL 105	Writing Skills	3
<b>KISW 114</b>	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
BIOL 105	Human Biology	2
<b>PHYS 100</b>	Concepts of Physical Sciences	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## One classes from the following (2 credits)

PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE COUR	CORE COURSES 63 Credits	
ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
ECON 210	Principles of Microeconomics	3
ECON 211	Principles of Macroeconomics	3
ECON 310	Intermediate Microeconomics	3
ECON 315	Intermediate Macroeconomics	3
ECON 328	Money and Banking	3
FNCE 287	Principles of Finance	3
INSY 118	Introduction to Business Information	3
	Processing	
INSY 305	Management information systems	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
MGMT 130	Fundamentals of Management	3
MGMT 141	Business Law I (Mercantile Law)	2
MGMT 142	Business Law II (Company Law)	2
MGMT 220	Business Statistics I	3
MGMT 221	Business Statistics II	3
MGMT 494	Business Research Methods	3
MKTG 115	Principles of Marketing	3
MKGT 380	Quantitative Techniques	3
OFAD 306	Business Communication	3

SPECIALIZATION COURSES 41 Credits		
ACCT 221	Intermediate Accounting I	3
ACCT 222	Intermediate Accounting II	3
ACCT 340	Cost and Managerial Accounting.	3
ACCT 361	Taxation	3
FNCE 390	Financial Markets and Institutions	3
FNCE 455	International Finance	3
FNCE 467	Investment Analysis and Portfolio Mgmt.	3
FNCE 470	Financial Management	3
FNCE 473	Financial Derivatives	3



FNCE 474	Intermediate Corporate Finance	3
FNCE 475	Advanced Corporate Finance	3
FNCE 480	Management of Financial Institutions	3
FNCE 485	Corporate Internship in Finance	2
FNCE 495	Finance Research Project	3

COGNATE COURSES 6 Credits		its
ECON 420	Public Finance	3
<b>MGMT 475</b>	Production and Operations Management	3

ELECTIVE COURSES 6 Credit		its	
INSY 210	Database Management Systems		3
INSY 136	Microcomputer Applications		3
MGMT 231	Human Resource Management		3
MGMT 358	Risk Management		3

## MINORS

## PREREQUISITES FOR A MINOR IN ACCOUNTING OR FINANCE

22 Credits

A non-business student who desires a minor in accounting or finance should take the following prerequisites:

ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
FNCE 287	Principles of Finance	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
MGMT 130	Fundamentals of Management	3

## MINOR IN ACCOUNTING

24 Credits

CORE COU	RSES 15 Credi	ts
ACCT 221	Intermediate Accounting I	3
ACCT 222	Intermediate Accounting II	3
ACCT 340	Cost and Managerial Accounting	3
ACCT 451	Advanced Accounting I	3
ACCT 461	Auditing I	3

ELECTIVE (	COURSES 9 Credi	ts
ACCT 452	Advanced Accounting II	3
ACCT 462	Auditing II	3
ACCT 484	Practical Experience in Accounting I	1
FNCE 455	International Finance	3
FNCE 467	Investment Analysis and Portfolio	3
	Management	
FNCE 470	Financial Management	3
INSY 318	Accounting Information Systems	2
MGMT 475	Production and Operations Management	3
MGMT 494	Business Research Methods	3

## **MINOR IN FINANCE**

**27 Credits** 

CORE COU	CORE COURSES 15 Credit	
FNCE 287	Principles of Finance	3
FNCE 291	Personal Finance	3
FNCE 390	Financial Markets and Institutions	3
FNCE 467	Investment Analysis and Portfolio Management	3
FNCE 470	Financial Management	3
FNCE 480	Management of Financial Institutions	3

ELECTIVE COURSES 9 Credit		its
ECON 315	Intermediate Macroeconomics	3
FNCE 455	International Finance	3
MGMT 358	Risk Management	3
MGMT 475	Production and Operations Management	3



# **BACHELOR OF BUSINESS ADMINISTRATION IN ACCOUNTING**

# Four-Year Course plan

YEAR		FIRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
1st	ACCT 111	Fundamentals of Accounting I	4	ACCT 112	Fundamentals of Accounting II	4
150	MATH 113	Business Mathematics 1	3	MATH 114	Business Mathematics II	3
	PSYC 101/	Introduction to Psychology/	2	MGMT 130	Fundamentals of Management	3
	SOCI 121/	Intro to Sociology/		MGMT 142	Business law II	2
	SWFI 207	Family Issues		<b>RELT 207</b>	Christian Beliefs	3
	<b>RELH 155</b>	Adventist Heritage	2	HLED 110	Health Principles	1
	LITE 151 GCAS 107	Introduction to Literary Appreciation/ Music Appreciation	2	PHYS 100	Concepts of Physical Science	2
	MGMT 141	Business Law I	2	INSY 118	Introductions to Business Information Processing	3
	0FTE 120	Keyboarding	0		Vocational Skills	1
	PEAC 107	Physical and Recreational Activities	1		Total	22
		Total	19			
		Life and Teachings of Jacus	2		Introduction to Christian Ethics	2
	RELB 220	Life and Teachings of Jesus	2	RELT 255	Introduction to Christian Ethics	2
	ACCT 221	Intermediate Accounting I	3	ACCT 222	Intermediate Accounting II	3
	KISW 114/ Fren 103	Language use in Kiswahili/ Beginning French	2	ECON 211	Principles OF Macroeconomic	3
				MGMT 221	Business Statistics II	3
	ECON 210	Principles of Microeconomics	3	FNCE 287	Principles of Finance	3
	MKTG 115	Principles of Marketing	3	MGMT 231	Human Resource Management	3
	MGMT 220	Business Statistics I	3	EDUC 215	Introduction to Philosophy of Christian Education	
	HIST 119/ HIST 111	Issues in Development Studies/ Concepts of World Civilization	2	BIOL 105	Human Biology	2
		Total	16		Total	21
7 nd	ECON 310	Intermediate Microeconomics	3	ECON 315	Intermediate Macroeconomics	3
3rd	OFAD 306	Business Communications	3	MKTG 380	Quantitative Techniques	3
	INSY 305	Management Information Systems	3	ECON 328	Money and Banking & Financial Institutions	3
	ACCT 360	Public Sector Accounting	3	ACCT 361	Taxation	3
	ACCT 340	Cost and Managerial Accounting	3		An Elective	3
		An Elective	3		Total	15
		Total	18			
4th	MGMT 475	Production and Operation Management	3	ACCT 452	Advanced Accounting II	3
	ACCT 451	Advanced Accounting I	3	ACCT 462	Auditing II	3
	ACCT 461	Auditing I	3	ACCT 495	Accounting Research Project	3
	INSY 318	Accounting Information Systems	3	ACCT 484	Practical Experience in Accounting I	1
	MGMT 494	Business Research Method	3	ACCT 485	Corporate Internship in Accounting	2
	FNCE 470	Financial Management	3		Total	12
		Total	18			



# **BACHELOR OF BUSINESS ADMINISTRATION IN FINANCE**

# Four-Year Course plan

YEAR	l	FIRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
1st	ACCT 111	Fundamentals of Accounting 1	4	ACCT 112	Fundamentals of Accounting II	4
	ENGL 105	Writing Skills	3	MATH 114	Business Mathematics II	3
	MATH 113	Business Mathematics 1	3	MGMT 130	Fundamentals of Management	3
	PSYC 101/	Introduction to Psychology/	2	MGMT 142	Business law II	2
	SOCI 121/	Introduction to Sociology/		<b>RELT 207</b>	Christian Beliefs	3
	SWFI 207	Family Issues		HLED 110	Health Principles	1
	RELH 155	Adventist Heritage	2	PHYS 100	Concepts of Physical Science	2
	LITE 151/ GCAS 107	Introduction to Literary Appreciation/ Music Appreciation	2	INSY 118	Introduction to Business Information Processing	3
	MGMT 141	Business Law I	2		Vocational Skills	1
	OFTE 120	Keyboarding	0		Total	22
	PEAC 107	Physical and recreational Activities	1			
		Total	19			
Qued	RELB 220	Life and Teachings of Jesus	2	RELT 255	Introduction to Christian Ethics	2
2nd	ACCT 221	Intermediate Accounting I	3	ACCT 222	Intermediate Accounting II	3
	KISW 114/ FREN 103	Language use in Kiswahili/ Beginning French	2	ECON 211	Principles of Macroeconomic	3
	ECON 210	Principles of Microeconomics	3	MGMT 22	Business Statistics II	3
	MKTG 115	Principles of marketing	3	FNCE 287	Principles of Finance	3
	MGMT 220	Business Statistics I	3	EDUC 215	Introductions to Philosophy of Christian Education	2
		Total	16	BIOL 105	Human Biology	2
					Total	
7d	ECON 310	Intermediate Microeconomics	3	ECON 315	Intermediate Macroeconomics	3
3rd	OFAD 306	Business Communications	3	MKTG 380		3
	INSY 305	Management Information Systems	3	FNCE 390		3
	ACCT 340	Cost and Managerial Accounting	3	ECON 328		3
	AUUT 340				Institutions	
		Elective	3	ACCT 361	Taxation	3
		Total	15		An Elective	3
					Total	18
4th	MGMT 475	Production and Operation Management	3	FNCE 455	International finance	3
	FNCE 467	Investment Analysis & Portfolio Management	3	FNCE 480	Management of Financial Institutions	3
	FNCE 474	Intermediate Corporate Finance	3	FNCE 495	Finance Research Project	3
	MGMT 494	Business Research Methods	3	FNCE 475	Advanced Corporate Finance	3
	FNCE 470	Financial Management	3	FNCE 485	Corporate Internship in Finance	2
	FNCE 473	Financial Derivatives	3	ECON 420	Public Finance	3
		Total	18		Total	17

# **Course Descriptions**

#### ACCT 110 Bookkeeping and Accounting

A practical course which deals with how to keep personal accounts and financial records for professionals and merchandising concerns. Some of the topics covered are journalizing, posting to ledgers, adjusting accounts, and the preparation of income statements and balance sheets. The course is for non- business majors and it will be a zero credit for those who are intending to take Business as a major or minor.

#### ACCT 111 Fundamentals of Accounting I 4 Ci

4 Credits

2 Credits

A study of basic accounting concepts and principles; accounting records used in the accounting cycle; preparation of financial statements for service, professional, and trading enterprise. Topics dealing with cash control and receivables, accounting principles and control of inventories, prepaid expenses, investments, plant assets, and intangibles are also covered in this course.

#### ACCT 112 Fundamentals of Accounting II 4 Credits

As a continuation of Fundamentals of Accounting I the course deals with, liabilities and "stockholders" equity accounts. It also deals with partnership and corporate forms of business ownership and the accounting associated with such ownership, basic accounting concepts and principles in the area of Managerial Accounting, manufacturing accounting systems, standard costing, and the mechanism of planning, controlling, and decision making related to capital investments. Prerequisite: ACCT 111.

#### ACCT 221 Intermediate Accounting I

#### 3 Credits

A review of the basic accounting concepts and principles with the objective of acquiring broader perspective in the area of financial statement preparation, current assets, non-current assets and their related revenue accounts. It also covers the recent FASB pronouncements. Prerequisite: An average grade of C+ for Accounting majors and minors in ACCT 111 and ACCT 112.

#### ACCT 222 Intermediate Accounting II

## 4 Credits

As a continuation of Intermediate Accounting 1, the course includes current and non-current liabilities, stockholders equity and the related revenue and expense accounts and also the statement of changes in financial position. It also includes a study of accounting concepts and principles in miscellaneous topics such as accounting for pension and post-retirement benefits. Also covered in this course are accounting changes and error analysis, basic financial analysis and full disclosures in financial statements. Prerequisite: ACCT 221.

#### ACCT 340 Cost and Managerial Accounting 4 Credits

A study of cost determination, accumulation, and allocation procedures. The course covers the area of job order costing and process costing. It also covers standard costs, transfer pricing, differential cost and revenue analysis. A study of management planning, decision making, and control. Topics such as budgeting, variance analysis, cost volume profit relationships, and relevant costs for decision making are covered. It also includes performance evaluation decisions, capital expenditure decisions, planning and control in decentralized operations. Prerequisites: MGMT 220, MGMT 221, and ACCT 112.

#### ACCT 360 Public Sector Accounting

The study of fundamental accounting procedures used by government, hospitals, schools, welfare societies, clubs and churches. Topics covered include the analysis and interpretation of non-profit financial statements and fund accounting. Prerequisite: ACCT 222.

## ACCT 361 Taxation

A study of the general principles of income taxation as it applies to individuals, proprietorships and corporations, and the tax structures in Kenya. Students are required to prepare income tax returns for individuals and corporations. Value added tax, transfer tax, and other related topics are also covered in this course. The course may require a field trip. Prerequisite: ACCT 112.

#### ACCT 451 Advanced Accounting I

Advanced financial accounting theory with problems in consolidation and mergers. Inter-company transfer of assets, debt and security transactions, and consolidated financial statements are studied in this course. The equity method of accounting for investments in the securities of subsidiary companies together with the various patterns of equity ownership are emphasized. Prerequisite: ACCT 222.

#### ACCT 452 Advanced Accounting II 3 Credits

This is a continuation of Advanced Accounting I. A study of branch and consignment accounting, foreign currency accounting, partnership accounting, and accounting for non-profit organizations such as universities, hospitals and governments. Topics on international accounting and harmonization of accounting standards worldwide are also covered. Prerequisite: ACCT 451.

#### ACCT 461 Auditing I

The examination of financial statements as applied by internal and external auditors. Auditing theory, audit standards and professional ethics are covered in this course. Prerequisite: ACCT 221 and MGMT 221.

#### ACCT 462 Auditing II

A continuation of Auditing I, the course covers the detailed audit of the balance sheet accounts and the related revenue and expense accounts. Principles of internal control are emphasized. It also includes topics in operational and governmental audit. Practical audit problems and auditing in an electronic data processing environment are incorporated in this course. The course may require a field trip. Prerequisite: ACCT 461.

## ACCT 484 Practical Experience in 1 Credits Accounting I

This course provides a link between accounting theory and practice. The student is expected to accomplish a minimum of two practice sets in such areas as job costing, accounting for merchandising firms, partnerships, etc. Prerequisite: Junior standing in Accounting.

**3 Credits** 

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**3 Credits** 

**3 Credits** 

**3 Credits** 

**3 Credits** 

# ACCT 485 Corporate Internship in Accounting 2 Credits

The course is an internship program that prepares the student for the challenges of the workplace. The student must complete a total of twelve (12) continuous weeks of practical experience in a well-established company such as a bank, manufacturing or merchandising business, hospital, university, or an accounting/ auditing firm. Prerequisite: ACCT 484.

## ACCT 495 Accounting Research Project 3 Credits

This is a demonstration of a study in accounting conducted on an individual basis. It is an original piece of work on any accounting topic of interest approved and supervised by the instructor. A research paper or report is required. A seminar presentation may also be required. Prerequisites: Senior standing in Accounting and MGMT 494.

## **FNCE 287** Principles of Finance

#### **3 Credits**

This course is an introduction to financial management techniques. Topics include: forms of business organizations, time value of money, valuation of stocks and bonds, cost of capital, capital budgeting analysis, flow of funds, ratio analysis, working capital, various sources of corporate funds, international financial management, and other topics associated with successful business finance decisions in an internationally competitive environment. Prerequisite: ACCT 112.

### FNCE 390 Financial Markets and Institutions

## **3 Credits**

The course covers investigation and analysis of organization, structure and performance of money, capital markets and institutions. It also covers the impact of financial institutions on the allocation of funds to various sectors of the economy, analysis of the intermediary process, determination of interest rates in the financial markets, regulation of the financial industry, and the role of financial instruments. The students are expected to become familiar with current events in the financial news. The course may require a field trip. Prerequisite: FNCE 287 or ACCT 222.

## FNCE 291 Personal Finance

## **3 Credits**

**3 Credits** 

An introduction to concepts to assist both individuals and families who need a considerable degree of financial expertise in order to utilize optimally their limited incomes. Principal topics include: financial planning process, money management and personal investments (real estate, securities, etc.), insurance needs (medical life, automobile and disability), income tax planning, consumer credit and retirement planning. Prerequisite: FNCE 287.

## **FNCE 455 International Finance**

The course examines the financial operations of the firm from an international point of view. Topics include exchange rate determination, foreign exchange risk management (hedging techniques B forward/futures, options and swaps), international financial markets (bond & equity and foreign exchange markets), balance of payments, trade documentation and international budgeting. Prerequisite: FNCE 390.

## FNCE 467 Investment Analysis and Portfolio Management

## **3 Credits**

**3 Credits** 

**3 Credits** 

The course introduces students to the investment management process. The coverage includes an introduction to modern portfolio theory, a study of capital asset pricing model (CAPM), asset pricing models (APM), security valuation principles and practices, efficient markets, stock and bond valuation models, fundamental vs technical analyses, trading practices, performance evaluation and an introduction to the role of futures and options in hedging and speculation. The course may require a field trip. Prerequisite: FNCE 390.

## FNCE 470 Financial Management

The course provides an in depth analysis of corporate finance including forecasting, financial planning and control, risk and return, asset pricing, analysis of financial statements, time value of money, bond and stock valuation, the financial environment (markets, financial institutions, and interest rates) capital structure choices, dividends policy, cost of capital and operating leverage. Prerequisite: FNCE 287.

## FNCE 473 Financial Derivatives

This course is designed for students who seek to understand how financial engineering, especially derivatives and risk management techniques, can be used to advance the strategic goals of the firms. Coverage includes an analysis of derivative securities B financial futures, forward contracts, commodity futures, warrants, convertibles, options pricing, swaps, stock index futures, and interest rate futures. Emphasis will be placed on how these derivatives can be used for hedging and speculative purposes. The course may require a field trip. **Prerequisite:** FNCE 467.

## FNCE 474 Intermediate Corporate Finance 3 Credits

This course provides an in depth treatment of working capital analysis, cash budgeting, receivable management, credit policy, inventory management, long term financing decisions including sources of long term funds and financial leverage. Prerequisite: FNCE 470.

## FNCE 475 Advanced Corporate Finance 3 Credits

The course familiarizes students with most important tools, concepts and topics in the areas of corporate finance. It provides in depth treatment of working capital analysis, long term financing decisions including sources of long term funds, financial leverage, measurement of cost of capital, capital budgeting decision methods, projects cash flow analysis, risks in capital budgeting, optimal capital budget, and lease financing. Prerequisite: FNCE 474.

## FNCE 480 Management of Financial 3 Credits Institutions

This course examines the major financial management issues confronting depository financial service firms. Specific topics include: asset and liability management techniques, profitability analysis and management of various risk areas such as interest rate risk, liquidity risk, capital management, and financial engineering as a management tool for financial institutions. Other topics include lending decisions and pricing of services and strategies of maintaining profitability and liquidity. The course may require a field trip. Prerequisite: FNCE 390.



This course provides a link between finance theory and practice. It is an internship program that prepares the student for the challenges in the workplace. The student must complete a total of twelve (12) continuous weeks of practical experience in a well-established company such as a bank or other financial institutions, manufacturing or merchandising business, hospital, university, or financial consulting firm. Prerequisite: Junior standing in Finance.

#### FNCE 495 Research in Finance

#### **3 Credits**

This is a demonstration of a study in finance conducted on an individual basis. It is an original piece of work on any finance topic of interest approved and supervised by the instructor. A research paper or report is required. A seminar presentation may also be required. Prerequisite: MGMT 494.

# **DEPARTMENT OF INFORMATION SYSTEMS AND COMPUTING**

#### FACULTY

Nyamwamu R, BBIT, MSc., PhD in progress (Acting Head of Department)

Giftson, J., MBA. Jilo, C., MTech. Kansiime, E., MSc. Mayaka, K., MSc., PhD in progress Omambia, A., MIS. Sagas, E. MSc. Omari D. MSc

#### **PHILOSOPHY**

The department provides an environment suitable to produce skilled professional graduates with a sound understanding of the relevant disciplines of network technologies and communication principles, software development methods in the broad areas of programming and systems analysis and design for industry, commerce and government. The appreciation of the spiritual values needed are emphasized while considering ethical, security and privacy issues.

#### **MISSION**

The department is committed to supporting and implementing the mission of the University in the provision and advancement of a wholistic Christian quality education for the youth with the aim of equipping them with the necessary skills for service to God and mankind.

#### VISION

To be a recognized center of excellence in leveraging information technology in training, research and development. To foster an academic environment that uses information technology to solve current and future problems.

#### **DEGREES AND CONCENTRATIONS OFFERED**

The department of Information System and Computing offers the following degrees:

- 1. Bachelor of Business Information Technology
- 2. Bachelor of Science in Networks and Communication Systems
- 3. Bachelor of Science in Software Engineering

## **EXPECTED LEARNING OUTCOMES**

Students completing the various programs from the department of Information systems and computing will be able to:

1. Demonstrate understanding of the building blocks of

information systems and Information systems from a system analysis, design, development and management perspective;

- Explain how Information Systems components fit into and support the organizational system;
- Successfully develop, implement and manage information systems in an organization;
- Demonstrate an understanding of the computing and information system processes by critically evaluating existing systems with knowledge gained;
- Integrate, communicate, and apply concepts related to Information Technology and computing to solve problems facing humanity;
- Understand multi-layer networks: an introduction to network design, implementation, maintenance, management and troubleshooting of networks and network related problems;
- Understand different protocols used throughout the network and how the protocols are designed to achieve different tasks;
- 3. Participate in designing of networks, network management and monitoring systems.

#### **ENTRANCE REQUIREMENTS**

## **DIRECT ENTRY**

A student seeking admission to this department for a degree program must meet the entry requirement to the university and also have a grade of C+ in Mathematics and a C+ in English at the KCSE or its equivalent for all the majors offered in the department. However, in addition to meeting the university entrance requirement, consideration for admission may be granted if the requirements specified for each major listed below are met:

#### Bachelor of Business Information Technology

A student with a C in Mathematics and a C+ and above in Business Education and C+ in English at KCSE or its equivalent.

#### Bachelor of Science in Networks and Communication Systems and Bachelor of Science in Software Engineering

A student with a C in Mathematics, a C+ and above in Physics, a C+ in English at KCSE or its equivalent.

#### **GRADUATION REQUIREMENTS**

To qualify for graduation, a student must complete the university graduation requirements as stipulated in this bulletin.

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# **Course Listing**

# BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

## **SUMMARY**

General Education Requirements	34
Core Courses	60
Cognates	40
Electives	6
Total	140 Credits

Students in the Department of Information Systems and Computing are exempted from the following courses in the General Education Requirements:

MGMT 103	Basic Management and Entrepreneurial Skills	2
INSY 107	Information Technology Today	2
MATH 100	Foundations of Mathematics	3
	Total	7

GENERAL EDU	CATION REQUIREMENTS	34 Credits
ENGL 105 Writ	ing Skills	3
ENGL 106 Spe	ech Communication	1
KISW 114 Lang	guage Use in Kiswahili Or	2
FREN 103 Beg	inning French II	2
GCAS 107 Mus	ic Appreciation Or	2
LITE 151 Intro	oduction to Literary Appreciati	on 2
OFTE 120 Keyl	boarding	0
EDUC 215 Intro	oduction to Philosophy of Chris	stian 2
	cation	
	sical and Recreational Activitie	
HLED 110 Hea	Ith Principles	1
AGRI 105 Prin	ciples of Agricultural Technolo	gy 2
BIOL 105 Hum	nan Biology	2
PHYS 100 Con	cepts of Physical Sciences	2
CHEM 200 Envi	ronmental Science Or	2
ENVI 227 Envi	ronment and Society Or	2
TCED 231 Safe	ety Education	2
RELB 220 Life	and Teachings of Jesus	2
RELH 155 Adve	entist Heritage	2
RELT 207 Chri	stian Beliefs	3
RELT 255 Intro	oduction to Christian Ethics	2

## Four credits from the following

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
<b>NRSG 100</b>	First Aid	1
FDNT 115	Cooking	1
<b>FDNT 120</b>	Basic Cake Preparation and Cake Decoration1	1
W00D100	Woodwork	1

CORE COURSES 60 Credit		ts
COSC 161	Fundamentals of Programming	3
COSC 162	Data Structures and Algorithm	3
COSC 217	Introduction to Linux Administration	3
COSC 225	Computer Organizations	3
COSC 237	Networks and Telecommunication	3
COSC 261	Operating Systems	3
COSC 272	Object Oriented Design and Programming	3
COSC 343	Foundations of Human-Computer Interaction	3
COSC 440	Artificial Intelligence	3
INSY 118	Introduction to Business Information Systems	3
INSY 210	Database Management Systems	3
INSY 314	Web Design and Internet Technologies	3
INSY 136	Microcomputer Applications	3
INSY 281	Systems Analysis and Design	3
INSY 305	Management Information Systems	3
INSY 316	E-Commerce	3
INSY 318	Accounting Information Systems	3
INSY 399	Practical Experience	2
INSY 443	Research Methods in IT	2
INSY 492	Senior Project	2
INSY 497	IT Project Management	3

COGNATE COURSES 40 Credits		ts
ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
ECON 210	Principles of Microeconomics	3
FNCE 287	Principles of Finance	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
MGMT 130	Fundamentals of Management	3
MGMT 141	Business Law I	2
MGMT 231	Human Resource Management	3
MGMT 237	Business Ethics	3
MKTG 115	Principles of Marketing	3
OFAD 306	Business Communications	3
STAT 150	Introduction to Probability and Statistics	3



ELECTIVE COURSES 6 Credits		
COSC 220	Fundamentals of Software Engineering	3
COSC 303	Real Time and Embedded Systems	3
COSC 344	Data and Network Security	3
COSC 390	Mobile Application Programming	3

# BACHELOR OF BUSINESS INFORMATION TECHNOLOGY FOR UPGRADING STUDENTS

## **SUMMARY**

Total	116 Credits
Electives	6
Cognates	39
Core Requirements	55
General Education Requirements	16

Upgrading students for the Bachelor of Business Information Technology degree are exempted from the following general education requirements.

ENVI 227Environment and Society2BIOL 105Human Biology2PHYS 100Concepts of Physical Science2HIST 119Issues in Development Studies2AGRI 105Principles of Agricultural Technology2PEAC 107Physical and Recreational Activities1OFTE 120Keyboarding0LITE 151Intro to Lit Appreciation2SWFI 207Family Issues2INSY 107Information Technology Today2INSY 107Speech Communication1ENGL 106Speech Communication1Vocational Skills12	HLED 110	Health Principles	1
PHYS 100Concepts of Physical Science2HIST 119Issues in Development Studies2AGRI 105Principles of Agricultural Technology2PEAC 107Physical and Recreational Activities1OFTE 120Keyboarding0LITE 151Intro to Lit Appreciation2SWFI 207Family Issues2MGMT 103Basic Management and Entrepreneurial Skills2INSY 107Information Technology Today2MATH 100Speech Communication1Vocational Skills1	ENVI 227	Environment and Society	2
HIST 119Issues in Development Studies2AGRI 105Principles of Agricultural Technology2PEAC 107Physical and Recreational Activities1OFTE 120Keyboarding0LITE 151Intro to Lit Appreciation2SWFI 207Family Issues2MGMT 103Basic Management and Entrepreneurial Skills2INSY 107Information Technology Today2MATH 100Speech Communication1Vocational Skills1	BIOL 105	Human Biology	2
AGRI 105Principles of Agricultural Technology2PEAC 107Physical and Recreational Activities1OFTE 120Keyboarding0LITE 151Intro to Lit Appreciation2SWFI 207Family Issues2MGMT 103Basic Management and Entrepreneurial Skills2INSY 107Information Technology Today2MATH 100Speech Communication1ENGL 106Speech Communication1	PHYS 100	Concepts of Physical Science	2
PEAC 107Physical and Recreational Activities1OFTE 120Keyboarding0LITE 151Intro to Lit Appreciation2SWFI 207Family Issues2MGMT 103Basic Management and Entrepreneurial Skills2INSY 107Information Technology Today2MATH 100Foundations of Mathematics3ENGL 106Speech Communication1Vocational Skills1	HIST 119	Issues in Development Studies	2
OFTE 120Keyboarding0LITE 151Intro to Lit Appreciation2SWFI 207Family Issues2MGMT 103Basic Management and Entrepreneurial Skills2INSY 107Information Technology Today2MATH 100Foundations of Mathematics3ENGL 106Speech Communication1Vocational Skills1	AGRI 105	Principles of Agricultural Technology	2
LITE 151Intro to Lit Appreciation2SWFI 207Family Issues2MGMT 103Basic Management and Entrepreneurial Skills2INSY 107Information Technology Today2MATH 100Foundations of Mathematics3ENGL 106Speech Communication1Vocational Skills1	PEAC 107	Physical and Recreational Activities	1
SWFI 207Family Issues2MGMT 103Basic Management and Entrepreneurial Skills2INSY 107Information Technology Today2MATH 100Foundations of Mathematics3ENGL 106Speech Communication1Vocational Skills1	OFTE 120	Keyboarding	0
MGMT 103Basic Management and Entrepreneurial Skills2INSY 107Information Technology Today2MATH 100Foundations of Mathematics3ENGL 106Speech Communication1Vocational Skills1	LITE 151	Intro to Lit Appreciation	2
SkillsIINSY 107Information Technology Today2MATH 100Foundations of Mathematics3ENGL 106Speech Communication1Vocational Skills1	SWFI 207	Family Issues	2
MATH 100Foundations of Mathematics3ENGL 106Speech Communication1Vocational Skills1	MGMT 103	<b>o</b> 1	2
ENGL 106         Speech Communication         1           Vocational Skills         1	INSY 107	Information Technology Today	2
Vocational Skills 1	MATH 100	Foundations of Mathematics	3
	ENGL 106	Speech Communication	1
Total 25		Vocational Skills	1
		Total	25

Upgrading students for the Bachelor of Business Information Technology degree are also exempted from the following core courses:

INSY 118	Introduction to Business Information	3
	Processing	
INSY 136	Microcomputer Applications	3
	Total	6

GENERAL EDUCATION REQUIREMENTS 16 Credit		ts
ENGL 105	Writing Skills	3
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
EDUC 215	Introduction to Philosophy of Christian	2
	Education	

RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE COURSES 55 Credits		
COSC 161	Fundamentals of Programming	3
COSC 162	Data Structures and Algorithm	3
COSC 217	Introduction to Linux Administration	3
COSC 225	Computer Organizations	3
COSC 237	Networks and Telecommunication	3
COSC 261	Operating Systems	3
COSC 272	Object Oriented Design and Programming	3
COSC 343	Foundations of Human-Computer Interaction	3
COSC 440	Artificial Intelligence	3
INSY 210	Database Management Systems	3
INSY 314	Web Design and Internet Technologies	3
<b>INSY 281</b>	Systems Analysis and Design	3
INSY 305	Management Information Systems	3
INSY 316	E-Commerce	3
INSY 318	Accounting Information Systems	3
INSY 399	Practical Experience	2
INSY 443	Research Methods in IT	3
INSY 492	Senior Project	2
INSY 497	IT Project Management	3

COGNATE COURSES 39 Credits		ts
ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
ECON 210	Principles of Microeconomics	3
FNCE 287	Principles of Finance	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
MGMT 130	Fundamentals of Management	3
MGMT 141	Business Law I	2
MGMT 231	Human Resource Management	3
MGMT 237	Business Ethics	3
MKTG 115	Principles of Marketing	3
OFAD 306	Business Communications	3
STAT 150	Introduction to Probability and Statistics	3

ELECTIVE COURSES 6 Credit		S
COSC 220	Fundamentals of Software Engineering	3
COSC 303	Real Time and Embedded Systems	3
COSC 344	Data and Network Security	3
COSC 390	Mobile Application Programming	3



## BACHELOR OF SCIENCE IN NETWORKS AND COMMUNICATION SYSTEMS

## **SUMMARY**

General Education Requirements	34
Core Courses	78
Cognates	25
Electives	6
Total	144 Credits

Students in the Department of Information Systems and Computing are exempted from the following courses in the General Education Requirements:

MGMT 103	Basic Management and Entrepreneurial Skills	2
INSY 107	Information Technology Today	2
MATH 100	Foundations of Mathematics	3
	Total	7

GENERAL	EDUCATION REQUIREMENTS 34 Credi	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Four credits from the following

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE CO	URSES 78 Credit	S
INSY 118	Introduction to Business Information Systems	3
INSY 136	Microcomputer Applications	3
COSC 161	Fundamentals of Programming	3
COSC 162	Data Structures and Algorithms	3
COSC 217	Introduction to Linux Administration	3
COSC 225	Computer Organization	3
COSC 261	Operating Systems	3
COSC 340	Networks Administration	3
COSC 342	Routing and Switching	3
COSC 345	Advanced Routing and Switching	3
COSC 343	Foundations of Human-Computer Interaction	3
COSC 344	Data and Network Security	3
COSC 349	Wireless Communications	3
COSC 350	Network Monitoring and Optimization	3
COSC 303	Real Time and Embedded Systems	3
COSC 410	Satellite, Optical and Mobile Communication	3
	Systems	
COSC 438	Information Theory	3
COSC 440	Artificial Intelligence	3
COSC 443	Computer Network Design	3
COSC 498	Senior Project	2
COSC 399	Practical Experience	2
INSY 210	Database Management Systems	3
INSY 314	Web Design and Internet Technologies	3
INSY 281	Systems Analysis and Design	3
INSY 305	Management Information Systems	3
INSY 443	Research Methods in IT	2
INSY 497	IT Project Management	3

COGNATE COURSES 25 Cree		its
ACCT 111	Fundamentals of Accounting I	4
ECON 210	Principles of Microeconomics	3
MGMT 130	Fundamentals of Management	3
MKTG 115	Principles of Marketing	3
MATH 121	Discrete Mathematics	3
MATH 342	Boolean Algebra	3
OFAD 306	Business Communications	3
STAT 150	Introduction to Probability and Statistics	3



# BACHELOR OF SCIENCE IN NETWORKS AND COMMUNICATIONS FOR UPGRADING STUDENTS

#### **SUMMARY**

General Education Requirements	16
Core Requirements	67
Cognates	25
Electives	6
Total	114 Credits

Upgrading students for the Bachelor of Science degree in Networks and Communications are exempted from the following general education requirements.

HLED 110	Health Principles	1
ENVI 227	Environment and Society	2
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physical Science	2
HIST 119	Issues in Development Studies	2
AGRI 105	Principles of Agricultural Technology	2
PEAC 107	Physical and Recreational Activities	1
OFTE 120	Keyboarding	0
LITE 151	Intro to Lit Appreciation	2
SWFI 207	Family Issues	2
MGMT 103	Basic Management and Entrepreneurial Skills	2
INSY 107	Information Technology Today	2
MATH 100	Foundations of Mathematics	3
ENGL 106	Speech Communication	1
	Vocational Skills	1
	Total	25

Communications are also exempted from the following core requirements:

COSC 225	Computer Organization			
COSC 261	Operating Systems	3		
INSY 118	Introduction to Business Information Processing	3		
INSY 136	Microcomputer Applications	3		
	Total	12		

GENERAL EDUCATION REQUIREMENTS 16 (				16 Credi	ts	
	ENGL 105	Writing Skills				3
	KISW 114	Language Use in K	iswahili Or			2
	FREN 103	<b>Beginning French</b>	I			2
	EDUC 215	Introduction to Education	Philosophy	of	Christian	2

RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE REC	QUIREMENTS 67 Credi	its
COSC 161	Fundamentals of Programming	3
COSC 162	Data Structures and Algorithms	3
COSC 217	Introduction to Linux Administration	3
COSC 303	Real Time and Embedded Systems	3
COSC 340	Networks Administration	3
COSC 342	Routing and Switching	3
COSC 345	Advanced Routing and Switching	3
COSC 343	Foundations of Human-Computer Interaction	3
COSC 344	Data and Network Security	3
COSC 349	Wireless Communications	3
COSC 350	Network Monitoring and Optimization	3
COSC 399	Practical Experience	2
COSC 410	Satellite, Optical and Mobile Communication Systems	3
COSC 438	Information Theory	3
COSC 440	Artificial Intelligence	3
COSC 443	Computer Network Design	3
COSC 498	Senior Project	2
INSY 210	Database Management Systems	3
INSY 314	Web Design and Internet Technologies	3
INSY 281	Systems Analysis and Design	3
INSY 305	Management Information Systems	3
INSY 443	Research Methods in IT	3
INSY 497	IT Project Management	3

COGNATE COURSES 25 Credits		
ACCT 111	Fundamentals of Accounting I	4
ECON 210	Principles of Microeconomics	3
MATH 121	Discrete Mathematics	3
MATH 342	Boolean Algebra	3
MGMT 130	Fundamentals of Management	3
MKTG 115	Principles of Marketing	3
OFAD 306	Business Communications	3
STAT 150	Introduction to Probability and Statistics	3

COGNATE COURSES 25 Credits		its
COSC 220	Fundamentals of Software Engineering	3
COSC 390	Mobile Application Programming	3
ELCT 111	Fundamentals of Electronics	4
INSY 316	E-Commerce	3

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# **BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING**

## **SUMMARY**

General Education Requirements	33
Core Courses	78
Cognates	25
Electives	6
Total	142 Credits

Students in the Department of Information Systems and Computing are exempted from the following courses in the General Education Requirements:

MGMT 103	Basic Management and Entrepreneurial Skill	2
INSY 107	Information Technology Today	2
MATH 100	Foundations of Mathematics	3
ENGL 106	Speech Communication	1
	Total	8

GENERAL	EDUCATION REQUIREMENTS 33 Credi	ts
ENGL 105	Writing Skills	3
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Four credits from the following

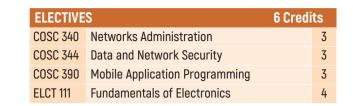
HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
<b>PSYC 101</b>	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE REC	QUIREMENTS 78 Credi	ts
COSC 161	Fundamentals of Programming	3
COSC 162	Data Structures and Algorithms	3
COSC 217	Introduction to Linux Administration	3
COSC 220	Fundamentals of Software Engineering	3
COSC 221	Software Process Definition and Modeling	3
COSC 225	Computer Organization	3
COSC 237	Networks and Telecommunication	3
COSC 261	Operating Systems	3
COSC 272	Object Oriented Design and Programming	3
COSC 301	Software Requirements Engineering and Specification	3
COSC 303	Real Time and Embedded Systems	3
COSC 304	Formal Methods for Software Engineering	3
COSC 343	Foundations of Human-Computer Interaction	3
COSC 397	Software Project Management	3
COSC 399	Practical Experience	2
COSC 421	Software Quality Engineering and Assurance	3
COSC 429	Metrics and Statistical Method for Software Engineering	3
COSC 440	Artificial Intelligence	3
COSC 485	Computer Graphics	3
COSC 498	Senior Project	2
INSY 118	Introduction to Business Information Systems	3
INSY 210	Database Management Systems	3
INSY 314	Web Design and Internet Technologies	3
INSY 136	Microcomputer Applications	3
INSY 281	Systems Analysis and Design	3
INSY 305	Management Information Systems	3
INSY 443	Research Methods in IT	2

COGNATE COURSES 25 Credit		its
ACCT 111	Fundamentals of Accounting I	4
ECON 210	Principles of Microeconomics	3
MATH 121	Discrete Mathematics	3
MATH 342	Boolean Algebra	3
MGMT 130	Fundamentals of Management	3
MKTG 115	Principles of Marketing	3
OFAD 306	Business Communications	3
STAT 150	Introduction to Probability and Statistics	3



# BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING FOR UPGRADING STUDENTS

## **SUMMARY**

Total	120 Credits
Electives	6
Cognates	25
Core Requirements	73
General Education Requirements	16

Upgrading students for the Bachelor of Science degree in Software Engineering are exempted from the following general education requirements.

HLED 110	Health Principles	1
ENVI 227	Environment and Society	2
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physical Science	2
HIST 119	Issues in Development Studies	2
AGRI 105	Principles of Agricultural Technology	2
PEAC 107	Physical and Recreational Activities	1
OFTE 120	Keyboarding	0
LITE 151	Intro to Lit Appreciation	2
SWFI 207	Family Issues	2
MGMT 103	Basic Management and Entrepreneurial Skills	2
INSY 107	Information Technology Today	2
MATH 100	Foundations of Mathematics	3
ENGL 106	Speech Communication	1
	Vocational Skills	1
	Total	25

Upgrading students for the Bachelor of Science degree in Software Engineering are also exempted from the following core courses:

INSY 118	Introduction to Business Information	3
	Processing	
INSY 136	Microcomputer Applications	3
	Total	6

GENERAL EDUCATION REQUIREMENTS 16 Credit						
ENGL 105	Writing Skills	3				
KISW 114	Language Use in Kiswahili					
FREN 103	Beginning French II					
EDUC 215	Introduction to Philosophy of Christian Education	2				

RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE REC	QUIREMENTS 73 Credi	ts
COSC 161	Fundamentals of Programming	3
COSC 162	Data Structures and Algorithms	3
COSC 217	Introduction to Linux Administration	3
COSC 225	Computer Organization	3
COSC 237	Networks and Telecommunication	3
COSC 221	Software Process Definition and Modeling	3
COSC 220	Fundamentals of Software Engineering	3
COSC 261	Operating Systems	3
COSC 272	Object Oriented Design and Programming	3
COSC 301	Software Requirements Engineering and Specification	3
COSC 304	Formal Methods for Software Engineering	3
COSC 397	Software Project Management	3
COSC 343	Foundations of Human-Computer Interaction	3
COSC 303	Real Time and Embedded Systems	3
COSC 421	Software Quality Engineering and Assurance	3
COSC 429	Metrics and Statistical Method for Software Engineering	3
COSC 440	Artificial Intelligence	3
COSC 485	Computer Graphics	3
COSC 498	Senior Project	2
COSC 399	Practical Experience	2
INSY 210	Database Management Systems	3
INSY 314	Web Design and Internet Technologies	3
INSY 281	Systems Analysis and Design	3
INSY 305	Management Information Systems	3
INSY 443	Research Methods in IT	3

COGNATE	COGNATE COURSES 25 Credit			
ACCT 111	Fundamentals of Accounting I	4		
ECON 210	Principles of Microeconomics	3		
MATH 121	Discrete Mathematics	3		
MATH 342	Boolean Algebra	3		
MGMT 130	Fundamentals of Management	3		
MKTG 115	Principles of Marketing	3		
OFAD 306	Business Communications	3		
STAT 150	Introduction to Probability and Statistics	3		

ELECTIVE	S COURSES 6 (	Credits
COSC 220	Fundamentals of Software Engineering	3
COSC 390	Mobile Application Programming	3
ELCT 111	Fundamentals of Electronics	4
INSY 316	E-Commerce	3

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# **BACHELOR OF BUSINESS INFORMATION TECHNOLOGY (BBIT)**

# Four-Year Course plan

YEAR	FIRST SEMESTER				SECOND SEMESTER		
	CODE	COURSE TITLE	CR		CODE	COURSE TITLE	CR
	INSY 118	Business Information Processing	3		RELH 207	Christian Beliefs	3
1st	RELH 155	Adventist Heritage	2		PHYS 100	Concepts of Physical Sciences	2
	ENGL 105	Writing Skills	3		INSY 136	Microcomputer Applications	3
	PEAC 107	Physical and Recreational Activities	1		COSC 161	Fundamentals of Programming	3
	GCAS 107/ LITE 151	Music Appreciation/Introduction to Literary Appreciation	2		ACCT 112	Fundamentals of Accounting II	4
	ACCT 111	Fundamentals of Accounting	4		MATH 114	Business Mathematics II	3
	MATH 113	Business Mathematics 1	3			Total	18
		Total	18				
	AGRI 105	Principles of Agricultural Technology	2		RELT 255	Introduction to Christian Ethics	2
2nd	MGMT 130	Fundamentals of Management	3		EDUC 215	Intro to Philosophy of Christian Education	2
	COSC 225	Computer Organization and architecture	3		BIOL 105	Human Biology	2
	HLED 110	Health Principles	1		COSC 261	Operating Systems	3
	KISW 114/ FREN 103	Language use in Kiswahili/ Beginning French	2		COSC 272	Object Oriented Design and Programming	3
	COSC 162	Data Structures and Algorithms	3		COSC 237	Networks and Telecommunication	3
	COSC 217	Introduction to Linux Administration	3		INSY 210	Database Management Systems	3
		Total	19			Total	18
	INSY 305	Management Information Systems	3		FNCE 287	Principles of Finance	3
3rd		ELECTIVE 1	3		STAT 150	Probability and Statistics	3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2		MGMT 231	Human Resource Management	3
	INSY 314	Web Design and Internet Technologies	3		MGMT 141	Business Law I	2
	INSY 281	Systems Analysis and Design	3		INSY 443	Research Methods in IT	2
	MGMT 237	Business Ethics	3		INSY 399	Practical Experience	2
		Total	17	1	MKTG 115	Principles of Marketing	3
						Total	18
4th	COSC 343	Foundations of Human-Computer Interaction	3		INSY 316	E-Commerce	3
Tui	INSY 497	IT Project Management	3		ENVI 227	Environment and Society	2
		ELECTIVE 2	3		OFAD 308	Business Communications	3
	INSY 492	Senior Project	2	1	RELB 220	Life and Teaching of Jesus Christ	2
	ECON 210	Principles of Microeconomics	3	1	COSC 440	Artificial Intelligence	3
	INSY 318	Accounting Information Systems	3		HIST 119/ HIST 111	Issues in Developmental Studies/ Concepts in World Civilization	2
		Total	17			Total	15



# BACHELOR OF OF SCIENCE IN NETWORKS AND COMMUNICATION SYSTEMS Four-Year Course plan

YEAR	FI	RST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	INSY 118	Business Information Processing	3	<b>RELH 207</b>	Christian Beliefs	3
1st	RELH 155	Adventist Heritage	2	INSY 281	Systems Analysis and Design	3
	ENGL 105	Writing Skills	3	INSY 136	Microcomputer Applications	3
	PSYC 101/	Introduction to Psychology/	2	COSC 161	Fundamentals of Programming	3
	SOCI 121/	Sociology/				
	SWFI 207	Family Issues				
	PEAC 107	Physical and Recreational Activities	1	MATH 121	Discrete Mathematics	3
	ACCT 111	Fundamentals of Accounting	4	STAT 150	Introduction to Probability and Statistics	3
	MGMT 130	Fundamentals of Management	3		Total	18
		Total	18			
	AGRI 105	Principles of Agricultural Technology	2	MKTG 115	Principles of Marketing	3
2nd	PHYS 100	Concepts of Physical Sciences	2	COSC 261	Operating Systems	3
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Developmental Studies	2	COSC 272	Object Oriented Design and Programming	3
	HLED 110	Health Principles	1	COSC 237	Networks and Telecommunication	3
	KISW 114/ FREN 103	Language use in Kiswahili/ Beginning French II	2	INSY 210	Database Management Systems	3
	COSC 162	Data Structures and Algorithms	3	ECON 210	Principles of Microeconomics	3
	COSC 217	Introduction to Linux Administration	3		Total	18
	COSC 225	Computer Organization and Architecture	3			
		Total	17			
	INSY 305	Management Information Systems	3	COSC 345	Advanced Routing and Switching	3
3rd	COSC 340	Networks Administration	3	RELB 220	Life and Teachings of Jesus Christ	2
ord	COSC 342	Routing and Switching	3	OFAD 308	Business Communications	3
	MATH 342	Boolean Algebra	3	COSC 344	Data and Network Security	3
	INSY 314	Web Design and Internet Technologies	3	COSC 350	Network Monitoring and Optimization	3
	COSC 349	Wireless Communications	3	INSY 443	Research Methods in IT	2
		Total	18	INSY 399	Practical Experience	2
					Total	18
4th	COSC 343	Foundations of Human-Computer Interaction	3	COSC 440	Artificial Intelligence	3
401		ELECTIVE 1	3		Vocational Skills	1
	INSY 497	IT Project Management	3	COSC 303	Real Time and Embedded Systems	3
		Vocational Skills	1		ELECTIVE 2	3
	COSC 443	Computer Network Design	3	COSC 410	Satellite, Optical and Mobile Communication Systems	3
	INSY 498	Senior Project	2	GCAS 107/ LITE 151	-	2
	COSC 438	Information Theory	3	ENVI 227	Environment and Society	2
		Total	18		Total	17

# **BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING**

# Four-Year Course plan

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	INSY 118	Business Information Processing	3	RELH 207	Christian Beliefs	3
1st	RELH 155	Adventist Heritage	2	PHYS 100	Concepts of Physical Sciences	2
	ENGL 105	Writing Skills	3		Vocational Skills	1
	PEAC 107	Physical and Recreational Activities	1	INSY 136	Microcomputer Applications	3
	GCAS 107/	Music Appreciation/	2	COSC 161	Fundamentals of Programming	3
	LITE 151	Introduction to Literary Appreciation				
	ACCT 111	Fundamentals of Accounting	4	MATH 121	Discrete Mathematics	3
	MGMT 130	Fundamentals of Management	3	STAT 150	Introduction to Probability and Statistics	3
		Total	18		Total	19
	AGRI 105	Principles of Agricultural Technology	2	MKTG 115	Principles of Marketing	3
2nd	RELB 220	Life and Teaching of Jesus Christ	2	RELT 255	Christian Ethics	2
	ENVI 227	Environment and Society	2	INSY 281	Systems Analysis and Design	3
	KISW 114/ FREN 103	Language use in Kiswahili/ Beginning French	2	INSY 210	Database Management Systems	3
	COSC 162	Data Structures and Algorithms	3	COSC 221	Software Process Definition and Modeling	3
	COSC 220	Fundamentals of Software Engineering	3	HIST 119/ HIST 111	Issues in Developmental Studies/ Concepts of World Civilization	2
	COSC 225	Computer Organizationand Architecture	3		Total	16
		Total	19			
	COSC 261	Operating Systems	3	COSC 397	Software Project Management	3
3rd	COSC 301	Software Requirements Engineering and Specification	3	ECON 210	Principles of Microeconomics	3
	COSC 304	Formal Methods for Software Engineering	3	INSY 305	Management Information Systems	3
	COSC 217	Introduction to Linux Administration	3	0FAD 308	Business Communications	3
	MATH 342	Boolean Algebra	3	COSC 237	Networks and Telecommunication	3
	INSY 314	Web Design and Internet Technologies	3	INSY 443	Research Methods in IT	2
		Total	18	INSY 399	Practical Experience	2
					Total	19
	COSC 440	Artificial Intelligence	3		ELECTIVE 2	3
4th	COSC 303	Real Time and Embedded Systems	3	COSC 421	Software Quality Engineering and Assurance	3
		ELECTIVE 1	3	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2
	COSC 343	Foundations of Human-Computer Interaction		COSC 429	Metrics and Statistical Method for Software Engineering	3
	COSC 272	Object Oriented Design and Programming	3	COSC 485	Computer Graphics	3
	INSY 492	Senior Project	2		Total	15
		Total	17			

# **Course Descriptions**

#### COSC 161 Fundamentals of Programming 3 Credits

An introduction to program methodology using the C programming language including computer usage, problem solving, algorithm development, control structures, arrays, program style, program design, code documentation techniques, and program correctness as well as a brief overview of computer history. Further study of programming methodology by examining program specifications, design, coding, correctness and style with additional coverage of pointers and arrays. A number of programming exercises are assigned. Students will be required to complete a project as part of course requirements. Prerequisites: INSY 118.

### COSC 162 Data Structure and Algorithms 3 Credits

In-depth study of data structures and recursion, implementation of simple lists, stacks, queues, and files as well as a brief overview of computer ethics and the impact of computers upon society. Continuation of the study of programming methodology with particular emphasis on program specification, design, and implementation of data structures and algorithms such as manipulation, searching, sorting and traversal for linked structures, trees and harsh tables. Students will be required to complete a project as part of course requirements. Prerequisite: COSC 161.

## COSC 171 Visual Basic.NET Programming 3 Credits

An introduction to program methodology using Visual Basic. NET, including computer usage within windows environment, problem solving, algorithm development, control I/O function structures, arrays, program style, program design, code documentation techniques. Object oriented programming development of application software using VB.Net. There will be 2 lecture hours and 1 three hour laboratory each week. Students will be required to complete a project as part of course requirements. Prerequisite: MATH 102 or MATH 114 or MATH 172.

## COSC 217 Introduction to Linux 3 Credits Administration

This course focuses on the basics of the Linux Operating System. The course provides an introduction to Linux system administration basics including the Linux file system, the bash shell, file management, user management, process management, shell scripting and system security. Prerequisite: INSY 118.

## COSC 220 Fundamentals of Software 3 Credits Engineering

This course surveys the fundamentals of software engineering. Topics include a preview of software engineering, nature and qualities of software, software engineering principles, software design, specification, verification, production process, management of software engineering, software engineering tools and environments. Other topics include the future of software engineering and ethics and social responsibility of a software engineer. Prerequisite: INSY 118.

## COSC 221 Software Process Definition and 3 Credits

Modeling This course provides students with the fundamental knowledge for software process definition and modeling. Software process content includes a framework for process definition and modeling, engineering of process, enactment of the process, and description of the process properties. Other subjects related to process definition covered are process, process step, process element, and process script. The course also addresses various representations to process modeling, such as text based, template based, and graphical based. Executable presentations in the form of process program are studied. These executable presentations include process definition and modeling tools, such as state transition diagrams, entry task, validation exit, state charts, petri nets, and automated tools for process representation. Prerequisite: COSC 162.

#### COSC 225 Computer Organization

The course covers various elements related to computer organization. Topics covered include data representation, number base conversion, representation negative values; representation and manipulation algorithms for integer fractions and floating point-numbers, Boolean algebra, truth table digital logic and circuit representation of basic computational building blocks, introduction to computer architecture, interrupt schemes, an introduction to aspects of systems software including assemblers, loaders and linkers, and operating systems. Assembly language and programming are introduced. Prerequisite: INSY 118.

## COSC 227 Networks and 3 Credits Telecommunications

This course introduces students to the networking field. Topics include an overview of network terminology and protocols, local area networks, wide-area networks, OSI model, cabling, ethernet, IP addressing, and network standards. Upon completion, students should have an understanding of network addressing, network terminologies, models, subnetting, and TCP/IP Protocols. The course also covers an overview of essential network services and wireless networking. Students learn to evaluate, select, and implement different networking options within an organization. Prerequisite: INSY 118.

#### COSC 261 Operating Systems

**3 Credits** 

**3 Credits** 

This course examines the facilities provided in a modern operating system. Students learn process management including a synchronous concurrent processes and deadlock, virtual storage management and job and process scheduling, multiprocessing, disk scheduling and file and database systems, and performance and security. Prerequisite: COSC 225.

## COSC 272 Object Oriented Design and 3 Credits Programming

This course emphasizes the study of object-oriented development methodologies and the application of these methodologies to advanced data structures using a chosen 00 language. Also included is a survey of other object oriented languages and programming environments (Java, C++). A number of programming exercises are assigned using selected data structures and object oriented design methodologies. Students

will be required to complete a project in Java as part of course requirements. Prerequisite: COSC 162.

## COSC 301 Software Requirements 3 Credits Engineering and Specifications

This course is concerned with the software engineering process of determining what is to be produced and the products generated as a result following the process. Requirements. elicitation, analysis/ validation and specification are studied. There is also in-depth study of methods such as prototyping and scenario analysis for requirements elicitation, Objector function-oriented methodologies and quality function deployment for requirements analysis and validation, and standards for requirements specifications are studied. The course also includes use of Computer Aided Software Engineering (CASE) tools and review techniques (e.g., peer review, inspection, structured walk throughs in requirements engineering of software systems. Students participate in individual and group projects on performing software requirements engineering task. In addition, the course requires definition and development of a process guideline for requirements engineering task. Prerequisite: COSC 221.

## COSC 303 Real Time and embedded Systems 3 Credits

A survey of the system architecture and software engineering aspects of real time systems such as operating systems, and process control software. Students will be introduced to the basics of designing, interfacing, configuring, and programming embedded systems. The course includes a term project using Arduino or Raspberry Pi. Prerequisites: COSC 261.

## COSC 304 Formal Methods for Software 3 Credits Engineering

A study of mathematical logic and proof techniques, discrete structures, and other mathematical topics that are used in software engineering; the use of formal methods in software specifications; and the use of formal methods throughout the software life-cycle. Prerequisite: COSC 221.

#### COSC 340 Networks Administration

**3 Credits** 

An investigation of the tasks of selecting, configuring and administering services in an internetworking environment. Topics include service administration, user administration, and security and privacy issues. Students completing this course have experience in administering an internetwork of computers with a variety of services. Students will be introduced to VOIP, IOT and virtualization design and administration. Prerequisite: COSC 217.

#### COSC 342 Routing and Switching

**3 Credits** 

This course covers router configuration, router software management, routing protocol configuration and routing security. Ethernet switching, routing configuration of switches, and routers will be covered. Prerequisite: COSC 237.

## COSC 343 Foundations of Human- 3 Credits Computer Interaction

This course provides an introduction to skills and concepts of HCI that will enable students to design systems that meet human needs. Topics covered include: cognitive psychology, human factors, interaction styles, user analysis, task analysis, interaction design methods and techniques, and evaluation. The primary focus of this course is on the users and their tasks. Prerequisite: INSY 281.

#### COSC 344 Data and Network Security 3 Credits

The course covers fundamentals of secure networks, cryptography, encryption and privacy, public key, private key, symmetric key, authentication protocols, packet filtering, firewall, virtual private networks, and transport layer security. Prerequisite: COSC 342.

#### COSC 345 Advanced Routing and Switching 3 Credits

This laboratory-based course will introduce the student to installation and configuration of advanced routing and switching solutions, including dynamic routing protocols (OSPF, EIGRP) Border Gateway Protocol (BGP), Multiprotocol Label Switching (MPLS), Quality of Service (QoS), High Availability (HA), and IP version 6 (Ipv6) and VPN's over routed networks. The course will introduce the student to monitoring and troubleshooting routed and switched implementations. Prerequisite: COSC 342

#### COSC 349 Wireless Communications 3 Credits

This course gives an introduction to the fundamentals of the wireless communications systems. The course covers the design, planning, implementation, operation and troubleshooting of wireless LANs. It covers an overview of technologies, security, and design best practices for wireless networks. Prerequisite: COSC 342.

## COSC 350 Network Monitoring and 3 Credits Optimization

This is a laboratory based course that deals with the monitoring and optimization of networks. It introduces students to tools and techniques for monitoring and optimizing networks. The course provides an overview of the network optimization process and its relation to network planning. The course defines performance criteria, shows how measurement of network performance is done, shows how to analyze and process data collected, and then how to use this information to evaluate and optimize network performance. Prerequisite: COSC 344.

## COSC 390 Mobile Application Programming 3 Credits

This project-oriented course examines the principles of mobile application design and development. Students will learn application development on the Android, iOS, FirefoxOS and Windows Phones. Topics will include memory management; user interface design; user interface building; input methods; data handling; network techniques and URL loading and GPS and motion sensing. Students will be required to complete a project as part of course requirements. Prerequisite: INSY 314.

## COSC 397 Software Project Management 3 Credits

The course covers the factors necessary for successful management of system development or enhancement projects. Both technical and behavioral aspects of project management are discussed. Focus is on management for enterprise-level systems. Software marketing principles are also discussed. Prerequisite: INSY 281.

#### **COSC 399** Practical Experience

#### 3 Credits

This course exposes the student to the current trends in computer applications in the industry. A log book of daily activities for the period, endorsed by the student's supervisor at the organization must be submitted at the end. This is a three month course which must be done during the junior year in the department. Prerequisite: 50hrs practicum done in the department.

## COSC 410 Satellite, Optical and Mobile 3 Credits Communication Systems

The course covers modern data transmission technologies starting from the component level and building up to complete system operation and management. It considers optical systems, satellite communications (with spacecraft and payload considerations), cellular mobile radio and telephony for voice and data traffic and their integration into global systems. Prerequisite: COSC 342.

## COSC 421 Software Quality Engineering 3 Credits and Assurance

This course describes the overall approach to specifying software quality, achieving quality, and mapping a quality specification into an engineer able set of activities. It describes the major activities used to cross-check the quality of software artifact and its development process. This course provides a framework for understanding the application of software verifications and validation (V & V) processes and techniques throughout the software development cycle. Typical products of V & V processes are identified along with their possible V & V objectives. The course's emphasis is on validating the system at the requirements and design stages. This validation is then coherently extended into a discussion of testing concepts, planning and controlling of testing activity, and integrationlevel. Prerequisite: COSC 301.

#### COSC 429 Metrics and Statistical Methods 3 Credits for Software Engineering

This course is concerned with three related topics of software measurement, statistical tools and methods, and applied experimental design in software engineering. Students are introduced to the principles and concepts relevant to measurement in software engineering including the representational theory of measurement, collection, analysis and validation of data. Also studied are frameworks such as goal question-metrics and quality function deployment paradigms for guiding measurements efforts. Statistical methods along with Statistical Process Control (SPC) tools such as control charts, Fishbone Diagram, scatter diagrams and advanced subjects such as Taguchi's Robust Design technique and their application in software engineering are covered. Also explored are the concepts of experimental design, analysis of experiments, model building, ethics and presentation of experiments. Prerequisite: COSC 220 or STAT 150.

#### COSC 438 Information Theory

#### **3 Credits**

The course covers Claude Shannon's theory on finding fundamental limits on compressing and reliably storing and communicating data, historical background of information theory models or compilation systems, and coding theory. It also covers information and encoding, basic concepts of interactive computing, interactive terminals devices protocols, the teleprocessing environment, equipment and techniques, data transmission, lines, services, common carriers, line-control, error detection, algorithms and network design. Prerequisites: COSC 229 and MATH 342.

#### COSC 440 Artificial Intelligence

**3 Credits** 

**3 Credits** 

**3 Credits** 

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The course provides the conceptual basis for understanding current trends in artificial intelligence. Topics include both symbolic and numeric processing, intelligent search methods, problem representation (such as attention, search, control, game trees, and knowledge representations), machine learning, expert systems and a survey of social implications of AI; Application of AI techniques in natural languages scene analysis, robot planning and some laboratory exercises in AI languages. The course introduces students to a range of topics in the field of artificial neural networks. The course covers information processing principles in biological systems. The course consists of the theory and properties of major neural network algorithms and architectures. Prerequisites: COSC 272 and senior status in the department.

#### COSC 443 Computer Network Design 3 Credits

This course teaches students how to perform the conceptual and intermediate design of a network infrastructure given enterprise business and technical requirements and constraints. The student will learn how to come up with desired network solutions comprising of intelligent network services that will achieve effective performance, scalability, and availability. The student will learn the fundamental aspects of network design i.e. addressing, guality of service, security, network management, fine-tuning routing protocols, switching structures, and IP multicast. In addition, this course provides solution models for aspects of the network that are strategic to today's organizations, including IP telephony, content and storage networking, and wireless networking. The course will also touch on improving end-node network performance, security, network reliability, redundancy and high availability architectures. Prerequisite: COSC 350.

#### **COSC 485** Computer Graphics

The course introduces computer graphics and examines raster and/or vector images, 2D and 3D images, polygons, transformations, segments, windowing, chipping, and hidden line removal. Prerequisite: COSC 312 and MATH 342.

#### COSC 498 Senior Project

This is a major project in application software development in a selected area of interest. A plan for a project is made. The plan must include a problem statement, constraints, objective, and background material with reference, a procedure, and a time schedule for the discrete tasks. Students are subjected to both seminar and oral examination on the projects undertaken. Prerequisites: Senior standing in the department, ENGL 105.

#### INSY 107 Information Technology Today 2 Credits

The course introduces computer concepts including a discussion of computer history, computer hardware and problem solving algorithms. It covers computer terminology, computer hardware and software, care and selection of a personal computer, current industry trends, the role of computers in application areas and ethical considerations, practical software applications including programming exposure, email and the internet. It includes hands-on usage of the computer in using word processors, spreadsheets, and databases. This course is designed to meet the General Education Requirements of the humanities/sciences students.

## INSY 108 Information Technology for 3 Credits Health Professionals

The course examines the impact of information technology on a wide variety of health care fields. These include telemedicine, radiology, pharmacy, dentistry, surgery, rehabilitative therapies, and public health. The course includes information technology infrastructures and software in general, the latest information on medical informatics, informational resources, and electronic record keeping in the health information technology decade, information technology in public health. It covers common software applications (i.e. word processing, spreadsheet, etc.). The students will learn about the most current computer and medical technologies. Privacy and security issues are also discussed. (for Nursing, Public Health, and MLS students)

## INSY 118 Introduction to Business 3 Credits Information Processing

An introduction to the use of computer in the business area. Introduces computer concepts including a discussion of computer history, computer hardware and problem solving algorithms. Information systems for various business application are discussed. It includes hands-on usage of the computer in using a word processor, spreadsheet, database, BASIC programming, email and the internet.

#### INSY 210 Database Management Systems 3 Credits

The course examines basic file processing concepts: the file management concepts, basic terminology and concepts, structure of file management systems, dataflow between systems, dataflow between internal memory and external storage, blocking and deblocking, files searching and sorting, and introduction to database design, setup, manipulation and use. Other issues such as data integrity, security, backup and recovery and database administration are discussed. Students will be required to complete a project as part of course requirements. Prerequisite: INSY 118.

## INSY 118 Web Design and Internet 3 Credits Technologies

The course focuses on creation of web presence and related technologies. The students will learn the basics of designing and developing a web site. The course will cover design issues specific to web-based presentations, web page layout and effective navigation. Scripting and markup languages will be introduced as well. The course will also include a study of current Internet technologies and their effects, including web server platforms, various server and client side scripting languages, back end programming for rich internet applications. Students will be required to complete a project as part of course requirements. Prerequisites: INSY 210.

#### **INSY 136 Microcomputer Applications**

**3 Credits** 

The course provides an in-depth study and practical experience with several typical microcomputer software packages such as spreadsheets, database systems, word processing, local area network software, communications software, and statistical and graphics packages (e.g. using SPSS and presentation graphics software). Students will be required to complete a project as part of course requirements. Prerequisites: INSY 107, INSY 108, or INSY 118.

#### INSY 281 Systems Analysis and Design 3 Credits

The course provides a methodical approach to developing computer systems including system planning, analysis, feasibility study, design, testing, implementation and software maintenance. The role of the systems analyst and causes of systems failure are stressed throughout. Hardware/software selection is also discussed. No programming assignments are involved; however, the course builds upon concepts to which the student has been exposed in previous computer classes. Prerequisite: INSY 118.

#### **INSY 305 Management Information Systems 3 Credits**

The course covers the use and effect of computer information processing in a business environment with emphasis on management; computer system theory; business computing equipments; management concerns such as decision support systems, computer security, and data base management information systems; systems life cycle and systems analysis and design. Includes use of business software such as network systems, database implementations, statistical packages, forecasting programs, and simulations. Prerequisite: INSY 118.

#### INSY 316 E-Commerce

**3 Credits** 

The course covers foundations of e-commerce, benefits, driving forces, impact, retailing in e-commerce, direct marketing, online customer service, internet consumers and market research, consumer behavior model, decision making, advertisement in electronic commerce, various forms of e-commerce, electronic payment systems, e-commerce security, e-commerce strategy and implementation, global and other issues in EC. Students learn to analyze existing e-business and e-commerce projects and recognize their strengths and weaknesses taking lessons learned into account when formulating their own plans for new and expanding e-commerce. The student is expected to do a small project. Prerequisite: INSY 314.

#### INSY 318 Accounting Information Systems 3 Credits

The course provides general introduction to the three levels of Financial Information Systems with emphasis on operational Level Accounting Information Systems. The major components of computerized accounting systems are discussed. Reviews on various accounting subsystems design are done by the students while also considering integrated systems. There is hands-on experience on some major common productivity and application software used in accounting information systems, like Spreadsheet, Database, Quicken, Sun account system, etc. Prerequisite: INSY 136.



## **INSY 443 Research Methods in IT**

3 Credits

The course is designed to cultivate the necessary competencies for preparing students to carry out research in the domain of IT by enabling them to: understand concepts, principles and methods in the field of IT research; be aware of the leading edge trends and topics in IT research; and have competencies in initiating, planning and executing IT research projects. Students will be required to do a research project on an area relevant to their major. Prerequisite: ENGL 105.

# **DEPARTMENT OF MANAGEMENT**

## FACULTY

Miyayo, Y., MBA., PhD in progress (Acting Head of Department) Abunda J. MComm Banaga, C., PhD Biru, S., PhD Kibirango, M, PhD Mambo, R., MBA Omondi R., MBA Ondari, W., PhD

Sang M., PhD

## **Teaching Assistants**

Ateka, R., BBA Cheruiyot, D., BBA Mule, D., BBA,

deansob@ueab.ac.ke

## PHILOSOPHY

The Department of Management aims to equip management, marketing, economics, and office administration students with sound business principles and analytical competence in order to be able to identify and accurately define managerial problems, obtain, organize, and interpret relevant data/information and be able to select and implement decisions efficiently and effectively. The department also aims at integrating business ethics and Christian values.

## MISSION

To nurture students in the Christian philosophy of life and prepare them to become competent, committed, and dedicated managers, marketers, economists, and office administrators in the service of God and humanity.

## VISION

The Department of Management envisions being the leader in promoting world class value driven academics and practical excellence, integrating Christian faith and learning and promoting responsiveness to local and global needs in society in line with Christian philosophy.

## **OBJECTIVES OF THE PROGRAM**

To graduate competent and ethical business graduates capable of effectively contributing to the national economic development and progressing to higher levels of business studies.

## **DEGREES OFFERED BY THE DEPARTMENT**

- 1. Master of Business Administration
- 2. Bachelor of Business Administration in Management
- 3. Bachelor of Business Administration in Marketing

- 4. Bachelor of Business Administration in Office Administration
- 5. Minor in Management
- 6. Minor in Marketing
- 7. Minor in Economics

## **CORE PROGRAM LEARNING OUTCOMES**

A BBA graduate should be able to:

- 1. Effectively carry out the key tasks in the business functional areas
- 2. Carry out relevant research to help in effective decision making
- 3. Effectively solve emerging problems and challenges in modern business organizations
- 4. Conduct business practices within acceptable legal and ethical framework
- 5. Effectively communicate and be a resourceful team player
- 6. Continuously strive for mental excellence, develop intellectual curiosity, and maintain an intense desire to reach the highest level of professional skills and self-reliance.

## MANAGEMENT CORE COURSES LEARNING OUTCOMES

At the end of the program the student is expected to;

- 1. Effectively carry out the key tasks in management functional areas.
- 2. Carry out relevant research to help in effective management decision making.
- 3. Conduct management practices within legal and acceptable legal and ethical framework.
- 4. Effectively be able to solve emerging problems and challenges in modern management of the organization.
- 5. Work effectively and be a resourceful team prayer.

## MANAGEMENT SPECIALIZATION COURSES LEARNING OUTCOMES

- 1. Develop operational management concepts and plans.
- 2. Design and implement quality management practices.
- 3. Analyze the international dimensions of organizational management.
- 4. Manage organizational projects.
- 5. Discuss and explore contemporary issues and theories in management.
- 6. Formulate and develop healthful manageable organization policies and values.

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## LEARNING OUTCOMES FOR BBA IN MARKETING

- 1. Conduct relevant marketing research for effective marketing decisions
- 2. Develop innovative products and programmes that effectively cater for customer needs and wants
- 3. Design competitive marketing strategies



## LEARNING OUTCOMES FOR BBA IN OFFICE ADMINISTRATION

At the end of this program, the student is expected to:

- Demonstrate proper use of word processing software, spreadsheets and the internet to correctly format and produce mailable complex business documents with graphics, tables, reports, memos, minutes; maintaining speed and accuracy;
- Design, edit, format, proofread, and compose correspondences that meet mailability requirements and business standards in variety of office settings;
- Evaluate the changing work environment and skills needed by the administrative assistant to function in a changing work environment;
- 4. Design, implement and maintain efficient procedures for accomplishing various office-related tasks;
- 5. Use technology to organize information, manage business records and complete office tasks more efficiently;
- 6. Identify and analyze ethical issues in business;
- Analyze and synthesize information through critical thinking, creativity, and initiative, and apply and adapt required skills to the changing business community;
- Apply a variety of techniques to enhance learning in the workplace: time management, listening, note-taking, communications, critical thinking and decision makings skills.

## **ENTRANCE REQUIREMENTS**

## **DIRECT ENTRY**

In addition to meeting the university entrance requirement, a grade of C in English and C in Mathematics at the KSCE or its equivalent is required in order to pursue a bachelor of Business Administration in Management, Marketing, or Office Administration.

## INTERDEPARTMENTAL TRANSFER

Students wishing to transfer from other departments of the University of Eastern Africa, Baraton, and have not met the direct entry requirement into the department as stipulated above, must obtain a mean (average) grade of a C in MATH 113 and 114 and an average of a C+ in ENGL105 and ENGL 106 at the University of Eastern Africa, Baraton.

## **GRADUATION REQUIREMENTS**

- 1. A minimum overall GPA of 2.00 on a scale of 4.00
- 2. A minimum GPA of 2.25 for all courses in the business core
- 3. A minimum GPA of 2.25 for all courses in the major concentration
- 4. A minimum GPA of 2.25 for all courses in the cognates
- 5. A minimum GPA of 2.00 for all courses in the electives
- 6. A minimum GPA of 2.25 for all courses in the minor area
- A minimum of twelve (12) continuous weeks, of practical experience in an established company approved by the department chair-person, the student must score at least a grade of B- (minus) in practical experience to pass.

# **Course Listing**

## BACHELOR OF BUSINESS ADMINISTRATION IN MANAGEMENT

## SUMMARY

Total	144 Credits
Electives	6
Cognates	12
Concentration (Specialization)	36
Core	63
General Education Requirements	27

Students in BBA Management are exempted from the following General Education Requirements:

MGMT 103	Basic Management & Entrepreneur Skills	2
ENGL 106	Speech Communication	1
INSY 107	Information Technology today	2
MATH 100	Foundations of Mathematics	3
ENVI 227	Environment and Society	2
RELT 255	Christian Ethics	2
AGRI 105	Principles of Agriculture	2

GENERAL	GENERAL EDUCATION REQUIREMENTS 27 Credits					
ENGL 105	Writing Skills	3				
<b>KISW 114</b>	Language Use in Kiswahili Or	2				
FREN 103	Beginning French II	2				
GCAS 107	Music Appreciation Or	2				
LITE 151	Introduction to Literary Appreciation	2				
OFTE 120	Keyboarding	0				
EDUC 215	Introduction to Philosophy of Christian Education	2				
PEAC 107	Physical and Recreational Activities	1				
HLED 110	Health Principles	1				
BIOL 105	Human Biology	2				
PHYS 100	Concepts of Physics	2				
RELB 220	Life and Teachings of Jesus	2				
<b>RELH 155</b>	Adventist Heritage	2				
<b>RELT 207</b>	Christian Beliefs	3				

## Four credits from the following

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1

FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

BUSINESS CORE 65 Credits		
ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
ECON 210	Principles of Microeconomics	3
ECON 211	Principles of Macroeconomics	3
ECON 310	Intermediate Microeconomics	3
ECON 315	Intermediate Macroeconomics	3
ECON 328	Money and Banking and Financial Institutions	3
<b>FNCE 287</b>	Principles of Finance	3
INSY 118	Introduction to Business Information	3
11101/ 705	Processing	-
INSY 305	Management Information Systems	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
MGMT 130	Fundamentals of Management	3
MGMT 141	Business Law I	3
MGMT 142	Business Law II	3
<b>MGMT 220</b>	Business Statistics I	3
MGMT 221	Business Statistics II	3
MGMT 494	Business Research Methods	3
MKTG 115	Principles of Marketing	3
MKTG 380	Quantitative Techniques for Business Decision	3
OFAD 306	Business Communication	3

## CONCENTRATION

CONCENTRATION 36 Credits		s
MGMT 231	Human Resource Management	3
<b>MGMT 235</b>	Human Behavior in Organization	3
MGMT 337	Business Ethics	3
<b>MGMT 256</b>	Organization Theory	3
<b>MGMT 258</b>	Risk Management	3
MGMT 357	Strategic Management	3
<b>MGMT 440</b>	Change Management	3
<b>MGMT 460</b>	Corporate Internship in Management	3
MGMT 467	International Management	3
MGMT 475	Productions & Operations Management	3
MGMT 482	Project Management	3
<b>MGMT 495</b>	Management Research Project	3

COGNATES 12 Credit		its
FNCE 470	Financial Management	3
FNCE 390	Financial Markets and Institutions	3
INSY 281	System Analysis and Design	3
MKTG 484	Distribution, Logistics, & Pricing Management	3

ELECTIVES 6 Credit		ts
COSC 171	Visual Basics Net programming	3
MGMT 497	Contemporary Issues in Management	3
MKTG 330	Services Marketing	3
MKTG 355	Global Marketing	3
OFAD 212	Office Management	3

# **BACHELOR OF BUSINESS ADMINISTRATION IN MARKETING**

## **SUMMARY**

Total	144 Credits
Electives	6
Cognates	12
Concentration (Specialization)	36
Core	65
General Education Requirements	25

Students in Marketing are exempted from the following General Education Requirements:

MGMT 103	Basic Management & Entrepreneur Skills	2
ENGL 106	Speech Communication	1
INSY 107	Information Technology today	2
MATH 100	Foundations of Math	3
RELT 255	Christian Ethics	2
ENVI 227	Environmental Studies	2
AGRI 105	Principles of Agriculture	2

#### GENERAL EDUCATION REQUIREMENTS 27 Credits

<b>U</b> LINAL		
ENGL 105	Writing Skills	3
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physics	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3

## Four credits from the following

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2



## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
<b>NRSG 100</b>	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D100	Woodwork	1

BUSINESS	CORE 63 Credi	ts
ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
ECON 210	Principles of Microeconomics	3
ECON 211	Principles of Macroeconomics	3
ECON 310	Intermediate Microeconomics	3
ECON 315	Intermediate Macroeconomics	3
ECON 328	Money and Banking	3
FNCE 287	Principles of Finance	3
INSY 118	Introduction to Business Information Processing	3
INSY 305	Management Information Systems	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
MGMT 130	Fundamentals of Management	3
MGMT 141	Business Law I	2
MGMT 142	Business Law II	2
MGMT 220	Business Statistics I	3
MGMT 221	Business Statistics II	3
MGMT 494	Business Research Methods	3
MKTG 115	Principles of Marketing	3
MKTG 380	Quantitative Techniques for Business Decision	3
OFAD 306	Business Communications	3

CONCENTRATION 36 Credits		ts
MKTG 137	Principles and Practices of Retailing and Wholesaling	3
MKTG 226	Consumer Behavior	3
MKTG 240	Customer Care and Relationship Management	3
MKTG 330	Services Marketing	3
MKTG 288	Advertising and Promotion	3
MKTG 355	Global Marketing Strategies	3
MKTG 366	Sales Management	3
MKTG 370	Marketing Planning and Strategies	3
MKTG 375	Industrial Marketing	3

MKTG 460	Corporate Internship in Marketing	3
MKTG 484	Distribution, Logistics, and Pricing	3
	Management	
MKTG 495	Marketing Research Project	3
COGNATE	S 12 Credi	ts
COGNATE FNCE 470	S 12 Credi Financial Management	ts 3
FNCE 470	Financial Management	3

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ELECTIVES 6 Credit		ts
MKTG 497	Contemporary Issues in Marketing	3
FNCE 390	Financial Markets and Institutions	3
MGMT 467	International Management	3
FNCE 480	Management of Financial Institutions	3
MGMT 440	Change Management	3

# BACHELOR OF BUSINESS ADMINISTRATION IN OFFICE ADMINISTRATION

## **SUMMARY**

General Education Requirements	25
Core	63
Concentration	36
Cognates	13
Electives	6
Total	143 Credits

Office Administration students are exempted from the following General Education Requirements:

MGMT 103	Basic Management & Entrepreneur Skills	2
ENGL 106	Speech Communication	1
INSY 107	Information Technology today	2
MATH 100	Foundations of Math	3
OFTE 120	Keyboarding	0
KISW 114	Language Use in Kiswahili	2
RELT 255	Christian Ethics	2
ENVI 227	Environmental Studies	2
AGRI 105	Principles of Agricultural Technology	2
	Total	16

GENERAL	EDUCATION REQUIREMENTS 25 Credi	ts
ENGL 105	Writing Skills	3
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1



## Four credits from the following

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
WOOD 100	Woodwork	1

BUSINESS CORE 63 Credit		ts
ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
ECON 210	Principles of Microeconomics	3
ECON 211	Principles of Macroeconomics	3
ECON 310	Intermediate Microeconomics	3
ECON 315	Intermediate Macroeconomics	3
ECON 328	Money and Banking and Financial Institutions	3
<b>FNCE 287</b>	Principles of Finance	3
INSY 118	Introduction to Business Information Processing	3
INSY 305	Management Information Systems	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
MGMT 130	Fundamentals of Management	3
<b>MGMT 141</b>	Business Law I	2
<b>MGMT 142</b>	Business Law II	2
<b>MGMT 220</b>	Business Statistics I	3
<b>MGMT 221</b>	Business Statistics II	3
MGMT 494	Business Research Methods	3
<b>MKTG 115</b>	Principles of Marketing	3
MKTG 380	Quantitative Techniques for Business Decision	3
OFAD 306	Business Communications	3

CONCENTRATION 36 Credits		ts
OFAD 180	Introduction to Typing	2
OFAD 185	Intermediate Typing	2
OFAD 200	Advanced Typing	2
OFAD 205	Introduction to Shorthand	2
OFAD 210	Intermediate Shorthand	2
OFAD 212	Office Management	3
OFAD 310	Advanced Shorthand	2
OFAD 312	Office Organization and Procedures	3
OFAD 314	Records Management	3
OFAD 315	Office Administration Ethics and Public Relations	3
OFAD 457	Personality Development	3
OFAD 460	Corporate Internship in Office Administration	3
OFAD 483	Legal and Medical Office Procedures	3
OFAD 495	Office Administration Research Project	3

COGNATES 12 Credit		ts
FREN 102	Beginning French I	2
FREN 103	Beginning French II	2
INSY 210	Database Management Systems	3
MGMT 231	Human Resource Management	3
MGMT 235	Human Behavior in Organizations	3

ELECTIVES 6 Credits		S
ENGL 465	Creative Writing	3
FREN 130	Oral Expression and Aural Comprehension	3
MKTG 330	Services Marketing	3
OFAD 476	Front Office and Secretarial Bureau Management	3

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# **MINORS**

A non-business student who desires a minor in Management, Marketing, and Economics should take the following prerequisite courses:

ECON 210	Principles of Microeconomics	3		
ECON 211	Principles of Macroeconomics	3		
MATH 113	Business Mathematics I	4		
MATH 114	Business Mathematics II	4		
MGMT 130 Fundamentals of Management				
Total 17 Credit				

## MINOR IN MANAGEMENT

## 28 Credits

CORE COL	JRSES 22 Credit	ts
MGMT 231	Human Resource Management	3
<b>MGMT 235</b>	Human Behavior in Organization	3
<b>MGMT 256</b>	Organization Theory	3
MGMT 357	Strategic Management	3
MKGT 380	Quantitative Techniques	3
<b>MGMT 475</b>	Production and Operations Management	3
MKTG 115	Principles of Marketing	3

ELECTIVES	S 6 Credi	6 Credits	
FNCE 287	Principles of Finance	3	
FNCE 390	Financial Markets and Institutions	3	
MGMT 358	Risk Management	3	
MGMT 467	International Management	3	
MGMT 497	Contemporary Issues in Management	3	

## MINOR IN MARKETING

## 28 Credits

CORE COL	JRSES 21 Credi	ts
MKGT 380	Quantitative Techniques	3
MKTG 115	Principles of Marketing	3
MKTG 226	Consumer Behavior	3
MKTG 288	Advertising and Promotion	3
MKTG 330	Services Marketing	3
MKTG 370	Marketing Planning and Strategies	3
MKTG 375	Industrial Marketing	3

ELECTIVE	S 6 Credi	ts
FNCE 287	Principles of Finance	3
MGMT 482	Project Management	3
MKTG 137	Principles and Practices of Retailing and Wholesaling	3
MKTG 355	Global Marketing Strategies	3
MKTG 366	Sales Management	3
MKTG 484	Distribution, Logistics and Pricing Management	3

## **MINOR IN ECONOMICS**

## 28 Credits

CORE COL	JRSES 22 Credi	ts
ECON 221	Mathematical Methods for Economists I	3
ECON 222	Mathematical Methods for Economists II	3
ECON 310	Intermediate Microeconomics	3
ECON 315	Intermediate macroeconomics	3
ECON 326	International Economics	3
ECON 465	Economic Development	3
MKTG 380	Quantitative Techniques	4

ELECTIVES	6 Credi	ts
ECON 420	Public Finance	3
ECON 345	Agricultural Economics	3
ECON 495 Independent Study in Economics		3
FNCE 287	Principles of Finance	3
MGMT 221	Business Statistics	3



# BACHELOR OF BUSINESS ADMINISTRATION IN MANAGEMENT

# Four-Year Course Plan

YEAR	FI	RST SEMESTER				SECOND SEMESTER	
	CODE	COURSE TITLE	CR		CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	ľ	ACCT 112	Fundamentals of Accounting II	4
1st	ACCT 111	Fundamentals of Accounting I	4	ľ	MGMT 130	Fundamentals of Management	3
	OFTE 120	Keyboarding	0		INSY 118	Introduction to Business Information Processing	3
	LITE 151/ GCAS 107	Introductions to Literary Appreciation/ Music Appreciation	2		RELT 207	Christian Beliefs	3
	RELH 155	Adventist Heritage	2	Ī	MATH 114	Business Mathematics II	3
	PSYC 101 SOCI 121 SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	-	MGMT 142	Business Law II	2
	MATH 113	Business Mathematics I	3	Ī	PHYS 100	Concepts of Physical Sciences	2
	MGMT 141	Business Law I	2	ł	HLED 110	Health Principles	1
	PEAC 107	Physical and Recreational Activities	1	ł		Vocational Skills	1
		Total	19	ł		Total	22
2nd	RELB 220	Life and Teachings of Jesus	2		EDUC 215	Introduction to Philosophy of Christian Education	2
	MGMT 220	Business Statistics I	3		ECON 211	Principles of Macroeconomics	3
	ECON 210	Principles of Microeconomics	3		MGMT 221	Business Statistics II	3
	MKTG 115	Principles of Marketing	3		BIOL 105	Human Biology	2
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Development Studies	2		FNCE 287	Principles of Finance	3
	KISW 114/ FREN 103	Language use in Kiswahili/ Beginning French II	2		INSY 281	System Analysis and Design	3
	MGMT 231	Human Resource Management	3	ľ		An Elective	3
		Total	18			Total	19
	MGMT 256	Organization Theory	3		ECON 315	Intermediate Macroeconomics	3
3rd	ECON 310	Intermediate Microeconomics	3	ł	MKTG 380		3
ord	OFAD 306	Business Communications	3	ł	MGMT 237		3
	INSY 305	Management Information Systems	3	ł	MGMT 357		3
	MGMT 235	Human Behavior in Organization	3	ł	ECON 328	Money and Banking	3
	MGMT 258	Risk Management	3	ŀ	MGMT 494	Business Research Methods	3
		An Elective	3	ł	FNCE 390	Financial Markets & Institutions	3
		Total	21	ľ		Total	21
	FNCE 470	Financial Management	3		MGMT 460	Corporate Internship in Management	3
4th	MGMT 475	Productions & Operations Management	3		100111-00	Total	3
	MGMT 482	Project Management	3				
	MGMT 495	Management Research Project	3				
	MGMT 467	International Management	3				
	MGMT 440	Change Management	3				
	MKTG 484	Distribution, Logistics and Pricing Management	3				
		Total	21				



# BACHELOR OF BUSINESS ADMINISTRATION IN MARKETING Four-Year Course Plan

YEAR	FI	RST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	ACCT 112	Fundamentals of Accounting II	4
1st	ACCT 111	Fundamentals of Accounting I	4	MGMT 130	Fundamentals of Management	3
	OFTE 120	Keyboarding	0	INSY 118	Introduction to Business Information Processing	3
	LITE 151/ GCAS 107	Introductions to Literary Appreciation/ Music Appreciation	2	RELT 207	Christian Beliefs	3
	RELH 155	Adventist Heritage	2	MATH 114	Business Mathematics II	3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	MGMT 142	Business Law II	3
	MATH 113	Business Mathematics I	3	PHYS 100	Concepts of Physical Sciences	2
	MGMT 141	Business Law I	3	HLED 110	Health Principles	1
	PEAC 107	Physical and Recreational Activities	1		Vocational Skills	1
		Total	19		Total	22
2nd	RELB 220	Life and Teachings of Jesus	2	EDUC 215	Introductions to Philosophy of Christian Education	2
	MGMT 220	Business Statistics I	3	ECON 211	Principles of Macroeconomics	3
	ECON 210	Principles of Microeconomics	3	MGMT 221	Business Statistics II	3
	MKTG 115	Principles of Marketing	3	MGMT 337	Business Ethics	3
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Development Studies	2	FNCE 287	Principles of Finance	3
	KISW 114/ FREN 103	Language use in Kiswahili/ Beginning French II	2	MKTG 137	Principles & Practices of Retailing & Wholesaling	3
	MGMT 231	Human Resource Management	3	BIOL 105	Human Biology	2
		Total	18		Total	19
	MKTG 366	Sales Management	3	ECON 328	Money and Banking	3
3rd	ECON 310	Intermediate Microeconomics	3	MKTG 288	Advertising and Promotions	3
	OFAD 306	Business Communication	3	MKTG 380	Quantitative Techniques	3
	INSY 305	Management Information Systems	3	ECON 315	Intermediate Macroeconomics	3
	MKTG 370	Marketing Planning and Strategies	3	MKTG 240	Customer Care & Relationship Management	3
	MKTG 330	Services Marketing	3	MGMT 494	Business Research Methods	3
	MKTG 226	Consumer Behavior	3		Elective	3
		Total	21		Total	21
	MKTG 355	Global Marketing Strategies	3	MKTG 460	Corporate Internship in Marketing	3
4th	MKTG 375	Industrial Marketing	3		Total	3
	FNCE 470	Financial Management	3			
	MKTG 484	Distribution, Logistics, and Pricing Management	3			
	MKTG 495	Marketing Research Project	3			
	INSY 316	E-Commerce	3			
		Elective	3			
		Total	21			



# BACHELOR OF BUSINESS ADMINISTRATION IN OFFICE ADMINISTRATION Four-Year Course Plan

YEAR	FI	RST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	ACCT 112	Fundamentals of Accounting II	4
1st	ACCT 111	Fundamentals of Accounting I	4	MGMT 130	Fundamentals of Management	3
	OFAD 180	Introductions to Typing	2	INSY 118	Introduction to Business Information Processing	3
	LITE 151/ GCAS 107	Introductions to Literary Appreciation/ Music Appreciation	2	RELT 207	Christian Beliefs	3
	RELH 155	Adventist Heritage	2	MATH 114	Business Mathematics II	3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	MGMT 142	Business Law II	3
	MATH 113	Business Mathematics I	3	HLED 110	Health Principles	1
	MGMT 141	Business Law I	3	OFAD 185	Intermediate Typing	2
	PEAC 107	Physical and Recreational Activities	1	FREN 102	Beginning French I	2
		Total	21		Vocational Skills	1
				<b>PHYS 100</b>	Concepts of Physical Sciences	2
					Total	26
2nd	RELB 220	Life and Teachings of Jesus	2	EDUC 215	Introductions to Philosophy of Christian Education	2
Ziiu	MGMT 220	Business Statistics I	3	MGMT 221	Business Statistics II	3
	ECON 210	Principles of Microeconomics	3	ECON 211	Principles of Macroeconomics	3
	MKTG 115	Principles of Marketing	3	FNCE 287	Principles of Finance	3
	HIST 111/	Concepts of World Civilization/	2	BIOL 105	Human Biology	
	HIST 119	Issues in Development Studies			65	2
	FREN 103	Beginning French II	2	INSY 210	Database Management Systems	3
	MGMT 231	Human Resource Management	3		Total	16
		Total	18			
	OFAD 205	Introduction to Shorthand	2	OFAD 210	Intermediate Shorthand	2
3rd	ECON 310	Intermediate Microeconomics	3	ECON 315	Intermediate Macroeconomics	3
	OFAD 306	Business Communications	3	ECON 328	Money & Banking and Financial Institutions	3
	INSY 305	Management Information Systems	3	MKTG 380	Quantitative Techniques for Business Decisions	3
	OFAD 314	Records Management	3	MGMT 235	<u> </u>	3
	OFAD 212	Office Management	3	0FAD 200	Advanced Typing	2
				MGMT 494		3
					Elective	3
		Total	17		Total	22
	OFAD 310	Advanced Shorthand	2	MKTG 460	Corporate Internship in Marketing	3
4th	OFAD 312	Office Procedures	3		Total	3
	OFAD 457	Personality Development	3			
	OFAD 315	Office Administration, Ethics & Public Relations	3			
	OFAD 483	Legal and Medical Office Procedures	3			
	OFAD 495	Office Administration Research Project	3			
		Elective	3			
		Total	20			

# **Course Descriptions**

#### ECON 201 Introduction to Principles of 3 Credits Economics This course covers some typical issues that are studied in both

This course covers some typical issues that are studied in both Macroeconomics and Microeconomics to demonstrate that economics is a structured way of thinking and looking at the world from an economic standpoint. The course covers the following general areas in economics, economizing problem: scarcity and choice, the discipline of economics as a social science, economic models and economic theorizing, the use of graphs in economic analysis, the demand and supply models and market equilibrium, economic systems, macroeconomic goals and the role of government in market economy, measurement of macroeconomic aggregates and their relationships in the economy, public and private choices.

#### ECON 210 Principles of Microeconomics 3 credits

The purpose of this course is to introduce students with the basic principles of microeconomic theory and their applications in decision-making for the economy, household, and firm thereby laying a foundation for more advanced diversified courses in economics and business. The content of the course includes: scope of economics and nature of economic systems; scarcity and choice; demand, supply and determination of market price; equilibrium analysis; price elasticity of demand; elastic and inelastic demand; utility theory and consumer equilibrium; theory of the firm, theory of production, costs and supply of commodities; markets and market structures; perfect competition, monopoly, duopoly, monopsony, general equilibrium analysis, market failure, and government regulations. Prerequisite: should have completed 1st year 32 credits.

## ECON 211 Principles of Macroeconomics 3 Credits

The purpose of this course is to introduce students to the basic principles, goals and models of Macroeconomics and how they have influenced macroeconomic thinking and policy over time to the present. Its content covers basic concepts and scope of macroeconomic analysis, macroeconomic goals and measurement, National income concepts and measurement, circular flow of income model, aggregate demand and aggregate supply in the classical model of economic activity: the Keynesian model of income determination. Introduction to the theories of consumption and investment, recessions, inflation and unemployment, taxation and fiscal policy, Money supply and monetary policy, international trade and exchange rates; economic growth and development. Prerequisite: ECON 210.

## ECON 221 Mathematical Methods for 3 Credits Economists I

This is the first course in a series of two courses in mathematical methods for economics. The purpose of the course is to equip students with the basic knowledge in mathematical economics so as to be able to handle economic literature that is increasingly containing mathematical models. Its content covers basic principles of scalar algebra, linear and quadratic equations and inequalities, univariate functions and their economic applications, univariate nonlinear functions, experimental and logarithmic functions and mathematics of finance, the derivative and differentiation of univariate functions, bivariate and multivariate functions and comparative static analysis, matrix algebra, free and constraint optimization. Prerequisite MATH 114.

## ECON 222 Mathematical Methods for 3 Credits Economists II

As with the first course this second courses purpose is to broaden the students understanding of mathematical economics for analyzing theoretical and applied economic issues involving mathematical literature. Its content covers dynamic analysis, integration, linear first-order differential equations, linear and first-order difference equations, further topics in linear algebra, complex numbers and circular functions, non-linear first-order differential equations, secondorder difference equations, non-linear programming and Kuhn-Tucker Conditions. Prerequisite: ECON 221.

#### ECON 310 Intermediate Microeconomics 3 Credits

The purpose of this course is to deepen the students understanding and analysis of the microeconomic principles covered in the introductory course with the application of mathematical tools like calculus in analyzing business conditions and policies. Its content covers: Price Theory and its applications; the concept of elasticity as a measure of responsiveness and its application, income ,price, and cross elasticities, equilibrium and disequilibrium models in microeconomic theory, indifference curve analysis and consumer behavior, the mathematics of production, stages of production, returns to scale; theory of market structure, perfect competition, monopoly and monopolistic competition, oligopoly, factor markets, general equilibrium of comparative markets, general equilibrium, pareto optimality, introduction to welfare economics. Prerequisite: ECON210 and MATH 114.

## ECON 315 Intermediate Macroeconomics 3 Credits

The purpose of this course is deepen the students' understanding and analysis of the theory and models of the behavior of aggregate economic activity and the impact of various policies on economic activity. Its content covers: overview of national income accounting and basic macroeconomic identities, basic macroeconomic models of income determination: the classical and monetarist model; Keynesian model, consumption function and aggregate demand equilibrium; the basic IS-LM model of income determination, fiscal and monetary policies in the extended model; international linkages in the extended model, trade, balance of payments, exchange rates and the Mundell-Fleming Model, Capital Mobility and interest rates, theories of consumption, permanent income hypothesis, expected income hypothesis, marginal efficiency of capital, the acceleration principal International trade and finance, introduction to growth theory. Prerequisites: ECON 211 and MATH 114.

## ECON 326 International Economics

The purpose of this course is to introduce students to the theory and policy of international trade and policy and impacts on development process. Its content covers the definitions and scope of international economics, international trade theory including the Ricardian model of labor productivity and comparative advantage, immobile factor model and international trade, the Hecksher-Ohlin model, one-factor and two-factor economy models and trade between two factor economies, economies of scale and international trade,

**3 Credits** 

international factor movements, international trade policy, instruments of trade policy, tariffs and subsidies, exchange rates and foreign exchange market, interest rates and exchanges in international transactions, foreign exchange interrelations, international trade agreements and development countries debt balance of payment problems. Prerequisites: ECON310 and ECON315.

## ECON 328 Money, Banking and Financial 3 Credits Institutions

The purpose of this course is to provide students with an overview of the financial system of a modern economy, role of money, financial markets and financial institutions with particular emphasis on banks. Its content covers: overview of an economy's financial system, definitions, functions, gualities, measurement and evolution of money and payment system; financial markets, types and functions, financial instruments, nature and structure of interest rates, term and risk structure of interest rates, commercial banks and their operations, information asymmetries and information costs, problem of adverse selection and moral hazard, fundamental problem of financial intermediation, bank risks, financial intermediary management, risk management in banks, asset-liability management model, regulation of banks and financial sector, central banking, its functions, monetary policy formulation, goals and tools. Prerequisites: ECON211 and ACCT112.

#### **ECON 345** Agricultural Economics

#### **3 Credits**

**3 Credits** 

**3 Credits** 

The purpose of this course is to provide students with detailed economies principles as they apply to the agricultural sector which is a key sector of most developing economics. Its content covers the demand and supply of agricultural commodities, elasticity concept and its application to agriculture, the theory of agricultural production, consumer theory, agricultural markets and marketing of agricultural products, farm planning and control, international trade in agricultural commodities and commodity agreements, the role of agriculture in economic development, agriculture and food policies, and food security in less developed economies. Prerequisites: ECON310 and ECON315.

## **ECON 420** Public Finance

The purpose of the course is to introduce students to the general principles underlying the role of the government in the provision of social or public goods. This course discusses the functions of public finance in Kenya fiscal institutions, the theory of private and public goods, fiscal expenditures and growth over time, public expenditure valuation methods including cost-benefit analysis, the structure of government revenue, taxation and tax system in Kenya, principles of taxation, types of taxes, merits and demerits, tax incidence and tax burden, the economics of public debt, government budget and budget process. Prerequisites: ECON310 and ECON315.

#### ECON 465 Economic Development

The purpose of this course is to introduce students to the process and dynamic of economic development with reference to development. The content of the course discusses and analyzes the definition of economic development, the goals of economic development, the theorize of economic development and growth, economic growth models, structural change models, international dependence models, problems and policies of

economic development, poverty and inequality, population growth, urbanization and rural-urban migration, human capital, agricultural transformation, the environment and sustainable development, development planning and policies. Prerequisites: ECON310 and ECON315.

#### ECON 495 Independent Study in Economics 3 Credits

This is a demonstration of economic investigation conducted on an individual basis. It is an original piece of work on any topic of interest on any economic issue approved and supervised by the instructor concerned. The findings will be presented in a report. Seminar presentations are required. Limited only to students in Economics. Prerequisite: Senior standing

## MGMT 103 Basic Management and 2 Credits Entrepreneurial Skills

The purpose of this course is to give students an understanding of entrepreneurship and the necessary skills needed to become an entrepreneur. Course content includes basic concepts of entrepreneurship and entrepreneur; the entrepreneur and society; the government and entrepreneurship; characteristics, qualities, and traits of an entrepreneur; business ideas and opportunities: sources for business ideas, enabling environmental public policies; formation of business, forms of business organizations; registration of business, trading licenses and other contracts, sources of finance for small entrepreneurs, decision making and risk taking .management of small scale business, sources of finance for small entrepreneurs: internal sources and external sources of financing, and taxation.

#### MGMT 130 Fundamentals of Management 3 Credits

The purpose of this course is to acquaint the students with the fundamental concepts, theories, and basic principles of effective management of organizations to meet real world work and business requirements that create a competitive advantage. Main topics of the course are definition, nature and importance of management, social and ethical responsibilities and political environment of management, managing work, motivation and leadership, communication and decision making, management functions: planning, organizing, leading and their applications to functional areas of business: human resource, marketing, finance and accounting, productions and operations. Preparing a business plan and case analysis are also integrated in the course content.

#### MGMT 141 Business Law I

The purpose of this course is to give the students a basic understanding of law and its importance in society and in the business world and to equip them with analytical and critical problem solving skills in the legal business field. Topical contents of the course include the law of contract, the law of contract act, the law of partnership, Sale of Goods Act, the Law of Negotiable Instruments, and the Bills of Exchange Act, the Law of Bankruptcy, and the Bankruptcy Act.

#### MGMT 142 Business Law II

The purpose of this course is to acquaint the students with legal knowledge relating to commercial and property transactions within the business environment and to prepare them to undertake professional courses both locally and internationally in company law. Topical contents of the course include: nature and classification of companies, the formation

**3 Credits** 

## **3 Credits**

63

of companies, memorandum of associations, directors, officers and shareholders, shares, capital and dividends, mergers and acquisitions, and winding up of business organizations. Prerequisite: MGMT 141.

## MGMT 220 Business Statistics I

#### **3 Credits**

The purpose of this course is to provide students the foundational level, fundamental theories of both descriptive and inferential statistics and how they apply to business environments, managerial decision-making and business research. Its content covers: meaning of data and statistical data, scope and role of business statistics, data collection, analysis and presentation, measures of central tendency and dispersion, probability theory, elementary probability concepts, Bayes Theorem, probability distributions, normal distribution, binomial distributions, Poisson distribution, multinomial distribution, exponential distribution, sampling and sampling distributions, point interval estimates, confidence intervals and levels, statistical inference, hypothesis testing of means, variances, and proportions and differences among each, small and large sample tests involving different sampling distributions including t, F and chi-square distributions, simple and multiple linear regression model, and its evaluation, simple and multiple correlation and its evaluation. Prerequisite: MATH 114

## MGMT 221 Business Statistics II

#### 3 Credits

The purpose of this course is to provide the students with the several non-parametric statistical tools widely available for application in research projects and their interpretation for business and managerial decision making. Its content covers: a review of simple correlation and regression theory, multiple and partial correlation theory, significance of correlation ratios, ANOVA (one-,two- or three-way classifications), MANOVA, Posthoc Multiple Comparison Tests, Tukey, Newman Keuls, Turkey/Kramer and Scheffe' method, chi-square test, and non-parametric tests; namely the sign test, Wilcoxon's signed-rank test, Wilcoxon Rank Sum test, Median Test, Mann Whitney U test, Wald Wolfowitz Runs Test, test for randomness, Kruskall-Wallis H Test, Kolmogrov-Smirnoff test, Friedman Fr Test, Spearman's Rho, McNemar and Cochran tests. Prerequisite: MGMT220.

## MGMT 231 (MGMT 330 for Education 3 Credits Majors) Human Resource Management

The purpose of this course is to examine the primary role of human resources management in the organization to help people and organizations effectively manage human resources. This highly interactive course focuses on job assessment and job design, HR planning and recruitment, selection and placement, training, performance and appraisal management, employee development, employee separation and retention, employee contribution with pay, employee benefits, collective bargaining and labor relation, managing HR globally, leadership and cultural difference and strategically managing the HRM function. Prerequisite: MGMT 130.

## MGMT 235 (MGMT 335 for Education 3 Credits Majors) Human Behavior in Organization

This course will enable the learners to gain understanding of behavior of people in organization and how such behaviors ultimately affect performance in the organization. The course content includes the following topics: definition and importance of HBO as a field of study, history and current trends and future perspectives of HBO; organization performance and behavioral approach, individual attributes and their effect on behavior and performance; group organization factors and Influence on behavior. Prerequisite: MGMT 231.

#### MGMT 337 Business Ethics

This course is designed to expose students to professional and ethical practices in business to be able to identify social, professional and ethical implications of business. The course covers: the origin of ethics; ethics in business; consequential theories of ethics; moral issues connected with market economy; ethics in the production; distribution and exchange of economic goods and services; pricing; advertising; profit motives; the relationship and obligations of employers and employees; producer and distributor; buyer and seller; consumerism; economic and fair trade laws; protection of environment; and social obligations and social responsibility. Prerequisites: MGMT 141 and MGMT 142.

#### MGMT 256 Organization Theory

The purpose of this course is to deepen the students understanding and awareness of the essentials of managing and of the way organizations behave. Its content covers: overview of the field of management, and insights into the concept of organizational structure, history, lexicon, and practices of management as a field of study, and its present position in terms of both theory, practice, and the standing as a profession, evolution of management, classical approaches to management as well as appreciating their contributions and limitations, analysis of organizations and the management processes of planning, organizing, staffing, directing, controlling. communicating, problem-identification and decision making with emphasis on their application to different areas of management-marketing, production, operations, and financial and human resources, methods of strategic business analysis, considering; political, cultural, legal, market and socioeconomic forces. Prerequisite: MGMT130.

#### MGMT 258 Risk Management

#### **3 credits**

The purpose of this course is to prepare and equip students with the knowledge, understanding and techniques of the general management of risk. Its content covers definition of risk, types of risk, sources and causes of risk, development of corporate risk policy, risk identification: risk analysis: methods of measuring risk, evaluation of likelihood of risk, risk control and reduction, risk financing, retention and transfer, evaluation of management techniques, moral hazards and adverse selection, insurance principles and requisites: underwriting insurance claims, marketing insurance; economic and social significance of insurance in Kenya, Prerequisite: MGMT 130.

## MGMT 440 Management of Change 3 Credits

This course is designed to enable students understand the dynamic nature of the modern business environment and formulate appropriate response strategies. Topical contents of the course include: Meaning and nature of change, components and forms of change; forces of change; change process; models of change; implementing change in organization; change models and managerial decision making; organizational development of change; strategies in handling resistance to change; role of

## SCHOOL OF BUSINESS

## 3 credits

**3 Credits** 

strategic leadership as change agent; Leadership styles and change strategies. Prerequisites: MGMT 130 and MGMT 256.

## MGMT 460 Corporate Internship in 3 Credits Management

The purpose of this course is to give students an opportunity to apply and experience what they have learned and be able to evaluate organizational practices in the actual real work setting. Its content involves directed internship in a private firm, a not-for-profit organization or government agency for practical application of the course studied. Students will be attached for three months to different organizations. They will be required to fully participate in the routine tasks and assignments of the organization. The purpose will be to enhance their understanding in the general areas of management such as principles, organizational policies and work ethics, team building, communication and organizational performance. Each student will maintain a logbook containing weekly reports of activities undertaken. A designated supervisor at the place of work will sign the logbook weekly. At the end of the attachment, each student will submit the logbook plus a detailed report of one major activity undertaken during the industrial attachment. The detailed report should detail their experience during the attachment, linking the theory and practice. The report will be examined. Prerequisite: Junior Standing and above.

#### MGMT 467 International Management 3 Credits

The purpose of this course is to equip the student with special problems encountered by executives in the management of international business operations. The main topics covered will include subjects such as international trade, investment theories, balance of payments, exchange determination and management, international finance and trade institutions, trade documentation and payment procedures, the decision process in making investments abroad, relationships with host governments, international legal environment, organizational and operating problems of the multinational corporation, including setting strategic goals, human resource management, planning, communications, and control. Prerequisite: MGMT 357.

## MGMT 475 Production and Operations 3 Credits Management

The purpose of this course is to equip the student with the understanding and the translation of the product and service requirements into goods and services, procedures, and operation organizations. The course covers, the analysis of challenges and issues faced by production/operations managers in manufacturing, merchandising, and service businesses, Process planning and control scheduling, quality management and control, plant layout, facility location, decision theories, game theory, queue analysis, production and inventory management, forecasting, Resource allocation techniques. Prerequisite: STAT 204.

#### MGMT 482 Project Management

This course provides the learners with project management knowledge, skills, abilities, tools and techniques necessary in a wide range of project applications from concept development to the actual project operations. Topical content of the course include: concept of projects; project organization and the manager; the project life cycle; project identification; project proposal writing; time and resource planning, project implementation; project monitoring and information systems; project evaluation; human resource management within projects; project management software; project termination. Prerequisite MGMT 130.

#### MGMT 494 Business Research Methods 3 Credits

The purpose of this course is to equip students with the necessary skills to undertake a scientific research in business. Its content covers: meaning and purpose of research, types of research, basic and applied research, quantitative and gualitative research, cross-sectional and longitudinal research; the scientific research process; identifying a research problem, stating the research problem, purpose, objectives, hypothesis/ research questions, significance of the study, limitation of the study, literature review, source of information and qualities of a good literature review, methodology: research design, population and sampling methods, developing research instrument, piloting/pretesting, data collection procedures - primary versus secondary data, plans for data analysis and interpretation; data management, data analysis: tools of gualitative and guantitative statistical analysis, interpretation, conclusions and recommendations; issues in research quality reliability, objectivity, validity; writing the research proposal and report. Prerequisites: MGMT220, MGMT221, and ENGL 105.

#### MGMT 495 Management Research Project 3 Credits

The purpose of this course is to test the students' conceptualization of research problems and to enable them to write a research report on a topic of their choice. The content involves a research project undertaken by the student under the supervision of an officially assigned faculty member who will guide the student research activities and ensure the research proposal, and report meet the required academic and ethical standards. The course will comprise two parts. The first part will comprise the writing of the research proposal and its approval. The second part will entail data collection, analysis, and writing of the final report. Prerequisite: MGMT 494

#### MGMT 497 Contemporary Issues in 3 Credits Management

This is a demonstration of a study in management issues which are not covered in depth in other courses. This is conducted on an individual basis. It is an original piece of work on any management topic of interest approved and supervised by the instructor concerned. Contemporary issues such as human resource accounting, market liberalization, emerging markets, local industrial policies, organizational size and dynamics in the information age, the role of the business manager in the emerging trade blocks, globalization and other issues. A seminar presentation is required after the investigation. Prerequisite: Senior standing.

#### MKTG 115 Principles of Marketing

#### **3 Credits**

The purpose of this course is to prepare the student to think strategically about marketing in today's global environment. This course is designed to provide students with an understanding of the principles of marketing. There will be a focus on the management of the marketing activities and how marketing relates to overall organizational functioning, including the management of exchange processes between business units and consumers and between firms. Topics include the marketing mix, new product development, consumer behavior, customer

**3 Credits** 

relationship management, strategic planning and e-commerce. Students will develop a comprehensive marketing plan and apply course concepts to real or imaginary products, Micro and macro marketing, segmentation strategies, society product, distribution, promotion, and pricing strategies. Prerequisite: ECON 210.

## MKTG 137 Principles of Retailing and 3 Credits Wholesaling

The purpose of this course is to equip the students with the theories, principles and practices and strategies of the two major intermediary channels of distributions: retailing and wholesaling. The course deals with the retail industry and its environment, retailing strategy, merchandise management, store management: layout and designs; nature and environment of wholesaling: benefits and economic functions, types and trends and strategic decisions in wholesaling. Prerequisite: MKTG 226.

#### MKTG 226 Consumer Behavior

**3 Credits** 

The purpose of this course is to acquaint the students with the factors that influence the complex nature of consumer behavior in the market place and to equip them with skills necessary to perform consumer analysis and develop competitive marketing strategies. Topics covered in the course include the nature, importance and basic concepts of customer behavior; psychological, social, cultural and political factors influencing consumer behavior; customer attitudes, customer motivation, customer decision making process and beyond; models of consumer behavior and consumer welfare. Prerequisite: MKTG 115.

## MKTG 240 Customer Care and Relationship Management

3 Credits

The purpose of this course is to provide guidelines and best

practices for providing excellent customer service that will enable frontline associates and service staff in back-up and support roles to build, maintain, and increase a loyal customer base. Retailers company's business prospects are often derailed by poor customer support. Procurement, fulfillment, and postsale support can be severely crippled by poor communication channels. Main topics for this course will include: customer care, customer satisfaction, meeting customers' expectations, meeting and exceeding customer needs measuring customer satisfactions, customer complaint, relationship marketing, how to retain customers, benefits of relationship marketing to organizations and customer care ethics. Prerequisites: MKTG 115 and MKTG 126.

#### MKTG 330 Services Marketing

#### **3 Credits**

The purpose of this course is to acquaint the students with the unique characteristics of services and their implications in order to come up with appropriate strategies to effectively manage service organizations. The topical contents of the course include concepts, importance and trends in services marketing, nature and characteristics of services; the extended marketing mix for services marketing and management: product, pricing, place, promotion, the role of people, physical ambiance, process and appropriate set up of strategies; quality management tactics; the SERVQUAL questionnaire, relations; service failures and complaint management; ethical issues in services marketing and strategies to control ethical behavior. Prerequisite: MKTG 115.

#### MKTG 288 Advertising and Promotion

**3 Credits** 

The purpose of this course is to increase an understanding of the important issues in planning and evaluating marketing communication campaigns and provide the appropriate theories, models, and other tools to make better marketing communications decisions. The course provides а comprehensive overview of advertising and promotion from an integrated marketing communications (IMC) perspective. The main topics covered in this course will include the role of marketing communication in the advertising, promotion, media planning and selection, sales promotion techniques and procedures, direct marketing and product placement, packaging, and its role in advertising, planning and implementing successful advertising and campaigns, evaluation of advertising effectiveness, advertising and promotion budgeting, public relations, creative strategies, appeals, legal and ethical issues in advertising and managing advertising agencies. Prerequisites: MKTG 226.

#### MKTG 355 Global Marketing Strategies 3 Credits

The purpose of this course is to expose the students with the emerging theories, principles and practices related with the competitive management of global/international corporations. Main contents of the course are international trade theories, marketing orientations: ethnocentrisms, polycentrism, and egocentrism; meaning global products, pricing, promotions and distributions strategies; grey marketing; challenges and emerging issues in global marketing. Prerequisite: MKTG 115.

#### MKTG 366 Sales Management

**3 Credits** 

This course aims to equip the students with adequate expertise of emerging practical strategies and tactics of sales management that can help an organization achieve its marketing goals and to prepare them to become successful sales executives, managers and supervisors. Topics covered in this course are meaning, trends and challenges of sales management; ethical and legal responsibilities of sales executives/managers; process and designs of sales force management: planning, organizing, training controlling, motivating and compensating compensation the sales force; process and strategies of personal selling; sales territories and accounts management, evaluation of sales performance and market analysis. Prerequisites: MGMT 130 and MKTG 115.

## MKTG 370 Marketing Planning and 3 Credits Strategies

The purpose of this course is to provide students with solid experience in creating marketing strategies for the future success of a business. The main focus is on discovering and developing a set of unique competencies for a firm that, through strategic differentiation, leads to sustainable competitive advantage in the marketplace. Areas covered in the course will include strategies such as tactical retreat, flanking, guerilla tactics, cyber strategies, strategic implementations and evaluation, relational marketing, positioning, segmentation strategies, pricing strategies, promotional, distributional, and product strategies. Prerequisite: MKTG 315.

#### MKTG 375 Industrial Marketing

#### 3 Credits

The purpose of this course is to enable the students to understand the concepts and unique nature of organizational customers and business markets. Course content covers meaning and scope of industrial marketing, the nature of industrial markets compared with consumer markets, organizational purchase process, industrial goods and customers; industrial product planning and packaging practices, pricing decision, promotion /communication decision, distribution and logistics strategies; and industrial market segmentations. Other topics include current trends and issues that domestically affect the industrial markets. Prerequisite: MKTG 115.

## MKTG 380 Quantitative Techniques for 3 Credits Business Decisions

The purpose of this course is to provide students with the basic understanding, analytical and computational ability of the various techniques and models used in business and managerial decision-making. Its content covers: overview of probability theory, counting rules, conditional probability, joint probability, probability trees, and Bayes theorem, decision analysis, decision making under uncertainty, linear programming, graphical and simplex method, algorithm, sensitivity analysis, transportation models and networks, forecasting, time series analysis, trend analysis, seasonal analysis and cyclical variation, inventory models, economic order quantity and fixed order, fixed order quantity calculation, lead time and inventory control models, queuing, models, project planning, scheduling and networks analysis, with PERT/CPM, simulation techniques. Prerequisite: MGMT 221.

## MKTG 460 Corporate Internship in 3 Credits Marketing

The purpose of this course is to give students an opportunity to apply and experience what they have learned and be able to evaluate organizational practices in the actual real work setting. Its content involves directed internship in a private firm, a not-for-profit organization or government agency for practical application of the course studied. Students will be attached for three months to different organizations. They will be required to fully participate in the routine tasks and assignments of the organization. The purpose will be to enhance their understanding in the general areas of management such as principles, organizational policies and work ethics, team building, communication and organizational performance. Each student will maintain a logbook containing weekly reports of activities undertaken. A designated supervisor at the place of work will sign the logbook weekly. At the end of the attachment, each student will submit the logbook plus a detailed report of one major activity undertaken during the industrial attachment. The detailed report should detail their experience during the attachment, linking the theory and practice. The report will be examined. Prerequisite: Junior Standing and above.

## MKTG 484 Distribution, Logistics and 3 Credits Pricing Management

The purpose of this course is to provide students with an overview of the challenges in distribution, logistics and pricing management of the productions and service firms. Areas covered will include supply chain choice and management, channels of distribution, their choice, motivation, compensation and management, physical distribution, transportation models, packaging, storing and warehousing, materials management, purchases and location choice, customer order processing, documentation and carrier liabilities, pricing strategies and policies. Prerequisite: MKTG 380 or MGMT 475.

#### MKTG 495 Marketing Research Project 3 Credits

The purpose of this course is to test the student's conceptualization of marketing research problems and enable them to write a research report on a marketing topic of his/her choice. Its content involves: a research project undertaken by the student that will be done under the supervision of an officially assigned faculty member who will guide the student's research activities and ensure the research proposal and report meets the required academic and ethical standards. The course will comprise two parts. The first part will comprise the writing of the research proposal and after its approval the second part will comprise the research and writing of the final report. Prerequisite: MKTG 487.

#### MKTG 497 Contemporary Issues in 3 Credits Marketing

This is a demonstration of a study in marketing issues which are not covered in depth in other courses. This is conducted on an individual basis. It is an original piece of work on any marketing topic of interest approved and supervised by the instructor concerned. Contemporary issues such as human resource accounting, market liberalization, emerging markets, local marketing policies, market size and dynamics of markets in this information age, the role of the marketing manager in the emerging trade blocks, globalization and other issues. A seminar presentation is required after the investigation. Prerequisite: Senior standing.

#### OFAD 180 Introduction to Typing

2 Credits

2 Credits

The purpose of this course is to introduce basic skills in keyboard operation to improve efficiency in manuscript production, centering and problem solving. The content covers mastering the alpha numeric keyboard, typing of basic documents such as tables, straight copies, statistical copies and manuscripts of varying complexities, mastering of typing skills in correspondences and mailable materials, proficiency in straight-copy of various complexities. A typing skills of 55 words per minute with 5% error allowance in 5 minutes is expected.

## OFAD 185 Intermediate Typing

The purpose of this course is to further deepen the students skills in key-stroking continuity and control, improve basic language skills, formatting business communications such as tables, resumes, and reports, type fast and accurately to reach 65 words per minute, improve ability to think and compose at the keyboard, work faithfully, honestly and industriously, format and design frequently used business forms and prepare administrative and employment documents as well as using judgment to take responsibility for the quality of documents produced. Content covers: improving communication skills by improving capitalization skills, rules, terminal punctuations, spelling skills, and number usage rules; formatting basic business communications, format unbound reports, format tabulated documents, inventory skills, long reports and complex tables. Prerequisite: OFAD 180.

#### OFAD 200 Advanced Typing

2 Credits

The purpose of this course is to build on keyboarding. communication and document formatting skills already developed as the complexity of tables and the length of reports the student prepares increases significantly in this level. Content includes: review of basic business communications. designing frequently used business forms and prepare administrative and employment documents, minutes, news release, itinerary, application letters, curriculum vitae, resumes, legal, medical and government documents. The final section is devoted to measuring the basic and document production skills already developed; professional image and employment opportunities. Emphasis is placed on working efficiently with script, rough draft, and statistical copy as well as on abstracting information from computer printouts. The student is required to use judgment and to take responsibility for the quality of the documents produced. These skills are invaluable and can be applied to any office situation. The minimum speed requirement is 75 words per minute with 2% error in 5 minutes. Prerequisite: OFAD 185.

#### **OFAD 205 Introduction to Shorthand**

#### 2 Credits

The purpose of this course is to provide students with the fundamental principles and theories of Pitman shorthand, master the consonants, vowels, positioning and phrasing techniques, drilling standard outlines, and comfortably take shorthand dictation and transcription at 50 – 70 words per minute with a minimum of 5% error in 10 minutes. Course content includes: drilling consonants, positioning, vowels, joining consonants, short-forms, phrases and outline derivatives, diphthongs, tri-phones, S circle, Ses circle, Sway circle, Stee, and Str loops. The course also includes reading pitman shorthand outlines and developing skills in drilling standard outlines so as to increase speed and accuracy with correct position of outlines as well as vowel indication. Also included are the application, and the development of an adequate business vocabulary.

#### **OFAD 210 Intermediate Shorthand**

#### 2 Credits

The purpose of this course is to improve student understanding of advanced theories of Pitman shorthand both in reading and writing, drill neat and accurate outlines, read both printed and handwritten outlines and take dictation and transcription at the rate of 80 – 100 words per minute with a minimum error of 3% in 5 minutes. The course content includes: halving, double consonants, hooks, compound consonants, double principle in halving, prefixes and suffixes, diaphones, figures, compound words and intersections. The course also involve reading and drilling complex shorthand outlines with increased speed and accuracy; yet maintaining correct positioning, phrasing, rules of grammar, punctuation, spelling, syllabication, and advanced business vocabulary. Prerequisite: OFAD 205.

#### **OFAD 212 Office Management**

## **3 Credits**

The purpose of this course is to provide a comprehensive overview of the administration of the modern office in the public and private sector through application of the management principles to office operations. Course content includes: the office, definition, purpose/function, office staff and clerical activities; emerging management trends and changes in the workplace, office environment, office organization and hierarchy, departmentalization, filing and retention of records, communication in the office, human relations in the office, human resource management, organization and methods, handling of mails and correspondences, meeting and event planning.

#### OFAD 306 Business Communications 3 Credits

The purpose of this course is to help the student develop the proficiency needed to succeed in today's technologically enhanced workplace by focusing on the development of professional oral and written communication skills. Having good oral communication and writing skills is essential in today's workplace. With the arrival of videoconferencing, largescale meetings are possible with increased frequency. Main content of the course covers memo, letter, report, multicultural and global communication; technological, legal and ethical considerations; interpersonal communication and team work; job search and resume; employment communication and job interview; social messages; presentation skills; participation in and chairing of meetings. Prerequisite: ENGL 105.

#### **OFAD 310 Advanced Shorthand**

2 Credits

The purpose of this course is to increase student's ability to construct legible shorthand outlines under the stress of dictation, increasing the possibility to pass entrance tests through combining shorthand, typing, and knowledge of the mechanics of English into production of specialized documents in legal and medical correspondences. Dictations are taken at the rate of 100 – 120 words per minutes with 95% accuracy. Emphasis is on speed in constructing own shorthand outlines following rules and principles of shorthand so as to drill and transcribe complex letters, memos, and reports accurately. The course also covers reading shorthand notes rapidly and accurately, proofreading to recognize errors in grammar, punctuation, spelling, and represent figures and symbols accurately. Prerequisite: OFAD 210.

## OFAD 312 Office Organization and 3 Credits Procedures

The purpose of this course is to introduce current office procedures necessary to perform administrative support functions as well as an opportunity to develop learning strategies that will prepare the student to confront academic, personal, and career challenges. A combination of practical tasks and processes provides a solid foundation for those entering administrative careers. The course content includes: office organization concept, elements or features of organization, importance of organization, objectives of business organizations, principles of organization, forms of organization, choosing an organization structure, forms of organizational chart, authority and responsibility, human relations, human behavior in the workplace, social and organizational dynamics and how they impact on the individuals, the organization and the office, issues of technology and its impact on secretarial procedures and proficiency, effective communication at all levels of the organization using e-mail, internet and intranet, extraction analysis and presentation of materials for managerial decisions, and issues of integrity and dignity of a secretary. Prerequisite: OFAD 212.

#### OFAD 314 Records Management

**3 Credits** 

The purpose of this course is to provide a practical, operationsbased examination of records management policies and procedures that are useful in managing vital records for primary business operations. The areas covered will include records management, history, definition, scope, and role in different institutions; policies and procedures; records inventories, retention schedules and indexes: practical controls for modern records in all institutions; filing methods for active, semi-active, and in-active records systems; automated records systems: electronic forms, computer assisted retrieval, and optical disk; purchasing procedures for records managers: getting the most from vendors, consultants, and contracts; records conversion, archives and the internet; general security and destruction; vital records and disaster; management of a small records center, working toward a digital future: building systems for current use and future adaptation: networks and towards a paperless office, the rise of the information specialist and the new roles for the records manager. Prerequisite: INSY118.

#### OFAD 315 Office Administration, Ethics, 3 Credits and Public Relations

The purpose of this course is to provide students with knowledge and skills in areas of business administration, ethics and public relations so as to understand office processes needed in different workplaces such as general business offices, legal, or medical offices. The areas covered will include the office concept, its purpose and functions, differentiating between administration and management, aspect of management process, office skills, procedures and responsibilities of an executive secretary/office administrator, study in organization dynamics, levels in the organizational hierarchy and relationships, departmentalization, office environment, organization and methods (0 & M); business ethics definition, business environment, factors affecting business ethics, applying ethics in different fields, consequences of unethical behavior - case study for illustration 'The Enron scandal', setting codes of business ethics, examples of codes of ethics, codes for corporations and non-profit organizations; History of public relations, definition of Public relations, the publics and opinion leaders, the images in public relations, differences between public relations, advertising, and marketing, PR and propaganda, types of PR departments, PR and press relations, the importance of human relations, work and motivational theories, types of groups, work frustrations, stress, causes and remedy, and managing conflicts. Prerequisite: MKTG 115.

#### **OFAD 457** Personality Development

#### **3 Credits**

The purpose of this course is to learn in-depth information about personality dynamics, and then it will guide the student in comparing themselves to the ideal so that they will become more aware of their personality handicaps. Activities are also meant to deepen their self – realization as they reflect on their existing value system, their life philosophy, paradigms and perceptions and discover how all these influence their present behavior, success and happiness. The main topics covered in this course will include personality theories, personality development, self image, professionalism and social etiquette, responsibilities of personal/executive secretary, grooming, attire, development of job ability, communication, the dynamics of communication, intra-personal, inter-ethnic, inter-cultural and cross gender communication and role modeling with Christ as the master model. Prerequisite: OFAD 312.

#### OFAD 460 Corporate Internship in Office 3 Credits Administration

The purpose of this course is to give students an opportunity to apply and experience what they have learned and be able to evaluate organizational practices in the actual real work setting. Its content involves directed internship in a private firm, a not-for-profit organization or government agency for practical application of the course studied. Students will be attached for three months to different organizations. They will be required to fully participate in the routine tasks and assignments of the organization. The purpose will be to enhance their understanding in the general areas of management such as principles, organizational policies and work ethics, team building, communication and organizational performance. Each student will maintain a logbook containing weekly reports of activities undertaken. A designated supervisor at the place of work will sign the logbook weekly. At the end of the attachment, each student will submit the logbook plus a detailed report of one major activity undertaken during the industrial attachment. The detailed report should detail their experience during the attachment, linking the theory and practice. The report will be examined. Prerequisite: Junior Standing and above.

#### OFAD 476 Front Office and Secretarial 3 Credits Bureau Management

The purpose of this course is to acquaint the student to all facets of front desk/front office lodging management. The student will have the opportunity to study interlinked front office operations for a variety of hospitality settings. A student will learn how lodging operations rely on connectivity and interdependence provided by the front desk/front office. The main content of the course covers the areas such as lodging industry, hotel organization, front office operations, communication and guest services, security and the lodging industry, check-out and account settlement, the role of housekeeping in hospitality operations, the concepts and types of a secretarial bureau, organization and provision of secretarial services, financing, accounting, and auditing of a secretarial bureau, customer relations and retention, how to register a bureau and preparation of business plans and projects for funding purposes. Prerequisite: OFAD 315 and OFAD 457.

#### OFAD 483 Legal and Medical Office 2 Credits Procedures

The purpose of this course is to equip the student to the functions and duties of the legal and medical office procedure. This course is designed to prepare students for employment either in a medical office or in a legal office. A student will understand what a medical and legal office is like, how it functions, and its personnel for an intelligent performance of secretarial duties. The main topics covered will include professionalism in the legal office procedures, legal etiquette, research, and report writing. The medical office procedure will include mastery of specialized skills for the medical office such as medical terminologies transcription in shorthand phrases and vocabulary, confidentiality of patient records, integrity, personal ethics, medical professional ethics

and exposure to medical institutions. The learner is expected to spend at least one week each in the legal office, courts and law libraries within the scheduled semester as part of the requirement. Prerequisite: OFAD 315 and MGMT 141.

#### OFAD 495 Office Administration Research Project

### **3 Credits**

The purpose of this course is to test the students' conceptualization of research problems and enable students to write a research report on a topic of his/her choice. The content involves: the research project undertaken by the student will be done under the supervision of an officially assigned faculty member who will guide the student research activities and ensure the research proposal and report meets the required academic and ethical standards. The course will comprise two parts. The first part will comprise the writing of the research proposal and its approval. The second part will entail data collection, analysis, and writing of the final report. Prerequisite: MGMT 494.

#### OFTE 120 Keyboarding

#### 0 credit

The purpose of this course is to develop skills in operating and manipulating the keyboard to produce mailable work. This includes mastery of the alpha-numeric keyboard, identifying and mastering the home keys, key reach techniques and striking skills, gain skill in copying from printed matter, statistical, script and rough draft copy, introduction to manuscript typing, basic types of letter styles, envelopes, reports, centering tables/ columns and memos. Emphasis is on speed, proofreading, neatness, accuracy and attractiveness. Speed objective: 25 – 40 a minute taken in 10 minutes.

# School of Education, Humanities, and Social Sciences



# School of Education, Humanities, and Social Sciences

DEAN – Allida, D, PhD, Associate Professor

Email: dean\_soe@ueab.ac.ke

#### **PHILOSOPHY**

The School of Education, Humanities and Social Sciences holds that God is the Creator and Sustainer of the universe and life and is the source of true knowledge. The entrance of sin caused man's alienation from God; therefore, the educative process seeks to restore the relationship of men and women with God by preparing pastors, teachers, educational administrators, curriculum experts, psychologists, guidance counselors, social scientists, experts in development studies, musicians, linguists, and public servants who fully understand God's will for humanity and endeavor to treat their learners, colleagues, leaders and subordinates with dignity, love, humility and care by emulating the example of Jesus Christ, the Master Teacher. This approach leads learners into self-actualization and to discover and understand the truth through positive critical thinking.

#### **MISSION**

The Mission of the School of Education, Humanities and Social Sciences is to provide and advance a wholistic quality Christian education, which develops men and women to be earnest seekers of truth and equips them with appropriate knowledge, skills and attitudes in education, humanities and social sciences for service to God and humanity.

### VISION

The vision of the School of Education, Humanities, and Social Sciences is to be a leading center of excellence in higher education and research, producing world-class pastors, teachers, educational administrators, curriculum experts, psychologists, guidance counselors, social scientists, experts in development studies, musicians, linguists, and public servants equipped with moral virtues.

#### **EXPECTED LEARNING OUTCOMES**

The academic programs in the School of Education, Humanities, and Social Sciences are specifically designated to accomplish the following objectives:

- To provide students with counseling skills needed in the contemporary society.
- 2. To train students to teach in primary, secondary, and tertiary institutions of learning.
- To uphold sound professional ethics for those training to be pastors, counselors, teachers, curriculum planners, musicians, linguists, historians, educational administrators, public servants.
- To prepare students to lead educational institutions and organizations.
- To provide experience to students how to develop documents on curriculum at school, district, county, national and regional levels.

- 6. To allow students to carry out and supervise research work with intentions to create new and relevant knowledge.
- 7. To acquaint students with the various fields within the humanities and social sciences as well as their relationship to other disciplines.
- 8. To prepare and enable students to appreciate the value and quintessence of humanistic disciplines as they relate to humankind and its problems.
- 9. To prepare professionals, including pastors, counselors, researchers and teachers, etc. who will, in turn contribute to the development and application of knowledge in nation building during and after their studies.
- To meet academic, scholarly and professional needs of students in all aspects of their pursuits.
   To help students live their own lives as useful members of their community by inculcating moral leadership values.
- To develop academic, scholarly and professional discourses and public agenda for quality education and academic excellence.
- 12. To prepare students for postgraduate studies and advanced research in humanistic disciplines.
- To prepare students to teach courses in religion, humanities and social sciences, etc. at all levels in secondary schools and teacher training colleges.
- 14. To provide broad based forum for free exchange of ideas – forum which embodies professional commitment to a set of values which include boldness of vision, willingness to initiate, capacity to lead and inspire desire to protect or dream of a better future.
- To provide quality higher education and academic excellence within the context of the philosophy of education and the mission of Seventh-day Adventist Church.

### DEGREES OFFERED BY THE SCHOOL OF EDUCATION, HUMANITIES, AND SOCIAL SCIENCES

#### DOCTORAL

- 1. Doctor of Philosophy (PhD) in Education with specialization in Educational Administration;
- 2. Doctor of Philosophy (PhD) in Education with specialization in Curriculum and Teaching.

### MASTERS

- 1. Master of Education (MEd) with specialization in Educational Administration;
- 2. Master of Education (MEd) with specialization in Curriculum and Teaching.

# POST-GRADUATE DIPLOMA IN EDUCATION (PGDE)

#### BACHELORS

- 1. Bachelor of Arts in Counseling Psychology
- 2. Bachelor of Arts in Development Studies
- 3. Bachelor of Arts in English

- 4. Bachelor of Arts in French
- 5. Bachelor of Arts in History
- 6 Bachelor of Arts in Kiswahili
- 7. Bachelor of Arts in Journalism and Mass Communication a. Electronic Media Specialization
  - b. Print Media Specialization
  - c. Public Relations and Advertising
- 8. Bachelor of Arts in Music Performance
- 9. Bachelor of Arts in Religion
- 10. Bachelor of Arts in Theology
- 11. Bachelor of Arts/Science in Geography
- 12. Bachelor of Education (Arts)
- 13. Bachelor of Education (Science)
- 14. Bachelor of Music in Music Education (BMusMusEd)

#### **MINORS**

- 1. Minor in Counseling Psychology
- 2. Minor in Development Studies
- 3. Minor in Electronic Media

- 4. Minor in English Language/Linguistics
- 5. Minor in Environmental Studies
- 6. Minor in French
- 7. Minor in Geographic Information Systems (GIS)
- 8. Minor in Geography
- 9. Minor in Health Psychology
- 10. Minor in History 11. Minor in Kiswahili
- 12. Minor in Literature
- 13. Minor in Music
- 14. Minor in Political Science
- 15. Minor in Print Media
- 16. Minor in Psychology
- 17. Minor in Public Relations and Advertising
- 18. Minor in Religion
- 19. Minor in Social Work

### **DEPARTMENT OF EDUCATION**

#### FACULTY

Allida, D., PhD. (Head of Department) Allida, V., PhD. Amimo, C., PhD. Ayiemba, G. J., MA., PhD in progress Balyage, Y., PhD. Butucha, K., PhD. Kinuthia, B. N., PhD. Metto, E., MEd. Mwangi, P., PhD. Odek, S., PhD. Ojwan'g, M., PhD.

Email: hod\_curriculum@ueab.ac.ke

#### **PHILOSOPHY**

The Department of Education operates on the UEAB worldview, which holds that God is the Creator and Sustainer of the universe and life and is the source of true knowledge. The entrance of sin caused man's alienation from God; therefore, the educative process seeks to restore the relationship of men and women with God by preparing teachers, school administrators, curriculum experts and researchers who fully understand God's will for humanity and endeavor to treat their students, colleagues, leaders and subordinates with dignity, love, humility and care by emulating the example of Jesus Christ, the Master Teacher. This approach will lead learners into self-actualization and to discover and understand the truth through positive critical thinking.

#### **MISSION**

The Mission of the Department of Education is to provide and advance wholistic, Christian, quality education which develops learners to be earnest seekers of truth and equip them with appropriate knowledge, skills, attitudes, technology and understanding for the teaching and leadership roles at preschool, primary and secondary school, college and university levels for the glory of God.

#### VISION

The Department of Education envisions being a center of excellence in higher education and research producing worldclass teachers, educational administrators, curriculum experts and researchers equipped with moral virtues.

#### **DEGREES OFFERED BY THE DEPARTMENT**

- 1. Doctor of Philosophy (PhD) in Education with specialization in Educational Administration;
- 2. Doctor of Philosophy (PhD) in Education with specialization in Curriculum and Teaching.
- 3. Master of Education (MEd) with specialization in Educational Administration;
- 4. Master of Education (MEd) with specialization in Curriculum and Teaching.
- 5. Post Graduate Diploma in Education (PGDE).
- 6. Bachelor of Education (BEd) Arts.
- 7. Bachelor of Education (BEd) Science.

#### **EXPECTED LEARNING OUTCOMES**

Graduates of the Department of Education will be able to:

- 1. Define such terms as teaching, education, school, schooling, curriculum, administration, and supervision;
- Explain the historical and philosophical development of education in various societies of the world with great emphasis on Kenya;
- 3. Discuss the life of Jesus Christ as a Master Teacher;
- Discuss stages of human growth and development in relation to their emotional, social, and cognitive development associated with learning;
- Develop a subject curriculum with a vision, philosophy, mission, goals, objectives and teaching and learning strategies in the light of national and millennium development goals;
- 6. Describe characteristics of effective professional teaching;
- 7. Prepare schemes of work, lesson plans, work and school syllabus;

- 8. Differentiate between methods and techniques of teaching;
- 9. Demonstrate the use of primary, secondary and tertiary technologies in classroom teaching;
- Compare and contrast educational system in Kenya with those of selected countries in Africa, Europe, Asia and America;
- Identify student needs, interests and potentials related to the teaching and learning process;
- Discuss theories of learning and their influence on student learning;
- Construct, validate, and administer essay and objective tests and examinations based on the expected learning outcomes;
- Apply administrative, management, and leadership functions in schools and instructions associated with the teaching and learning process;
- Construct a vision, philosophy, mission, goals, objectives and strategies in the process of laying out short term, medium term and long term plans for an educational institution and organization;
- Plan for human capital for economic, political and social development of a nation;
- Practice teaching for a period of not less than 13 weeks in a school situation;
- 18. Carry out research to improve quality of life through the educative process.

#### **BACHELOR OF EDUCATION (SECONDARY)**

Students seeking to be secondary school teachers enroll for either a Bachelor of Education (Science) or a Bachelor of Education (Arts).

#### **EXPECTED LEARNING OUTCOMES**

Student graduating from the Bachelor of Education degree program should be able to:

- Identify student needs, interests and potentials related to the learning process;
- Prepare schemes of work/course outline, lesson plans and record of work in their areas of specialization;
- 3. Teach secondary school subjects;
- Prepare and administer class and subject tests and examination to evaluate the effectiveness of the teaching learning process;
- Utilize techniques and methods of teaching appropriate to students' abilities in subjects of their specialization;
- 6. Manage secondary schools and/or any other educational related institution/organization;
- 7. Apply professional ethics and Christian values in their roles as school teachers, supervisors and administrators
- 8. Identify children with psychological and academic difficulties;
- 9. Provide support for children with psychological and academic difficulties;
- 10. Pursue further studies in education or any other subject area of their specialization.

#### **ENTRANCE REQUIREMENTS**

#### **DIRECT ENTRY**

For admission into the Bachelor of Education program the applicant must

 Pass KCSE with a minimum mean grade of C+ at secondary school certificate level or its equivalent or

- Have an advanced level certificate with two principal passes and division II at 0-level or its equivalent or
- Have a diploma in education from a government recognized institution and have a mean grade of C at KCSE or its equivalent
- 4. Have P1 certificate and have at least two years teaching experience

The student must pursue two teaching subjects selected from courses that were done and passed at secondary school level. No student is allowed to take education courses with the teaching subjects that were not done and passed with a minimum grade of C+ at KCSE or its equivalent.

#### **INTERDEPARTMENTAL TRANSFERS**

Students wishing to transfer from other departments to the Department of Education to be trained as teachers must do so during the first and second years of their program and must have passed the subjects they wish to teach after graduation with a minimum grade of C+ at KCSE or its equivalent.

#### **GRADUATION REQUIREMENTS**

In addition to the graduation policy of UEAB as stipulated in this bulletin, the Department of Education recommends a student for graduation to the School of Education, Humanities and Social Sciences Board and to the Senate upon completion of the following requirements:

- 1. A minimum overall GPA of 2.00.
- 2. A minimum GPA of 2.25 for the professional courses and two teaching subjects.
- Successful completion of EDTE 399 Teaching Practice in Secondary Schools for twelve to thirteen continuous weeks in a selected secondary school.

#### **TEACHING SUBJECTS**

Students selecting this degree are required to enroll in two teaching subjects taught at secondary school level. The subjects must be selected from either arts or sciences as indicated below.

Geography is the only teaching subject which fits in both arts and science categories.

### **Bachelor of Education (Arts)**

Students seeking a Bachelor of Education (Arts) degree select from the following subject combinations as per Teachers Service Commission:

- Geography/CRE;
- History/CRE;
- Geography/History;
- Geography/Kiswahili;
- English/Literature;
- Kiswahili/CRE;
- Kiswahili/History;
- Kiswahili/Geography;

Students planning to take English Language must also take Literature in English. This means that a student may opt for a concentration in English language and literature and is not required to take any other second teaching subject. This is because the candidate's area of study covers the language and literature disciplines as required for teaching English language in Secondary Schools. Students planning to teach Kiswahili are advised to take a second teaching subject in Religion, History or Geography.

### **Bachelor of Education (Science)**

Students seeking a Bachelor of Education (Science) degree select from the following subject combinations as per Teachers Service Commission:

- Chemistry/Biology;
- Chemistry/Physics;
- Agriculture/Biology;
- Agriculture/Chemistry;
- Agriculture/Geography;
- Biology/Geography;
- Home Science/Agriculture;
- Home Science/Biology;
- Physics/Computer;
- Mathematics/Chemistry;
- Mathematics/Biology;
- Mathematics/Physics;
- Mathematics/Business Studies;
- Mathematics/Geography
- Mathematics/Computer;
- Biology/Business Studies;
- Business Studies/Geography
- Chemistry/Business Studies

Teaching subjects are drawn from various departments of the university under the guidance of the department head of Education and two other department heads from where the candidate draws the two teaching subjects as areas of study.

### **REQUIREMENTS FOR TEACHING PRACTICE**

Graduation requirements include 6 credits of teaching practice for 12 to 13 weeks depending on the length of the school term when students are practicing teaching. School terms are scheduled by the Ministry of Education

- In order to qualify for teaching practice, the student teacher is expected to have completed:
  - a. All the prescribed General Education Requirements with a GPA of 2.00,
  - b. At least 70% of required professional courses (including EDPC 106, EDFO 120, EDTE 210, EDTE 255, EDTE 301 and two courses with a code of EDTM addressing the teaching subjects) with a minimum grade of C- in an individual subject and an accumulative GPA of 2.25 or C+; and
  - c. At least 70% of the requirements for the first and second teaching subjects with a minimum GPA of 2.25;
  - d. Attend an orientation seminar on teaching practice;
- Students on teaching practice must be physically present at the cooperating school throughout the duration of the school days and throughout the school term;
- A student on teaching practice is required to attend meetings and activities taking place on the cooperating school campus;
- 4. Students on teaching practice are expected to observe the rules and regulations of the University of Eastern Africa, Baraton, the Ministry of Education, the Teachers' Service Commission, the Teachers' Code of Ethics and the institution to which they are assigned.

# **Course Listing**

### GENERAL EDUCATION REQUIREMENTS 11Credits

Note: As per approval of the Senate, Education students are to take the following courses for general education requirements:

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
INSY 107	Information Technology Today	2
RELB 220	Life and Teachings of Jesus	2
<b>RELT 207</b>	Christian Beliefs	3

### CORE (PROFESSIONAL) COURSES

**55 Credits** 

**18 Credits** 

75

TEACHER	EDUCATION 17 Credit	ts
EDTE 180	Health Education and Life Skills	2
EDTE 210	Curriculum Development	3
EDTE 255	Principles and Methods of Teaching	3
EDTE 301	Educational Communication and Technology	3
EDTE 326	Educational Measurement and Evaluation	3
EDTE 333	Research Methods in Education	3

EDUCATIO	NAL PSYCHOLOGY 8 Credi	ts
EDPC 106	Educational Psychology	3
EDPC 238	Human Growth and Development	3
EDPC 244	Educational Guidance and Counseling	2
EDPC 106	Educational Psychology	3
EDPC 238	Human Growth and Development	3
EDPC 244	Educational Guidance and Counseling	2

#### EDUCATIONAL FOUNDATIONS

EDFO 130	History of Education	2
EDFO 260	Philosophy of Education	2
EDF0 280	Sociology and Comparative Education	3
EDF0 400	Educational Policy and Management	3
EDFO 401	Planning and Economics of Education	3
EDFO 403	Entrepreneurship Education	3
EDFO 410	Environmental Education	2

SUBJECT	TEACHING METHODS COURSES 6 Credit	ts
EDTM 311	Special Methods in Teaching History and government	3
EDTM 312	Special Methods in Teaching Religious Education	3
EDTM 313	Special Methods in Teaching Geography government	3
EDTM 314	Special Methods in Teaching English Language	3
EDTM 315	Special Methods in Teaching Literature in English	3
EDTM 316	Special Methods in Teaching Kiswahili Language	3

EDTM 318	Special Methods in Teaching French Language	3
EDTM 321	Special Methods in Teaching Biology	3
EDTM 322	Special Methods in Teaching Agriculture	3
EDTM 323	Special Methods in Teaching Home Science	3
EDTM 324	Special Methods in Teaching Chemistry	3
EDTM 325	Special Methods in Teaching Mathematics	3
EDTM 326	Special Methods in Teaching Physics	3
EDTM 329	Special Methods in Teaching Business Studies	3
EDTM 337	Special Methods in Teaching Physical Education	3
EDTM 338	Special Methods in Teaching Computer Science	3

Note: A student is required to take two of the subject teaching method courses, selected from the above list. The subject areas must correspond with the subjects the candidate will be teaching after graduating from the University.

TEACHIN	G PRACTICE 6 Credi	ts
EDTE 399	Teaching Practice in Secondary School	6

Prerequisites: EDPC 238, EDPC 106, EDTE 210, EDTE 255, EDTE 326, and any two of the EDTM 311 to EDTM 338 courses applicable to the teaching subject areas, approved by the Department, and attending an orientation seminar on teaching practice.

# **Bachelor of Education (Arts)**

### BACHELOR OF EDUCATION (ARTS) IN TEACHING CHRISTIAN RELIGIOUS EDUCATION

### SUMMARY

General Education Requirements	6
Teaching Religious Education	45
Second Teaching subject	42
Core (Professional Courses)	55
Total	148 Credits

Note: Religion majors will be exempted to taking RELB 220 Life and Teachings of Jesus because it is covered in RELB 331 New Testament Studies and also RELT 207 Christian Beliefs which is covered in RELT 427 Christian Doctrines.

GENERAL EDUCATION REQUIREMENTS		6 Credits	
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
INSY 107	Information Technology Today		2

TEACHING	CHRISTIAN RELIGIOUS EDUCATION 45 Credit	ts
RELB 204	Old Testament Studies	3
<b>RELB 331</b>	New Testament Studies	3
RELH 114	Introduction History of Christian Church	3
RELT 128	Adventist History and Philosophy	3
<b>RELT 131</b>	African Traditional Religions	3
<b>RELT 216</b>	Comparative Religions	3
RELT 231	Phenomenology of Religion	3
<b>RELT 280</b>	Philosophy of Religion	3
<b>RELT 330</b>	Islamic Studies	3
<b>RELT 337</b>	Sociology of Religion	3
RELT 418	New Religious Movements in Africa	3
<b>RELT 427</b>	Christian Doctrines	3
RELT 435	Issues in Ecumenism	3
RELT 460	Contemporary Themes in Christian Theology	3
<b>RELT 480</b>	History of the Christian Church in Africa	3

### BACHELOR OF EDUCATION (ARTS) IN TEACHING ENGLISH LANGUAGE AND LITERATURE

### SUMMARY

Total	149 Credits	
Core (Professional) Courses	55	
Specialization (Language and Literature)	83	
General Requirement Courses	11	

GENERAL	EDUCATION REQUIREMENTS	11 Credi	ts
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
INSY 107	Information Technology Today		2
RELB 220	Life and Teachings of Jesus		2
<b>RELT 207</b>	Christian Beliefs		3

TEACHING ENGLISH LANGUAGE 42 Credits		
ENGL 114	Introduction to the Description of English	3
ENGL 130	Introduction to the Study of Language	3
ENGL 148	English Grammar and Usage I	3
ENGL 216	Origins and Development of English	3
ENGL 217	Phonetics and Phonology	3
ENGL 218	Morphology and Syntax	3
ENGL 219	English Grammar and Usage II	3
ENGL 302	Language Policy and Issues	3
ENGL 305	English Structure and Semantics	3
ENGL 347	Second Language Acquisition	3
ENGL 456	Varieties of English	3
ENGL 463	Psycholinguistics	3
ENGL 465	Principles of Creative Writing	3
ENGL 469	Research Project/Seminar	3



TEACHING LITERATURE IN ENGLISH 41 Credits		ts
LITE 151	Introduction to Literary Appreciation	2
LITE 154	Introduction to Oral Literature	3
LITE 165	Stylistics	3
LITE 210	East African Prose Fiction	3
LITE 212	East African Poetry	3
LITE 214	East African Drama	3
LITE 260	Children's Literature	3
LITE 346	Introduction to Literary Theory and Criticism	3
LITE 347	South African Literature	3
LITE 348	European Literature	3
LITE 449	Modern Poetry	3
LITE 450	Theatre Arts	3
LITE 456	Caribbean Literature	3
LITE 466	Research/Creative Writing Project	3

### BACHELOR OF EDUCATION (ARTS) IN TEACHING GEOGRAPHY

#### SUMMARY

General Education Requirements	11	
Teaching Geography	42	
Second Teaching Subject	42	
Core (Professional Courses)	55	
Total	150 Credits	

GENERAL EDUCATION REQUIREMENTS 11 Credits		ts	
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
INSY 107	Information Technology Today		2
RELB 220	Life and Teachings of Jesus		2
<b>RELT 207</b>	Christian Beliefs		3

#### **TEACHING GEOGRAPHY** 42 Credits GEOG 100 Introduction to Geography 3 GEOG 111 Fundamentals of Physical Geography I 3 3 GEOG 121 Fundamentals of Human Geography I GEOG 130 Introduction to Cartography, Map work 3 and Land Surveying GEOG 211 Fundamentals of Physical Geography II 3 Fundamentals of Human Geography II 3 GEOG 221 3 GEOG 226 Geography of Tourism and Leisure 3 GEOG 313 Geography of East Africa 3 GEOG 321 Remote Sensing 3 GEOG 326 Agricultural Geography 3 GEOG 355 Geographical Information Systems (GIS) GEOG 410 **Research Methods in the Social Sciences** 3 3 GEOG 430 Meteorology and Climatology 3 GEOG 480 Independent Study in Geography

### BACHELOR OF EDUCATION (ARTS) IN TEACHING HISTORY

### SUMMARY

Total	150 Credits
Core (Professional Courses)	55
Second Teaching Subject	42
Teaching History	42
General Education Requirements	11

GENERAL	EDUCATION REQUIREMENTS 11 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
INSY 107	Information Technology Today	2
RELB 220	Life and Teachings of Jesus	2
<b>RELT 207</b>	Christian Beliefs	3
TEACHING	HISTORY 42 Credi	ts
HIST 106	Sources of African History	3
HIST 120	Introduction to Kenyan History	3
HIST 203	Introduction to African History to 1884	3
HIST 204	Introduction to African History since 1884	3
HIST 213	Themes in World History to 1500	3
HIST 313	Themes in East African History	3
HIST 345	Methods of Historical Research	3
HIST 380	Philosophy of History	3
HIST 421	Imperialism & Nationalism in the Third World	3
HIST 440	History of Political Ideas	3
HIST 447	History of International Relations	3
POLS 100	Introduction to Government	3
POLS 200	Modern Governments in Africa	3
POLS 230	Comparative Government in Developed Countries	3

### BACHELOR OF EDUCATION (ARTS) IN TEACHING KISWAHILI

#### **SUMMARY**

Total	150 Credits
Core (Professional Courses)	55
Second Teaching Subject	42
Teaching History	42
General Education Requirements	11

GENERAL	EDUCATION REQUIREMENTS	11 Credit	ts
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
INSY 107	Information Technology Today		2
RELB 220	Life and Teachings of Jesus		2
<b>RELT 207</b>	Christian Beliefs		3

TEACHIN	G KISWAHILI 42 Credi	ts
KISW 110	Introduction to the Study of Language	3
<b>KISW 111</b>	Historical Development of Kiswahili	3
<b>KISW 114</b>	Language Skills in Kiswahili I	3
<b>KISW 120</b>	Phonetics and Phonology	3
<b>KISW 225</b>	Kiswahili Morphology and Syntax	3
KISW 265	Language Skills in Kiswahili II	3
KISW 285	Second Language Learning	3
KISW 315	Theories of Literary Criticism	3
KISW 350	Oral Literature in Kiswahili	3
KISW 365	Contemporary Kiswahili Novel and Play	3
KISW 395	Research Methods in Language and Literature	3
KISW 420	Semantics and Pragmatics in Kiswahili	3
KISW 422	Textual and Discourse Analysis in Kiswahili	3
KISW 425	Kiswahili Poetry	3

## **Bachelor of Education (Science)**

### BACHELOR OF EDUCATION (SCIENCE) IN TEACHING AGRICULTURE

### SUMMARY

General Education Requirements	11
Teaching Agriculture	41
Second Teaching Subject	41
Core (Professional Courses)	55
Total	148 Credits

GENERAL EDUCATION REQUIREMENTS 11 Credit		ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
INSY 107	Information Technology Today	2
RELB 220	Life and Teachings of Jesus	2
<b>RELT 207</b>	Christian Beliefs	3

TEACHING	AGRICULTURE 41 Credi	ts
AGEC 345	Agricultural Economics	3
AGEC 413	Management of Agricultural Enterprises	3
AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGRI 101	Crop Production Skills	1
AGRI 102	Animal Production Skills	1
AGRI 108	Introduction to Agriculture	1
AGRI 116A	Agriculture Ecology	2
AGRI 116B	Agriculture Ecology Field Trip	1
AGRI 335	Mushroom Production	2
ANSC 211	Introduction to Animal Science	3
ANSC 411	Poultry Science	3
ANSC 442	Dairy Production	3

CPSC 213	Introduction to Soils	3
CPSC 279	Crop Physiology	3
CPSC 314	Crop Production I	3
CPSC 325	Crop Production II	3
CPSC 412	Crop Protection	3

### BACHELOR OF EDUCATION (SCIENCE) IN TEACHING BIOLOGY

#### SUMMARY

General Education Requirements 11			
Teaching Biology 41			
	41		
ssional Courses)	55		
	149 Crea	dits	
EDUCATION REQUIR	EMENTS	11 Credit	ts
Writing Skills			3
Speech Communicati	on		1
Information Technolo	gy Today		2
Life and Teachings of	Jesus		2
Christian Beliefs			3
	blogy ching Subject ssional Courses) EDUCATION REQUIR Writing Skills Speech Communication Information Technolo	blogy 41 ching Subject 41 ssional Courses) 55 <b>149 Crea</b> <b>EDUCATION REQUIREMENTS</b> Writing Skills Speech Communication Information Technology Today Life and Teachings of Jesus	blogy 41 ching Subject 41 ssional Courses) 55 <b>149 Credits</b> EDUCATION REQUIREMENTS 11 Credit Writing Skills Speech Communication Information Technology Today Life and Teachings of Jesus

TEACHING	G BIOLOGY 41 Credit	ts
BIOL 151	Fund Biol I/General Genetics	3
BIOL 152	Fund Biol II/General Botany	3
BIOL 153	Fund Biol III/Invert & Vertebrate Zoology	3
BIOL 176	Introduction to Microbiology	3
BIOL 285	Biostatistics	3
BIOL 286	General Ecology	3
BIOL 292	Fundamentals of Cell and Molecular Biology	4
BIOL 296	History & Philosophy of Biology	3
BOTN 374	Systematic Botany	3
BOTN 432	Plant Physiology	3
ZOOL 360	Parasitology & Immunology	3
Z00L 448	Developmental Biology	3
ZOOL 464	Systems Physiology	4

### BACHELOR OF EDUCATION (SCIENCE/ ARTS) IN TEACHING BUSINESS EDUCATION

#### SUMMARY

General Education Requirements	9
Teaching Business Education	44
Second Teaching Subject	41
Core (Professional Courses)	55
Total	149 Credits

Note: Business majors are exempted from INSY 107 Information Technology Today because the material is covered in INSY 118 Introduction to Information Processing

GENERAL	EDUCATION REQUIREMENTS	9 Credit	ts
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
RELB 220	Life and Teachings of Jesus		2
<b>RELT 207</b>	Christian Beliefs		3

TEACHIN	G BUSINESS EDUCATION 44 Credi	ts
ACCT 111	Fundamentals of Accounting I	4
ACCT 112	Fundamentals of Accounting II	4
ECON 210	Principles of Microeconomics	3
FNCE 287	Principles of Finance	3
FNCE 467	Investment Analysis and Portfolio Management	3
INSY 118	Introduction to Business Information Processing	3
MGMT 130	Fundamentals of Management	3
MGMT 141	Business Law I	3
MGMT 220	Business Statistics I	3
MGMT 330	Human Resource Management	3
MGMT 335	Human Behavior in Organization	3
MKTG 240	Customer Care and Relation Management	3
MKTG 366	Sales Management	3
MKTG 484	Distribution, Logistics and Pricing Management	3

### BACHELOR OF EDUCATION SCIENCE) IN TEACHING CHEMISTRY

### **SUMMARY**

Total	149 Credits	
Core (Professional Courses)	55	
Second Teaching Subject	41	
Teaching Chemistry	42	
General Education Requirements	11	

GENERAL	EDUCATION REQUIREMENTS 11 (	Credits
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	
INSY 107	Information Technology Today	2
RELB 220	Life and Teachings of Jesus	2
<b>RELT 207</b>	Christian Beliefs	3

TEACHING	G CHEMISTRY 42 Credi	ts
CHEM 120	Fundamentals of Chemistry	3
CHEM 130	Introduction to Organic Chemistry	3
CHEM 154	Introduction to Analytical Chemistry I	3
CHEM 171	Organic Functional groups	3
CHEM 205	Atomic Structure & Bonding	3
CHEM 231	Physical Chemistry I	3
CHEM 235	Analytical Chemistry II	3

CHEM 271	Chemical Thermodynamics and Phase equilibria	3
CHEM 341	Inorganic Chemistry I	3
CHEM 345	Synthetic Organic Chemistry	3
CHEM 394	Heterocyclic chemistry and stereochemistry	3
CHEM 402	Transition Metals Chemistry	3
CHEM 411	Industrial Chemistry I	3
CHEM 425	Electrochemistry	3

### BACHELOR OF EDUCATION (SCIENCE) WITH TEACHING CONCENTRATION IN COMPUTER SCIENCE

#### SUMMARY

Total	149 Credits
Core (Professional Courses)	55
Second Teaching Subject	41
Teaching Computer Science	42
General Education Requirements	9

Note: Students taking Computer Science are exempted for the course INSY 107 Information Technology Today.

GENERAL	EDUCATION REQUIREMENTS	9 Credits
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
RELB 220	Life and Teachings of Jesus	2
<b>RELT 207</b>	Christian Beliefs	3

TEACHING	COMPUTER 42 Credit	ts
COSC 161	Fundamentals of Programming	3
COSC 162	Data Structures and Algorithm	3
COSC 171	Visual Basic Net Programming	3
COSC 225	Computer Organizations	3
COSC 237	Networks and Telecommunications	3
COSC 261	Operating Systems	3
COSC 343	Foundations of Human-Computer Interaction	3
COSC 498	Senior Project	3
INSY 118	Introduction to Business Information Processing	3
INSY 210	Database Management Systems	3
INSY 314	Web Design and Internet Technologies	3
INSY 136	Microcomputer Applications	3
INSY 305	Management Information Systems	3
INSY 497	IT Project Management	3



### BACHELOR OF EDUCATION SCIENCE) IN TEACHING HOME SCIENCE

### SUMMARY

General Education Requirements	11
Teaching Home Science	42
Second Teaching Subject	41
Core (Professional Courses)	55
Total	149 Credits

Note: Students taking Computer Science are exempted for the course INSY 107 Information Technology Today.

GENERAL	EDUCATION REQUIREMENTS	11 Credit	S
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
INSY 107	Information Technology Today		2
RELB 220	Life and Teachings of Jesus		2
<b>RELT 207</b>	Christian Beliefs		3

TEACHING	COMPUTER 42 Credi	ts
HOSC 116	Creative Needle Work	1
HOSC 120	Introduction to Food Preparation (with lab)	3
HOSC 150	Clothing Construction I (with lab)	3
HOSC 170	Resource Management in the Family	3
HOSC 215	Clothing Construction II (with lab)	1
HOSC 230	Nutrition and Health	3
HOSC 235	Pattern Drafting	3
HOSC 250	Child Development and Growth	3
HOSC 303	Family Living	2
HOSC 318	Personal Hygiene and Good Grooming	3
HOSC 319	Design for Living	3
HOSC 330	Meal Preparation and Management	3
HOSC 400	Public Health and Community Nutrition	3
HOSC 415	Tailoring	3
HOSC 453	Food Demonstration Skills	2
HOSC 455	Quantity Food Management and Production	3

### BACHELOR OF EDUCATION (SCIENCE) IN TEACHING MATHEMATICS

### SUMMARY

General Education Requirements	11
Teaching Mathematics	42
Second Teaching Subject	41
Core (Professional Courses)	55
Total	149 Credits

Note: Students taking Computer Science are exempted for the course INSY 107 Information Technology Today.

GENERAL EDUCATION REQUIREMENTS 11 C		11 Credit	S
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1

INSY 107	Information Technology Today	2
RELB 220	Life and Teachings of Jesus	2
<b>RELT 207</b>	Christian Beliefs	3

TEACHING	G MATHEMATICS 42 Credit	ts
MATH 124	Basic Mathematics and Analytical Geometry	3
MATH 127	Differential Calculus	3
MATH 150	Linear Algebra I	3
MATH 227	Integral Calculus	3
MATH 240	Real Analysis I	3
MATH 248	Ordinary Differential Equations I	3
MATH 274	Complex Analysis I	3
STAT 150	Introduction to Probability and Statistics	3

For Levels Three and Four courses a student selects 9 credits for each level. Courses are selected from either Pure Mathematics or Applied Mathematics or Statistics.

LEVEL TH	REE 9 Credi	ts	
Option: Pure Mathematics			
MATH 340	Real Analysis II	3	
MATH 346	Group Theory	3	
MATH 354	Ring Theory	3	
MATH 365	Number Theory	3	
MATH 371	Linear Algebra II	3	
MATH 375	Algebraic Structures	3	
<b>Option:</b> A	pplied Mathematics		
MATH 336	Numerical Analysis I	3	
MATH 340	Real Analysis II	3	
MATH 348	Ordinary Differential Equations II	3	
MATH 355	Dynamics	3	
MATH 380	Analytic Applied Mathematics	3	
MATH 385	Fluid Mechanics	3	
Option: St	tatistics		
STAT 300	Multivariate Probability Distributions	3	
STAT 305	Theory of Estimation	3	
STAT 308	Operation Research	3	
STAT 313	Tests of Hypothesis	3	
STAT 330	Sample Survey	3	
STAT 336	Quality Control Methods	3	

LEVEL FOUR 9 Credi		ts
Option: P	ure Mathematics	
MATH 411	Field Theory	3
MATH 412	Galois Theory	3
MATH 414	Тороlоду	3
MATH 415	Measures Theory and Integration	3
MATH 474	Complex Analysis II	3
MATH 480	Functional Analysis	3
MATH 483	Coding Theory	3
Option: Applied Mathematics		
MATH 404	Numerical Methods	3
MATH 408	Differential Geometry	3

MATH 414	Тороlоду	3
MATH 445	Partial Differential Equations	3
MATH 447	Fluid Flow Analysis	3
MATH 448	Method of Fluid Mechanics	3
MATH 474	Complex Analysis II	3
MATH 480	Functional Analysis I	3
Option: Statistics		
STAT 400	Stochastic Process	3
STAT 410	Design and Analysis of Experiments	3
STAT 415	Multivariate Methods	
STAT 425	Measure and Probability	3
STAT 430	Systems Analysis and Design	3
STAT 435	Time Series Analysis	3

### BACHELOR OF EDUCATION (SCIENCE) IN TEACHING PHYSICS

#### SUMMARY

149 Credits	
55	
41	
42	
11	
	42 41 55

GENERAL	GENERAL EDUCATION REQUIREMENTS 11 Credits						
ENGL 105	Writing Skills		3				
ENGL 106	Speech Communication						
INSY 107	Information Technology Today		2				
RELB 220	Life and Teachings of Jesus		2				
<b>RELT 207</b>	Christian Beliefs		3				

TEACHIN	G PHYSICS 42 Credi	ts
<b>PHYS 160</b>	Mechanics	3
PHYS 165	Heat and Thermodynamics	3
PHYS 170	Geometric Optics	3
PHYS 180	Introduction to Quantum Physics	3
PHYS 215	Waves and Oscillations	3
PHYS 231	Electricity and Magnetism I	3
PHYS 232	Electricity and Magnetism II	3
PHYS 255	Quantum Mechanics	3
PHYS 300	Properties of Matter	3
PHYS 335	Physical Optics	3
PHYS 345	Electronics	3
PHYS 410	Nuclear Physics	3
PHYS 415	Solid State Physics	3
PHYS 431	Environmental and Renewable Energy Physics I	3

### BACHELOR OF EDUCATION (UPGRADING FROM DIPLOMA IN EDUCATION)

#### **ENTRANCE REQUIREMENTS**

The Department of Education offers a Bachelor of Education degree (Primary option) to teachers holding a Diploma in Primary teaching and a Bachelor of Education degree (Secondary option) to teachers holding a Diploma in Secondary School Teaching and who have been in the teaching profession or a related assignment for not less than two years. Graduates of this program are trained to teach in primary schools or secondary schools. Students under this program enroll for either a Bachelor of Education (Science) or a Bachelor of Education (Arts). The students admitted into the Bachelor of Education program should:

- Hold a Secondary School Certificate with either a mean grade of C or C+. (Candidates with a Secondary School certificate with a grade below C must possess a Diploma in Education);
- Hold a two and half years Primary or Secondary Teacher's Diploma taken after passing School Certificate Examinations;
- 3. The selected teaching subjects must have been passed with at least C+ at KCSE or its equivalent.

#### **COURSE INTAKE**

Bachelor of Education (Teaching Certificate holder entrants) students may join regular students in the regular semester. They may also join in school holidays scheduled by the Ministry of Education in Kenya in November/December, April, and August. Information on dates can be obtained from the Registrar's Office or the Department of Education.

#### **DURATION OF THE COURSE**

The Bachelor of Education degree takes a minimum period of four years and a maximum period of five years to regular students with effect from the date of the commencement of the course. Part time students must complete the program in a minimum period of five and half years and maximum of seven years. Courses taken after seven years must be repeated.

#### **TEACHING SUBJECTS**

Students seeking entrance into Bachelor of Education (primary option) program must enroll in two teaching subjects taught at primary school level. The recommended categories are:

- 1. Science which includes mathematics, physics, chemistry, biology, geography, computer science and agriculture.
- Languages that covers English language and literature. Kiswahili language is supposed to be taken with history, geography or religion.
- 3. Arts which include religion, history, geography and business education. While students seeking entrance into Bachelor of Education (secondary option) take two teaching subjects similar to those taken in Bachelor of Education (secondary) regular. The student must draw the subjects under the guidance of the Department Chairperson of Education and other two Department Chairpersons of the University under which a student draws the first and second teaching subject areas of study.

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#### **GRADUATION REQUIREMENTS**

In addition to the general graduation requirements of the University, students taking a teaching degree in Primary Option must do a minimum of 15 semester credits in English language including writing and communication skills, psychology of Child Development, a course in Guidance and Counseling, methods of teaching in primary school and teaching practice.

#### **TEACHING PRACTICE**

For students admitted into this program with a Primary teaching Diploma or Secondary teaching Diploma to graduate under a Bachelor of Education degree, 3 credits of teaching practice must be completed. This exercise takes 12 to 13 weeks depending on the length of the term. This can be done in the schools where they are working as teachers since most of them are already hired by the Teachers Service Commission.

- 1. In order to qualify for teaching practice, the student teacher is expected to have completed
  - All the General Education Requirements required for them with a minimum GPA of 2.00;
  - b. At least 70% of the first and second teaching subjects being pursued with a minimum GPA of 2.25; and
  - c. At least 70% of the professional courses with a minimum grade of C- and a GPA of 2.25;
  - d. Seminar orientation on Teaching Practice.
- All students in teaching practice must be physically present at the cooperating school throughout the duration of the school day and throughout the school term;
- A student on teaching practice is required to attend all required meetings and activities taking place on the school campus;
- 4. Students on teaching practice are expected to respect the rules and regulations of the University, the Code of Regulation, the Code of Ethics of the Ministry of Education, the Teachers' Service Commission and the institution to which they are assigned;
- Students must complete teaching practice in two teaching subjects to satisfy the Ministry of Education's stipulation of two subject areas.

### BACHELOR OF EDUCATION (SCIENCE & ARTS) FOR UPGRADING STUDENTS WITH DIPLOMA SECONDARY TEACHING

#### **SUBJECT EXEMPTION**

Students taking a Bachelor of Education who entered into the program with a Diploma in Education taken after completing Secondary School with a mean grade of C or C+ and with the selected teaching subjects having been passed with at least C+ in KCSE or its equivalent will be exempted from:

- 1. Fifteen (15) credits of professional education courses as follows:
  - a. EDPC 238 Human Growth and Development 3 Credits
  - b. EDTE 180 Health Education and Life Skills 2 Credits
  - c. EDFO 130 History of Education 2 Credits
  - d. EDTE 255 Principles and Methods of Teaching 3 Credits.
  - e. Teaching Practice (3 Credits)
- 2. Twelve (12) credits from each of the two teaching areas. The courses exempted must in either level 1 or level 2. Therefore

twenty four (24) credits in total shall be exempted from the two teaching areas.

 Students taking Religious Education as a teaching subject are in addition exempted from courses whose content is covered in the teaching area. These courses are: RELB 220 Life and Teachings of Jesus Christ, RELH 155 Adventist Heritage, and RELT 207 Christian Beliefs.

#### SUMMARY

Total	124 Credits	S
Teaching Professional Courses	41	
Second teaching subject	36	
First teaching subject	36	
General Courses	11	

GENERAL	GENERAL EDUCATION REQUIREMENTS 22 Credits						
ENG 105	Writing Skills		3				
ENG 106	Speech Communication						
INSY 107	Information Technology Today		2				
RELB 220	Life and Teachings of Jesus		2				
<b>RELT 207</b>	Christian Beliefs		3				

CORE (PROFESSIONAL COURSES) FOR BACHELOR OF EDUCATION (UPGRADING FROM DIPLOMA IN EDUCATION) 41 Credits

TEACHER	TEACHER EDUCATION 12 Credit	
EDTE 210	Curriculum Development	
EDTE 301	Educational Communication and Technology	
EDTE 326	Educational Measurement and Evaluation	3
EDTE 333	Research Methods in Education	3

EDUCATIONAL PSYCHOLOGY 5 Credit		ts
EDPC 106	Educational Psychology	3
EDPC 244	Educational Guidance and Counseling	2

EDUCATIO	EDUCATIONAL FOUNDATIONS 17 Credi				
EDFO 260	Philosophy of Education	2			
EDF0 280	Sociology and Comparative Education	3			
EDF0 400	Educational Policy and Management	3			
EDFO 401	Planning and Economics of Education	3			
EDF0 402	Environmental Education	3			
EDF0 403	Entrepreneurship Education	3			

#### SUBJECT TEACHING METHOD COURSES 6 Credits

Students taking a Bachelor of Education (Primary option) shall be required to take relevant methodology course(s) applied to teaching in primary school:

EDTM 351	Science Teaching Methods	3
EDTM 352	Social Studies Teaching Methods	
EDTM 353	Language Teaching Methods	3



TEACHING PRACTICE 3 Credi		S
EDTE 397	Teaching Practice Or	3
EDTE 398	Teaching Practice	3

(Prerequisites: EDPC 106, EDPC 239, EDTE 210, EDTE 255, EDTE 326, and any two of the EDTM 311 to EDTM 378 courses applicable to the teaching subject areas, approved by the Department, and

attending an orientation seminar on teaching practice)

# TEACHING SUBJECTS COURSE LISTING (36 CREDITS FOR EACH OF THE TWO AREAS)

For the course listing of selected teaching subjected the students will refer to the Level Two, Three and Four courses of respective Bachelor of Education for the Regular students.

### Teaching Subjects: 1st...GEOGRAPHY ...... 2nd...HISTORY

YEAR	F	IRST SEMESTER				SECOND SEMESTER	
	CODE	COURSE TITLE	CR		CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3	1	EDF0 260	Philosophy of Education	2
1st	ENGL 105	Writing Skills	3	1	EDTE 180	Health Education & Life skills	2
	GEOG 130	Introduction to Cartography, Map work and Land Surveying	3		ENGL 106	Speech Communication	1
	GEOG 111	Fundamentals of Physical Geography I	3	1	INSY 107	Information Technology Today	2
	HIST 120	Introduction to Kenyan History	3	1	GEOG 121	Fundamentals of Human Geography I	3
	HIST 106	Sources of African History	3	1	GEOG 100	Introduction To Geography	3
		Total	18	1	POLS 100	Introduction to Government	3
					EDF0 130	History of Education	2
						Total	18
	EDTE 210	Curriculum Development	3		EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3	-	EDF0 280	Sociology & Comparative Education	3
Ziiu	GEOG 211	Fundamentals of Physical Geography II	3	-	RELT 207	Christian Beliefs	3
	GEOG 221	Fundamentals of Human Geography II	3		GEOG 226	Geography of Tourism and Leisure	3
	HIST 203	Introduction to African History to 1884	3		HIST 213	Themes in World History to 1500	3
	HIST 204	Introduction to African History Since 1884	3		POLS 200	Modern Governments in Africa	3
	11101 204	Total	18		1020200	Total	18
- I	EDTE 301	Educational Communication & Technology	3		EDTM 313	Methods Teaching Geography	3
3rd	EDTE 326	Educational Measurement & Evaluation	3		EDTM 311	Methods Teaching History	3
	GEOG 313	Geography of East Africa	3		EDTE 333	Research Method in Education	3
	GEOG 321	Remote Sensing	3		GEOG 355	Geographical Information Systems (GIS)	3
	POLS 230	Comparative Government in Developed Countries	3		HIST 345	Methods of Historical Research	3
	HIST 313	Themes in East African History	3		HIST 380	Philosophy of History	3
		Total	18			Total	18
		INTERSEMESTER			EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3		EDF0 410	Environmental Education	2
4th	EDFO 401	Planning & Economics of Education	3		EDF0 403	Entrepreneurship Education	3
	GEOG 410	Research Methods in the Social Sciences	3		GEOG 430	Meteorology and Climatology	3
	HIST 440	History of Political Ideas	3		GEOG 480	Independent Study in Geography	3
	EDPC 244	Educational Guidance and Counseling	2	1	HIST 447	History of International Relations	3
	GEOG 326	Agricultural Geography	3		HIST 421	Imperialism & Nationalism in the Third World	3
	RELB 220	Life & Teachings of Jesus	2	1		Total	17
		Total	19	1			

## Teaching Subjects: 1st...GEOGRAPHY ....... 2nd...KISWAHILI

YEAR		FIRST SEMESTER				SECOND SEMESTER	
	CODE	COURSE TITLE	CR		CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3		EDF0 260	Philosophy of Education	2
1st	ENGL 105	Writing Skills	3		EDTE 180	Health Education & Life skills	2
	GEOG 130	Introduction to Cartography, Map work and Land Surveying	3		GEOG 121	Fundamentals of Human Geography I	3
	GEOG 111	Fundamentals of Physical Geography I	3		GEOG 100	Introduction To Geography	3
	KISW 114	Language Skills in Kiswahili I	3		KISW 111	Historical Development of Kiswahili	3
	KISW 110	Introduction to the Study of Language	3		KISW 120	Phonetics and Phonology	3
		Total	18		EDF0 130	History of Education	2
						Total	18
	EDTE 210	Curriculum Development	3		EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3		EDF0 280	Sociology & Comparative Education	3
	GEOG 321	Remote Sensing	3	1	KISW 225	Kiswahili Morphology and Syntax	3
	GEOG 211	Fundamentals of Physical Geography II	3	1	GEOG 226	Geography of Tourism and Leisure	3
	GEOG 221	Fundamentals of Human Geography II	3	1	KISW 285	Second Language Learning	3
	KISW 265	Language Skills in Kiswahili II	3	1	ENGL 106	Speech Communication	1
		Total	18		INSY 107	Information Technology Today	2
						Total	18
3rd	EDTE 301	Educational Communication & Technology	3		EDTM 313	Methods Tchng Geography	3
	EDTE 326	Educational Measurement & Evaluation	3		EDTM 316	Methods Tchng Kiswahili	3
	GEOG 313	Geography of East Africa	3		EDTE 333	Research Method in Education	3
	KISW 315	Theories of Literary Criticism	3		GEOG 355	Geographical Information Systems (GIS)	3
	KISW 350	Oral Literature in Kiswahili	3		KISW 365	Contemporary Kiswahili Novel and Play	3
	EDFO 403	Entrepreneurship Education	3		KISW 395	Research Methods in Language and Literature	3
		Total	18			Total	18
		INTERSEMESTER			EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3		EDFO 410	Environmental Education	2
4th	EDF0 401	Planning & Economics of Education	3	1	RELB 220	Life & Tchgs of Jesus	2
	GEOG 410	Research Methods in the Social Sciences	3		GEOG 430	Meteorology and Climatology	3
	KISW 420	Semantics and Pragmatics in Kiswahili	3	1	GEOG 480	Independent Study in Geography	3
	KISW 422	Textual and Discourse Analysis in Kiswahili	3	1	KISW 425	Kiswahili Poetry	3
	GEOG 326	Agricultural Geography	3	1	RELT 207	Christian Beliefs	3
		Total	18	1	EDPC 244	Educational Guidance & Counseling	2
						Total	18



### Teaching Subjects: 1st...HISTORY ...... 2nd...KISWAHILI Four-Year Course Plan

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3	EDF0 260	Philosophy of Education	2
1st	ENGL 105	Writing Skills	3	EDTE 180	Health Education & Life skills	2
	HIST 120	Introduction to Kenyan History	3	ENGL 106	Speech Communication	1
	HIST 106	Sources of African History	3	INSY 107	Information Technology Today	2
	KISW 114	Language Skills in Kiswahili I	3	POLS 100	Introduction to Government	3
	KISW 110	Introduction to the Study of Language	3	KISW 111	Historical Development of Kiswahili	3
		Total	18	KISW 120	Phonetics and Phonology	3
				EDFO 130	History of Education	2
					Total	18
	EDTE 210	Curriculum Development	3	EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3	EDF0 280	Sociology & Comparative Education	3
	EDPC 244	Educational Guidance & Counseling	2	KISW 225	Kiswahili Morphology and Syntax	3
	HIST 203	Introduction to African History to 1884	3	HIST 213	Themes in World History to 1500	3
	KISW 265	Language Skills in Kiswahili II	3	POLS 200	Modern Governments in Africa	3
	HIST 204	Intro to African History Since 1884	3	KISW 285	Second Language Learning	3
		Total	18		Total	18
	EDTE 301	Educational Communication &	3	EDTM 311	Methods Teaching History	3
3rd	EDTE 326	Technology Educational Measurement & Evaluation	3	EDTM 316	Methods Teaching Kiswahili	3
	POLS 230	Comparative Government in Developed Countries	3	EDTE 333	Research Method in Education	3
	HIST 313	Themes in East African History	3	HIST 345	Methods of Historical Research	3
	KISW 315	Theories of Literary Criticism	3	KISW 365	Contemporary Kiswahili Novel and Play	3
	KISW 350	Oral Literature in Kiswahili	3	KISW 395	Research Methods in Language and Literature	3
		Total	18		Total	18
	IN	TERSEMESTER		EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3	HIST 380	Philosophy of History	3
4th	EDF0 401	Planning & Economics of Education	3	EDF0 403	Entrepreneurship Education	3
	HIST 440	History of Political Idea	3	HIST 447	History of International Relations	3
	KISW 420	Semantics and Pragmatics in Kiswahili	3	HIST 421	Imperialism & Nationalism in the Third World	3
	KISW 422	Textual and Discourse Analysis in Kiswahili	3	KISW 425	Kiswahili Poetry	3
	RELB 220	Life & Teachings of Jesus	2	RELT 207	Christian Beliefs	3
	EDFO 410	Environmental Education	2		Total	18
		Total	18			

## Teaching Subjects: 1st...CRE ........ 2nd...HISTORY

### Four-Year Course Plan

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3	EDF0 260	Philosophy of Education	2
1st	EDF0 130	History of Education	2	EDTE 180	Health Education & Life skills	2
	ENGL 105	Writing Skills	3	INSY 107	Information Technology Today	2
	HIST 120	Introduction to Kenyan History	3	POLS 100	Introduction to Government	3
	HIST 106	Sources of African History	3	RELT 131	African Traditional Religions	3
	RELH 114	Introduction History of Christian Church History	3	RELT 128	Adventist History and Philosophy	3
		Total	17	EDTE 255	Principles & Methods of Teaching	3
					Total	18
	EDTE 210	Curriculum Development	3	EDF0 280	Sociology & Comparative Education	3
2nd	EDPC 238	Human Growth & Development	3	RELT 280	Philosophy of Religion	3
	EDPC 244	Educational Guidance &Counseling	2	HIST 213	Themes in World History to 1500	3
	HIST 203	Introduction to African History to 1884	3	POLS 200	Modern Governments in Africa	3
	HIST 204	Introduction to African History Since 1884	3	RELT 231	Phenomenology of Religion	3
	RELB 204	Old Testament Studies	3	RELT 216	Comparative Religions	3
		Total	17		Total	18
3rd	EDTE 301	Educational Communication & Technology	3	EDTM 312	Methods Tchng Religious Education	3
	EDTE 326	Educational Measurement & Evaluation	3	EDTM 311	Methods Tchng History	3
	RELT 330	Islamic Studies	3	EDTE 333	Research Method in Education	3
	POLS 230	Comparative Government in Developed Countries	3	HIST 345	Methods of Historical Research	3
	HIST 313	Themes in East African History	3	HIST 380	Philosophy of History	3
	RELB 331	New Testament Studies	3	RELT 418	New Religious Movements in Africa	3
		Total	18		Total	18
		INTERSEMESTER		EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3	EDFO 410	Environmental Education	2
4th	EDF0 401	Planning & Economics of Education	3	EDF0 403	Entrepreneurship Education	3
	HIST 440	History of Political Idea	3	HIST 447	History of International Relations	3
	RELT 427	Christian Doctrines	3	HIST 421	Imperialism & Nationalism in the Third World	3
	RELT 435	Issues in Ecumenism	3	RELT 460	Contemporary Themes in Christian Theology	3
	RELT 337	Sociology of Religion	3	RELT 480	History of the Christian Church in Africa	3
		Total	18	ENGL 106	Speech Communication	1
	1			1		. /

# SCHOOL OF EDUCATION, HUMANITIES & SOCIAL SCIENCES



# Teaching Subjects: 1st...CRE ....... 2nd...GEOGRAPHY

### Four-Year Course Plan

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
_	EDPC 106	Educational Psychology	3	EDF0 260	Philosophy of Education	2
1st	EDF0 130	History of Education	2	EDTE 180	Health Education & Life skills	2
	ENGL 105	Writing Skills	3	INSY 107	Information Technology Today	2
	GEOG 130	Introduction to Cartography, Map work and Land Surveying	3	GEOG 121	Fundamentals of Human Geography I	3
	GEOG 111	Fundamentals of Physical Geography I	3	GEOG 100	Introduction To Geography	3
	RELH 114	Introduction History of Christian Church History	3	RELT 131	African Traditional Religions	3
	ENGL 106	Speech Communication	1	RELT 128	Adventist History and Philosophy	3
		Total	18		Total	18
	EDTE 210	Curriculum Development	3	EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3	EDF0 280	Sociology & Comparative Education	3
	EDPC 244	Educational Guidance &Counseling	2	RELT 280	Philosophy of Religion	3
	GEOG 211	Fundamentals of Physical Geography II	3	GEOG 226	Geography of Tourism and Leisure	3
	GEOG 221	Fundamentals of Human Geography II	3	RELT 231	Phenomenology of Religion	3
	RELB 204	Old Testament Studies	3	RELT 216	Comparative Religions	3
		Total	17		Total	18
3rd	EDTE 301	Educational Communication & Technology	3	EDTM 312	Methods Tchng Religious Education	3
ora	EDTE 326	Educational Measurement & Evaluation	3	EDTM 313	Methods Tchng Geography	3
	RELT 330	Islamic Studies	3	EDTE 333	Research Method in Education	3
	GEOG 313	Geography of East Africa	3	GEOG 355	Geographical Information Systems (GIS)	3
	GEOG 321	Remote Sensing	3	RELT 418	New Religious Movements in Africa	3
	RELB 331	New Testament Studies	3	RELT 337	Sociology of Religion	3
		Total	18		Total	18
		INTERSEMESTER		EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3	EDFO 410	Environmental Education	2
4th	EDFO 401	Planning & Economics of Education	3	EDF0 403	Entrepreneurship Education	3
	GEOG 410	Research Methods in the Social Sciences	3	GEOG 430	Meteorology and Climatology	3
	RELT 427	Christian Doctrines	3	GEOG 480	Independent Study in Geography	3
	RELT 435	Issues in Ecumenism	3	RELT 460	Contemporary Themes in Christian Theology	3
	GEOG 326	Agricultural Geography	3	RELT 480	History of the Christian Church in Africa	3
		Total	18		Total	17

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## Teaching Subjects: 1st...CRE .......2nd...KISWAHILI

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3	EDF0 260	Philosophy of Education	2
1st	EDF0 130	History of Education	2	EDTE 180	Health Education & Life skills	2
	ENGL 105	Writing Skills	3	INSY 107	Information Technology Today	2
	KISW 114	Language Skills in Kiswahili I	3	KISW 111	Historical Development of Kiswahili	3
	KISW 110	Introduction to the Study of Language	3	KISW 120	Phonetics and Phonology	3
	RELH 114	Introduction History of Christian Church History	3	RELT 131	African Traditional Religions	3
		Total	17	RELT 128	Adventist History and Philosophy	3
					Total	18
	EDTE 210	Curriculum Development	3	EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3	EDF0 280	Sociology & Comparative Education	3
	EDPC 244	Educational Guidance & Counseling	2	RELT 280	Philosophy of Religion	3
	KISW 265	Language Skills in Kiswahili II	3	KISW 285	Second Language Learning	3
	RELB 204	Old Testament Studies	3	RELT 231	Phenomenology of Religion	3
	RELT 330	Islamic Studies	3	RELT 216	Comparative Religions	3
	ENGL 106	Speech Communication	1		Total	18
		Total	18			
3rd	EDTE 301	Educational Communication & Technology	3	EDTM 312	Methods Tchng Religious Education	3
ora	EDTE 326	Educational Measurement & Evaluation	3	EDTM 316	Methods Tchng Kiswahili	3
	KISW 315	Theories of Literary Criticism	3	EDTE 333	Research Method in Education	3
	KISW 350	Oral Literature in Kiswahili	3	KISW 365	Contemporary Kiswahili Novel and Play	3
	RELT 337	Sociology of Religion	3	KISW 395	Research Methods in Language and Literature	3
	RELB 331	New Testament Studies	3	RELT 418	New Religious Movements in Africa	3
		Total	18		Total	18
		INTERSEMESTER		EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3	EDF0 410	Environmental Education	2
4th	EDF0 401	Planning & Economics of Education	3	EDF0 403	Entrepreneurship Education	3
	KISW 420	Semantics and Pragmatics in Kiswahili	3	KISW 425	Kiswahili Poetry	3
	KISW 422	Textual and Discourse Analysis in Kiswahili	3	RELT 460	Contemporary Themes in Chr. Theology	3
	RELT 427	Christian Doctrines	3	KISW 225	Kiswahili Morphology and Syntax	3
	RELT 435	Issues in Ecumenism	3	RELT 480	History of the Christian Church in Africa	3
		Total	18		Total	17



### Teaching Subjects: 1st...ENGLISH LANGUAGE ........ 2nd...LITERATURE IN ENGLISH Four-Year Course Plan

YEAR	F	IRST SEMESTER				SECOND SEMESTER	
	CODE	COURSE TITLE	CR		CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3		EDF0 260	Philosophy of Education	2
1st	EDF0 130	History of Education	2		EDTE 180	Health Education & Life skills	2
	ENGL 105	Writing Skills	3		INSY 107	Information Technology Today	2
	ENGL 114	Introduction to the Description of English	3		ENGL 148	English Grammar and Usage I	3
	LITE 151	Introduction to Literary Appreciation	2	1	LITE 154	Introduction to Oral Literature	3
	ENGL 130	Introduction to the Study of Language	3		LITE 210	East African Prose Fiction	3
	LITE 165	Stylistics	3		RELT 207	Christian Beliefs	3
		Total	19			Total	18
	EDTE 210	Curriculum Development	3		EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3		EDF0 280	Sociology & Comparative Education	3
	EDPC 244	Educational Guidance &Counseling	2		ENGL 218	Morphology and Syntax	3
	ENGL 216	Origins and Development of English	3		LITE 214	East African Drama	3
	ENGL 217	Phonetics and Phonology	3		ENGL 219	English Grammar and Usage II	3
	LITE 212	East African Poetry	3		LITE 260	Children's Literature	3
	ENGL 106	Speech Communication	1			Total	18
		Total	18	-			
3rd	EDTE 301	Educational Communication & Technology	3		EDTM 314	Methods Tchng Engl. Language	3
	EDTE 326	Educational Measurement & Evaluation	3		EDTM 315	Methods Tchng Lit. in English	3
	RELB 220	Life & Tchgs of Jesus	2		EDTE 333	Research Method in Education	3
	LITE 346	Introduction to Literary Theory and Criticism	3		LITE 348	European Literature	3
	ENGL 302	Language Policy and Issues	3		ENGL 305	English Structure and Semantics	3
	LITE 347	South African Literature	3		ENGL 347	Second Language Acquisition	3
		Total	17			Total	18
		INTERSEMESTER			EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3		EDF0 410	Environmental Education	2
4th	EDFO 401	Planning & Economics of Education	3		EDF0 403	Entrepreneurship Education	2
	LITE 456	Caribbean Literature	3		ENGL 465	Principles of Creative Writing	3
	ENGL 469	Research Project/Seminar	3		ENGL 463	Psycholinguistics	3
	ENGL 456	Varieties of English	3		LITE 449	Modern Poetry	3
	LITE 466	Research/Creative Writing Project	3	]	LITE 450	Theatre Arts	3
		Total	18			Total	16

### Teaching Subjects: 1st...CHEMISTRY ....... 2nd...AGRICULTURE

### Four-Year Course Plan

YEAR	F	FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3				EDFO 260	Philosophy of Education	2		+
1st	EDF0 130	History of Education	2				EDTE 180	Health Education & Life skills	2		1
	ENGL 105	Writing Skills	3				ENGL 106	Speech Communication	1		
	CHEM 120	Fundamentals of Chemistry	2	1	3		INSY 107	Information Technology Today	2		
	CHEM 130	Introduction to Organic Chemistry	2	1	3		CHEM 154	Analytical Chemistry I	2	1	3
	AGRI 101	Crop Production Skills	1				CHEM 171	Organic Functional groups	2	1	3
	AGRI 116A	Agriculture Ecology	2				AGEN 115	Introduction to Farm Machinery and mechanization	2	1	3
	AGRI 108	Introduction to Agriculture	1				AGRI 116B	Agriculture Ecology	1		
		Total	16	2	18		AGRI 102	Animal Production Skills	1		
								Total	15	3	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		•
2nd	EDPC 238	Human Growth & Development	3				EDFO 280	Sociology & Comparative Education	3		
	CHEM 231	Physical Chemistry I	2	1	3		RELT 207	Christian Beliefs	3		
	CHEM 205	Atomic Structure & Bonding	3				CHEM 235	Analytical Chemistry II	2	1	3
	CPSC 213	Introduction to Soils	2	1	3		CHEM 271	Chemical Thermodynamics and Phase equilibria	3		
	ANSC 211	Introduction to Animal Science	2	1	3		CPSC 279	Crop Physiology	2	1	3
		Total	15	3	18			Total	16	2	18
3rd	EDTE 301	Educational Communication & Technology	3				EDTM 324	Methods Tchng Chemistry	3		
510	EDTE 326	Educational Measurement & Evaluation	3				EDTM 322	Methods Tchng Agriculture	3		
	AGRI 335	Mushroom Production	1	1	2		EDTE 333	Research Method in Education	3		
	RELB 220	Life & Tchgs of Jesus	2				CHEM 394	Heterocyclic chemistry and Stereochemistry	3		
	CHEM 341	Inorganic Chemistry I	2	1	3		CHEM 345	Synthetic Organic Chemistry	2	1	3
	CPSC 314	Crop Production I	2	1	3		CPSC 325	Crop Production II	2	1	3
	EDPC 244	Educational Guidance & Counseling	2					Total	18		
		Total	15	3	18			1			
	INT	ERSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy &	3				EDTE 399	Teaching Practice in Secondary School	6		-
4th	20.0.00	Management					000				
401	EDF0 401	Planning & Economics of Education	3				EDFO 410	Environmental Education	2		
	CHEM 402	Transition metals Chemistry	2	1	3	1	EDF0 403	Entrepreneurship Education	3		1
	CHEM 405	Industrial Chemistry I	2	1	3		CHEM 425	Electrochemistry	3		1
	ANSC 411	Poultry Science	2	1	3		AGEC 413	Management of Agriculture	2	1	3
	CPSC 412	Crop Protection	2	1	3		ANSC 442	Dairy Production	2	1	3
		Total	14	4	18		AGEC 345	Agricultural Economics	3		+
			L	I				Total	15	2	17



# Teaching Subjects: 1st...GEOGRAPHY ...... 2nd...HISTORY

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3	EDFO 260	Philosophy of Education	2
1st	ENGL 105	Writing Skills	3	EDTE 180	Health Education & Life skills	2
	GEOG 130	Introduction to Cartography, Map work and Land Surveying	3	ENGL 106	Speech Communication	1
	GEOG 111	Fundamentals of Physical Geography I	3	INSY 107	Information Technology Today	2
	HIST 120	Introduction to Kenyan History	3	GEOG 121	Fundamentals of Human Geography I	3
	HIST 106	Sources of African History	3	GEOG 100	Introduction to Geography	3
		Total	18	POLS 100	Introduction to Government	3
				EDFO 130	History of Education	2
					Total	18
	EDTE 210	Curriculum Development	3	EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3	EDF0 280	Sociology & Comparative Education	3
	GEOG 211	Fundamentals of Physical Geography II	3	RELT 207	Christian Beliefs	3
	GEOG 221	Fundamentals of Human Geography II	3	GEOG 226	Geography of Tourism and Leisure	3
	HIST 203	Introduction to African History to 1884	3	HIST 213	Themes in World History to 1500	3
	HIST 204	Introduction to African History Since 1884	3	POLS 200	Modern Governments in Africa	3
		Total	18		Total	18
3rd	EDTE 301	Educational Communication & Technology	3	EDTM 313	Methods Tchng Geography	3
ora	EDTE 326	Educational Measurement & Evaluation	3	EDTM 311	Methods Tchng History	3
	GEOG 313	Geography of East Africa	3	EDTE 333	Research Method in Education	3
	GEOG 321	Remote Sensing	3	GEOG 355	Geographical Information Systems (GIS)	3
	POLS 230	Comparative Government in Developed Countries	3	HIST 345	Methods of Historical Research	3
	HIST 313	Themes in East African History	3	HIST 380	Philosophy of History	3
		Total	18		Total	18
		INTERSEMESTER		 EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3	EDF0 410	Environmental Education	2
4th	EDF0 401	Planning & Economics of Education	3	EDFO 403	Entrepreneurship Education	3
	GEOG 410	Research Methods in the Social Sciences	3	GEOG 430	Meteorology and Climatology	3
	HIST 440	History of Political Ideas	3	GEOG 480	Independent Study in Geography	3
	EDPC 244	Educational Guidance &Counseling	2	HIST 447	History of International Relations	3
	GEOG 326	Agricultural Geography	3	HIST 421	Imperialism & Nationalism in the Third World	3
	RELB 220	Life & Teachings of Jesus	2		Total	17
		Total	19			

# Teaching Subjects: 1st...HOME SCIENCE (48 CR) ....... 2nd...AGRICULTURE (48 CR)

### Four-Year Course Plan

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YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3				EDF0 260	Philosophy of Education	2		
1st	EDFO 130	History of Education	2				EDTE 180	Health Education & Life skills	2		
	ENGL 105	Writing Skills	3				ENGL 106	Speech Communication	1		
	HOSC 116	Creative Needle Work	1				INSY 107	Information Technology Today	2		
	HOSC 120	Introduction to Food Preparation	2	1	3		H0SC 150	Clothing Construction I	2	1	3
	AGRI 101	Crop Production Skills	1				H0SC 170	Resource Management in the Family	3		
	AGRI 116A	Agriculture Ecology	2				AGEN 115	Introduction to Farm Machinery and Mechanization	2	1	3
	AGRI 108	Introduction to Agriculture	1				AGRI 116B	Agriculture Ecology	1		
		Total	15	2	16		AGRI 102	Animal Production Skills	1		
							1	lotal	16	2	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 238	Human Growth & Development	3				EDF0 280	Sociology & Comparative Education	3		
	EDPC 244	Educational Guidance & Counseling	2				RELT 207	Beliefs	3		
	HOSC 216	Clothing Construction II	1				H0SC 235	Pattern Drafting	3		
	HOSC 230	Nutrition and Health	3				H0SC 250	Child Development and Growth	3		
	CPSC 213	Introduction to Soils	2	1	3		CPSC 279	Crop Physiology	2	1	3
	ANSC 211	Introduction to Animal Science	2	1	3			Total	16	2	18
		Total	16	2	18						
3rd	EDTE 301	Educational Communication & Technology	3				EDTE 399	Teaching Practice in Secondary School	6		
้อเน	EDTE 326	Educational Measurement & Evaluation	3				EDFO 410	Environmental Education	2		
	AGRI 335	Mushroom Production	1	1	2	]	EDF0 403	Entrepreneurship Education	3		
	HOSC 300	Family Living	2				HOSC 415	Tailoring	2	1	3
	HOSC 318	Personal Hygiene and Grooming	3				HOSC 455	Quantity Food Management and Production	3		
	CPSC 314	Crop Production I	2	1	3		AGEC 413	Management of Agriculture	2	1	3
	AGEC 345	Agricultural Economics	3				ANSC 442	Dairy Production	2	1	3
		Total	17	2	19	]	RELB 220	Life & Teachings of Jesus	2		
								Total	16	2	18
	INTER	SEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
4th	EDFO 400	Educational Policy & Management	3				EDF0 410	Environmental Education	2		
	EDFO 401	Planning & Economics of Education	3			-	EDF0 403	Entrepreneurship Education	3		
	HOSC 450	Food Demonstration Skills	2				HOSC 415	Tailoring	2	1	3
	HOSC 400	Public Health and Community Nutrition	3				HOSC 455	Production	3		
	ANSC 411	Poultry Science	2	1	3		AGEC 413	Management of Agriculture	2	1	3
	CPSC 412	Crop Protection	2	1	3	]	ANSC 442	Dairy Production	2	1	3
		Total	17			]	RELB 220	Life & Teachings of Jesus	2		
								Total	16	3	19



# Teaching Subjects: 1st...CHEMISTRY...... 2nd...MATHEMATICS

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3			1	DFO 260	Philosophy of Education	2		
1st	ENGL 105	Writing Skills	3			1	EDTE 180	Health Education & Life skills	2		
	CHEM 120	Fundamentals of Chemistry	2	1	3	1	CHEM 154	Analytical Chemistry I	2	1	3
	CHEM 130	Introduction to Organic Chemistry	2	1	3	1	CHEM 171	Organic Functional groups	2	1	3
	MATH 124	Basic Mathematics and Analytical Geometry	3				ATH 150	MLinear Algebra I	3		
	STAT 150	Introduction to Probability and Statistics	3				MATH 127	Differential Calculus	3		
		Total	16	2	18		EDF0 130	History of Education	2		
								Total	16	2	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 238	Human Growth & Development	3				EDF0 280	Sociology & Comparative Education	3		
	CHEM 231	Physical Chemistry I	3				CHEM 235		2	1	3
	CHEM 205	Atomic Structure & Bonding	3				MATH 248		3		
	MATH 227	Integral Calculus	3				MATH 274	Complex Analysis I	3		
	MATH 240	Real Analysis I	3				ENGL 106	Speech Communication	1		
		Total	18				INSY 107	Information Technology Today	2		
								Total	17	1	18
ار مىر	EDTE 301	Educational Communication & Technology	3				EDTM 324	Methods Teaching Chemistry	3		
3rd	EDTE 326	Educational Measurement & Evaluation	3			-	EDTM 325	Methods Teaching Mathematics	3		
	RELB 220	Life & Teachings of Jesus	2				EDTE 333	Research Method in Education	3		
	CHEM 341	Inorganic Chemistry I	2	1	3		CHEM 394	Heterocyclic chemistry and stereochemistry	3		
	MATH	Pure or Applied or STAT	3			1	MATH	Pure or Applied or Stat	3		
	MATH	Pure or Applied or Stat	3				CHEM 271	Chemical Thermodynamics and Phase Equilibria	3		
	EDPC 244	Educational Guidance & Counseling	2			1		Total	18	0	18
		Total	18	1	19						
	INTER	SEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
4th	EDFO 400	Educational Policy & Management	3				EDTE 399	Teaching Practice in Secondary School	6		
	EDFO 401	Planning & Economics of Education	3			1	EDFO 410	Environmental Education	2		
	CHEM 402	Transition metals Chemistry	2	1	3	1	EDF0 403	Entrepreneurship Education	3		
	CHEM 405	Industrial Chemistry I	2	1	3		CHEM 425	Electrochemistry	3		
	MATH	Pure or Applied or Stat	3			1	MATH	Pure or Applied or Stat	3		
	MATH	Pure or Applied or Stat	3			1	RELT 207	Christian Beliefs	3		
		Total	16	2	18		CHEM 345	Synthetic Organic Chemistry	2	1	3
								Total	16	1	17
	Electives ((	Optional)									
	CHEM 384	Coordination Chemistry	3								
	CHEM 419	Environmental Chemistry	3			1					

### Teaching Subjects: 1st...MATHEMATICS ........ 2nd...PHYSICS

### Four-Year Course Plan

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YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3				EDF0 260	Philosophy of Education	2		
1st	ENGL 105	Writing Skills	3				EDTE 180	Health Education & Life skills	2		
	MATH 124	Basic Mathematics and Analytical Geometry	3				MATH 150	Linear Algebra I	3		
	STAT 150	Introduction to Probability and Statistics	3				MATH 127	Differential Calculus	3		
	PHYS 160	Mechanics	3				PHYS 170	Geometric Optics	2	1	3
	PHYS 165	Heat and Thermodynamics	2	1	3	1	PHYS 180	Introduction to Quantum Physics	3		
		Total	8				EDF0 130	History of Education	2		<u> </u>
								Total	18		
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 238	Human Growth & Development	3			-	EDF0 280	Sociology & Comparative Education	3		•
	MATH 227	Integral Calculus	3				MATH 248	Ordinary Differential Equations I	3		<u> </u>
	MATH 240	Real Analysis I	3				MATH 274	Complex Analysis I	3		<u> </u>
	PHYS 215	Waves and Oscillations	2	1	3		PHYS 232	Electricity and Magnetism II	3		<u> </u>
	PHYS 231	Electricity and Magnetism I	2	1	3		ENGL 106	Speech Communication	1		$\vdash$
		Total	16				INSY 107	Information Technology Today	2		<u> </u>
								Total	18	0	18
			7					Mathada Tasahina Mathamatian	7		
3rd	EDTE 301 EDTE 326	Educational Communication & Technology Educational Measurement &	3			-	EDTM 325	Methods Teaching Mathematics	3		
		Evaluation					EDTM 326	Methods Teaching Physics	3		
	EDPC 244	Educational Guidance & Counseling					EDTE 333	Research Method in Education	3		
	RELB 220	Life & Teachings of Jesus	2				MATH	Pure or Applied or Stat	3		
	MATH	Pure or Applied or Stat	3				PHYS 345	Electronics	2	1	3
	PHYS 300	Properties of Matter	3				PHYS 255	Quantum Mechanics	3		<u> </u>
	MATH	Pure or Applied or Stat	3					Total	17	1	18
		Total	19	0	19						
	INTER	SEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3				EDF0 410	Environmental Education	2		
4th	EDFO 401	Planning & Economics of Education	3				EDF0 403	Entrepreneurship Education	3		
	MATH	Pure or Applied or Stat	3				MATH	Pure or Applied or Stat	3		
	MATH	Pure or Applied or Stat	3				PHYS 431	Environmental and Renewable Energy Physics I	3		
	PHYS 410	Nuclear Physics	3				RELT 207	Christian Beliefs	3		
	PHYS 415	Solid State Physics	3				PHYS 335	Physical Optics	3		
		Total	18	0	18			Total	17	0	17
		Electives (optional)									
	PHYS 315	Atomic Physics	3			1					
	PHYS 421	Electromagnetic Theory I	3			1					



# Teaching Subjects: 1st...COMPUTER ....... 2nd... MATHEMATICS

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3	EDF0 260	Philosophy of Education	2
1st	ENGL 105	Writing Skills	3	EDTE 180	Health Education & Life skills	2
	COSC 161	Fundamentals of Programming	3	COSC 162	Data Structures and Algorithm	3
	INSY 118	Introduction to Business Information Processing	3	COSC 171	Visual Basic.Net Programming	3
	MATH 124	Basic Mathematics and Analytical Geometry	3	MATH 150	Linear Algebra I	3
	STAT 150	Introduction to Probability and Statistics	3	MATH 127	Differential Calculus	3
		Total	8	EDF0 130	History of Education	2
					Total	18
	EDTE 210	Curriculum Development	3	 EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3	EDF0 280	Sociology & Comparative Education	3
	INSY 210	Database Management Systems	3	COSC 225	Computer Organizations	3
	INSY 314	Web Design and Internet Technologies	3	INSY 136	Microcomputer Applications	3
	MATH 227	Integral Calculus	3	MATH 248	Ordinary Differential Equations I	3
	MATH 240	Real Analysis I	3	MATH 274	Complex Analysis I	3
		Total	18		Total	18
3rd	EDTE 301	Educational Communication & Technology	3	EDTM 325	Methods Tchng Mathematics	3
Siu	EDTE 326	Educational Measurement & Evaluation	3	EDTM 338	Methods Tchng Computer Science	3
	COSC 237	Networks and Telecommunications	3	EDTE 333	Research Method in Education	3
	COSC 261	Operating Systems	3	INSY 305	Management Information Systems	3
	MATH	Pure or Applied or Stat	3	COSC 343	Foundations of Human-Computer Interaction	3
	MATH	Pure or Applied or Stat	3	MATH	Pure or Applied or Stat	3
		Total	18		Total	18
		INTERSEMESTER		 EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3	EDF0 410	Environmental Education	2
4th	EDF0 401	Planning & Economics of Education	3	EDF0 403	Entrepreneurship Education	3
	COSC 498	Senior Project	3	INSY 497	IT Project Management	3
	MATH	Pure or Applied or Stat	3	MATH	Pure or Applied or Stat	3
	MATH	Pure or Applied or Stat	3	RELT 207	Christian Beliefs	3
	ENGL 106	Speech Communication	1	EDPC 244	Educational Guidance &Counseling	2
		Total	18	RELB 220	Life & Teachings of Jesus	2
					Total	19

### Teaching Subjects: 1st... MATHEMATICS ....... 2nd...BIOLOGY

### Four-Year Course Plan

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YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3				EDFO 260	Philosophy of Education	2		<u> </u>
1st	ENGL 105	Writing Skills	3				EDTE 180	Health Education & Life skills	2		<u> </u>
	MATH 124	Basic Mathematics and Analytical Geometry	3			-	MATH 150	Linear Algebra I	3		
	STAT 150	Introduction to Probability and Statistics	3				MATH 127	Differential Calculus	3		
	BIOL 151	Fund Biol I/General Genetics	2	1	3		BIOL 153	Fund Biol III/Invert & Vertebrate Zoology	2	1	3
	BIOL 152	Fund Biol II/General Botany	2	1	3	1	BIOL 176	Introduction to Microbiology	2	1	3
		Total	16	2	18		EDFO 130	History of Education	2		
								Total	16	2	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 238	Human Growth & Development	3			-	EDF0 280	Sociology & Comparative Education	3		
	MATH 227	Integral Calculus	3				ENGL 106	Speech Communication	1		
	MATH 240	Real Analysis I	3				MATH 248	Ordinary Differential Equations I	3		+
	BIOL 296	History & Philosophy of Biology	3				MATH 274	Complex Analysis I	3		<u> </u>
	BIOL 292	Fund of Cell and Molecular Biology	2	1	3		INSY 107	Information Technology Today	2		<u> </u>
		Total	17	1	18		BIOL 285	Biostatistics	3		<u> </u>
								Total	18	0	18
	EDTE 301	Educational Communication &	3		I	 	EDTM 325	Methods Tchng Mathematics	3		
3rd	EDIE JUI	Technology	3					Methous toning Mathematics	5		
JIU	EDTE 326	Educational Measurement & Evaluation	3			-	EDTM 321	Methods Tchng Biology	3		
	MATH	Pure or Applied or Stat	3				EDTE 333	Research Method in Education	3		
	MATH	Pure or Applied or Stat	3				MATH	Pure or Applied or Stat	3		
	Z00L 322	Invertebrate Zoology	2	1	3	1	BOTN 432	Plant Physiology	2	1	3
	BOTN 374	Systematic Botany	2	1	3	1	BIOL 286	General Ecology	2	1	3
		Total	16	2	18			Total	16	2	18
	INTI	ERSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
4th	EDFO 400	Educational Policy & Management	3				EDTE 399	Teaching Practice in Secondary School	6		
	EDFO 401	Planning & Economics of Education	3				EDFO 410	Environmental Education	2		
	MATH	Pure or Applied or Stat	3				EDF0 403	Entrepreneurship Education	3		
	MATH	Pure or Applied or Stat	3				MATH	Pure or Applied or Stat	3		
	ZOOL 448	Developmental Biology	2	1	3		ZOOL 464	Systems Physiology	3	1	4
	ZOOL 360	Parasitology & Immunology	2	1	3		EDPC 244	Educational Guidance & Counseling	2		
		Total	16	2	18		RELB 220	Life & Teachings of Jesus	2		
							RELT 207	Christian Beliefs	3		
								Total	18	0	19



## Teaching Subjects: 1st...MATHEMATICS ....... 2nd...GEOGRAPHY

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	EDPC 106	Educational Psychology	3	EDF0 260	Philosophy of Education	2
1st	ENGL 105	Writing Skills	3	EDTE 180	Health Education & Life skills	2
	MATH 124	Basic Mathematics and Analytical Geometry	3	MATH 150	Linear Algebra I	3
	STAT 150	Introduction to Probability and Statistics	3	MATH 127	Differential Calculus	3
	GEOG 130	Introduction to Cartography, Map work and Land Surveying	3	GEOG 121	Fundamentals of Human Geography I	3
	GEOG 111	Fundamentals of Physical Geography I	3	GEOG 100	Introduction To Geography	3
		Total	18	EDF0 130	History of Education	2
					Total	18
	EDTE 210	Curriculum Development	3	EDTE 255	Principles & Methods of Teaching	3
2nd	EDPC 238	Human Growth & Development	3	EDF0 280	Sociology & Comparative Education	3
	MATH 227	Integral Calculus	3	MATH 248	Ordinary Differential Equations I	3
	MATH 240	Real Analysis I	3	MATH 274	Complex Analysis I	3
	GEOG 211	Fundamentals of Physical Geography II	3	GEOG 226	Geography of Tourism and Leisure	3
	GEOG 221	Fundamentals of Human Geography II	3	ENGL 106	Speech Communication	1
		Total	18	INSY 107	Information Technology Today	2
					Total	18
3rd	EDTE 301	Educational Communication & Technology	3	EDTM 325	Methods Teaching Mathematics	3
ora	EDTE 326	Educational Measurement & Evaluation	3	EDTM 321	Methods Teaching Biology	3
	MATH	Pure or Applied or Stat	3	EDTE 333	Research Method in Education	3
	MATH	Pure or Applied or Stat	3	MATH	Pure or Applied or Stat	3
	GEOG 313	Geography of East Africa	3	RELT 207	Christian Beliefs	3
	GEOG 321	Remote Sensing	3	GEOG 355	Geographical Information Systems (GIS)	3
		Total	18		Total	18
	INTERS	EMESTER		EDTE 399	Teaching Practice in Secondary School	6
	EDF0 400	Educational Policy & Management	3	EDFO 410	Environmental Education	2
4th	EDF0 401	Planning & Economics of Education	3	EDF0 403	Entrepreneurship Education	3
	MATH	Pure or Applied or Stat	3	MATH	Pure or Applied or Stat	3
	MATH	Pure or Applied or Stat	3	GEOG 430	Meteorology and Climatology	3
	GEOG 410	Research Methods in the Social Sciences	3	GEOG 480	Independent Study in Geography	3
	GEOG 326	Agricultural Geography	3	EDPC 244	Educational Guidance &Counseling	2
		Total	18	RELB 220	Life & Teachings of Jesus	2
					Total	18

## Teaching Subjects: 1st...CHEMISTRY ....... 2nd...BIOLOGY

### Four-Year Course Plan

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YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3				EDF0 260	Philosophy of Education	2		
1st	ENGL 105	Writing Skills	3				EDTE 180	Health Education & Life skills	2		
	CHEM 120	Fundamentals of Chemistry	2	1	3		CHEM 154	Analytical Chemistry I	2	1	3
	CHEM 130	Introduction to Organic Chemistry	2	1	3		CHEM 171	Organic Functional groups	2	1	3
	BIOL 151	Fund Biol I/General Genetics	2	1	3		BIOL 153	Fund Biol III/Invert & Vertebrate Zoology	2	1	3
	BIOL 152	Fund Biol II/General Botany	2	1	3		BIOL 176	Introduction to Microbiology	2	1	3
		Total	14	4	18		EDF0 130	History of Education	2		
								Total	14	4	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	RELB 220	Life & Teachings of Jesus	2				EDF0 280	Sociology & Comparative Education	3		
	CHEM 231	Physical Chemistry I	2	1	3		ENGL 106	Speech Communication	1		
	CHEM 205	Atomic Structure & Bonding	3				CHEM 235	Analytical Chemistry II	2	1	3
	BIOL 296	History & Philosophy of Biology	3				CHEM 271	Chemical Thermodynamics and Phase equilibria	3		
	BIOL 292	Fund of Cell and Molecular Biology	2	1	3		INSY 107	Information Technology Today	2		
		Total	15	2	17	1	BIOL 285	Biostatistics	3		
								Total	17	1	18
3rd	EDTE 301	Educational Communication & Technology	3				EDTM 324	Methods Tchng Chemistry	3		
JIU	EDTE 326	Educational Measurement & Evaluation	3				EDTM 321	Methods Tchng Biology	3		
	CHEM 341	Inorganic Chemistry I	2	1	3		EDTE 333	Research Method in Education	3		
	EDPC 238	Human Growth & Development	3				CHEM 394	stereochemistry	2	1	3
	BOTN 374	Systematic Botany	2	1	3		CHEM 345	, ,	2	1	3
	EDF0 403	Entrepreneurship Education	3				ZOOL 360	Parasitology & Immunology	2	1	3
		Total	16	2	18			Total	15	3	18
	INTE	RSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3				EDFO 410	Environmental Education	2		
4th	EDFO 401	Planning & Economics of Education	3				EDPC 244	Educational Guidance & Counseling	2		
	CHEM 402	Transition metals Chemistry	2	1	3	1	CHEM 425	Electrochemistry	3		
	CHEM 405	Industrial Chemistry I	2	1	3		Z00L 464	Systems Physiology	4		
	Z00L 448	Developmental Biology	2	1	3		RELT 207	Christian Beliefs	3		
	BOTN 432	Plant Physiology	2	1	3		BIOL 286	General Ecology	2	1	3
		Total	14	4	18			Total	16	1	17
		Electives (optional)				1					
	CHEM 384	Coordination Chemistry	3								
	CHEM 419	Environmental Chemistry	3			1					



Key: Th - Theory; L - Lab; T - Total

# Teaching Subjects: 1st...CHEMISTRY ...... 2nd...PHYSICS

								Key. III - Illeoly, L - Lab	, .	10	tui
YEAR		FIRST SEMESTER	1	1				SECOND SEMESTER	1		
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3				EDFO 260	Philosophy of Education	2		
1st	ENGL 105	Writing Skills	3				EDTE 180	Health Education & Life skills	2		
	CHEM 120	Fundamentals of Chemistry	2	1	3		CHEM 154	Analytical Chemistry I	2	1	3
	CHEM 130	Introduction to Organic Chemistry	2	1	3		CHEM 171	Organic Functional groups	2	1	3
	PHYS 160	Mechanics	3			]	PHYS 170	Geometric Optics	2	1	3
	PHYS 165	Heat and Thermodynamics	2	1	3	1	PHYS 180	Introduction to Quantum Physics	3		
		Total	15	3	18	1	EDFO 130	History of Education	2		
								Total	15	3	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 238	Human Growth & Development	3				EDF0 280	Sociology & Comparative	3		•
ZIIU								Education	Ŭ		
	CHEM 231	Physical Chemistry I	2	1	3		ENGL 106	Speech Communication	1		
	CHEM 205		3				CHEM 235	Analytical Chemistry II	2	1	3
	PHYS 215	Waves and Oscillations	2	1	3		INSY 107	Information Technology Today	2		
	PHYS 231	Electricity and Magnetism I	2	1	3		PHYS 232	Electricity and Magnetism II	3		
		Total	17	1	18		PHYS 255	Quantum Mechanics	3		
								Total	17	1	18
3rd	EDTE 301	Educational Communication & Technology	3				EDTM 324	Methods Teaching Chemistry	3		
ord	EDTE 326	Educational Measurement & Evaluation	3				EDTM 326	Methods Teaching Physics	3		
	RELB 220	Life & Teachings of Jesus	2				EDTE 333	Research Method in Education	3		
	CHEM 341	Inorganic Chemistry I	2				CHEM 394	Heterocyclic Chemistry and Stereochemistry	3		
	PHYS 300	Properties of Matter	3				PHYS 345	Electronics	2	1	3
	EDPC 244	Educational Guidance & Counseling	2				CHEM 271	Chemical Thermodynamics and Phase Equilibria	3		
	EDFO 410	Environmental Education	2					Total	17	1	18
		Total	17								
	INTE	RSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3				EDFO 403	Entrepreneurship Education	3		
4th	EDFO 401	Planning & Economics of Education	3				CHEM 425	Electrochemistry	2	1	3
	CHEM 402		2	1	3		PHYS 431	Environmental and Renewable Energy Physics I	3		
	CHEM 405	Industrial Chemistry I	2	1	3	1	RELT 207	Christian Beliefs	3		
	PHYS 410	Nuclear Physics	3			1	PHYS 335	Physical Optics	3		
	PHYS 415	Solid State Physics	3				CHEM 345	Synthetic Organic Chemistry	2	1	3
		Total	16	2	18			Total	16	2	18
		Electives (optional)	-	-	-		<u> </u>	-	-		-
	CHEM 384		3				PHYS 315	Atomic Physics	3		
	CHEM 419	Environmental Chemistry	3			-	PHYS 421	Electromagnetic Theory I	3		-
	51121-1 713		5						5		

## Teaching Subjects: 1st...COMPUTER ....... 2nd...PHYSICS

### Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3			1	EDF0 260	Philosophy of Education	2		$\square$
1st	ENGL 105	Writing Skills	3			1	EDTE 180	Health Education & Life skills	2		$\square$
	COSC 161	Fundamentals of Programming	3				COSC 162	Data Structures and Algorithm	3		
	INSY 118	Introduction to Business Information Processing	2				COSC 171	Visual Basic.Net Programming	3		
	PHYS 160	Mechanics	3			1	PHYS 170	Geometric Optics	2	1	3
	PHYS 165	Heat and Thermodynamics	2	1	3		PHYS 180	Introduction to Quantum Physics	3		$\square$
		Total	16	1	17		EDF0 130	History of Education	2		$\left  - \right $
								Total	17	1	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		<b>-</b>
2nd	EDPC 238	Human Growth & Development	3				EDF0 280	Sociology & Comparative Education			$\left  \right $
Ling	INSY 210	Database Management Systems	3			1	RELT 207	Christian Beliefs	3		$\left  - \right $
	INSY 314	Web Design and Internet Technologies	3				COSC 225	Computer Organizations	3		
	PHYS 215	Waves and Oscillations	2	1	3		INSY 136	Microcomputer Applications	3		$\square$
	PHYS 231	Electricity and Magnetism I	2	1	3		PHYS 232	Electricity and Magnetism II	3		$\left  - \right $
		Total	16	2	18			Total	18	0	18
	EDTE 301	Educational Communication &	3				EDTM 326	Methods Tchng Physics	3		P
3rd		Technology	Ŭ				LDINIOLO	The choice forming in typics	Ŭ		
Ju	EDTE 326	Educational Measurement & Evaluation	3			-	EDTM 338	Methods Tchng Computer Science	3		
	RELB 220	Life & Tchgs of Jesus	2				EDTE 333	Research Method in Education	3		
	COSC 237	Networks and Telecommunications	3				INSY 305	Management Information Systems	3		
	COSC 261	Operating Systems	3			1	PHYS 345	Electronics	2	1	3
	PHYS 300	Properties of Matter	3				PHYS 255	Quantum Mechanics	3		
		Total	17	0	17			Total	17	1	18
	INT	TERSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3				EDF0 410	Environmental Education	2		
4th	EDF0 401	Planning & Economics of Education	3			1	EDF0 403	Entrepreneurship Education	3		$\square$
	COSC 498	Senior Project	3			1	INSY 497	IT Project Management	3		$\square$
	PHYS 410	Nuclear Physics	2	1	3		PHYS 431	Environmental and Renewable Energy Physics I	3		
	PHYS 415	Solid State Physics	3				PHYS 335	Physical Optics	3		
	EDPC 244	Educational Guidance &Counseling	2			-	COSC 343	Foundations of Human-Computer Interaction	3		
		Total	16	1	17	1	ENGL 106	Speech Communication	1		$\square$
		Electives (optional)				1		Total	18	0	18
	PHYS 315	Atomic Physics	3								$\square$
	PHYS 421	Electromagnetic Theory I	3								



## Teaching Subjects: 1st...GEOGRAPHY ...... 2nd...BIOLOGY

### Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	T
	EDPC 106	Educational Psychology	3				EDF0 260	Philosophy of Education	2		$\square$
1st	ENGL 105	Writing Skills	3			1	EDTE 180	Health Education & Life skills	2		
	GEOG 130	Introduction to Cartography, Map work and Land Surveying	3				EDFO 130	History of Education	2		
	GEOG 111	Fundamentals of Physical Geography I	3				GEOG 121	Fundamentals of Human Geography I	3		
	BIOL 151	Fund Biol I/General Genetics	2	1	3		GEOG 100	Introduction to Geography	3		
	BIOL 152	Fund Biol II/General Botany	2	1	3		BIOL 153	Fund Biol III/ Invert & Vertebrate Zoology	2	1	3
		Total	16	2	18	1	BIOL 176	Introduction to Microbiology	2	1	3
		Total						16	2	18	
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	RELB 220	Life & Teachings of Jesus	2				EDFO 280	Sociology & Comparative Education	3		
	GEOG 211	Fundamentals of Physical Geography II	3				BIOL 286	General Ecology	2	1	3
	GEOG 221	Fundamentals of Human Geography II	3				BIOL 285	Biostatistics	3		
	BIOL 296	History & Philosophy of Biology	3	0			ENGL 106	Speech Communication	1		
	BIOL 292	Fund of Cell and Molecular Biology	3	1	4		INSY 107	Information Technology Today	2		
		Total	17	1	18		GEOG 226	Geography of Tourism and Leisure	3		
								Total	17	1	18
3rd	EDTE 301	Educational Communication & Technology	3				EDTM 313	Methods Teaching Geography	3		
Ju	EDTE 326	Educational Measurement & Evaluation	3				EDTM 321	Methods Teaching Biology	3		
	GEOG 313	Geography of East Africa	3				EDTE 333	Research Method in Education	3		
	GEOG 321	Remote Sensing	3				ZOOL 360	Parasitology & Immunology	2	1	3
	EDPC 238	Human Growth & Development	3				BOTN 432	Plant Physiology	2	1	3
	BOTN 374	Systematic Botany	2	1	3		GEOG 355	Geographical Information Systems (GIS)	3		
		Total	17	1	18			Total	16	2	18
	IN.	TERSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3				EDF0 410	Environmental Education	2		
4th	EDF0 401	Planning & Economics of Education	3			1	EDPC 244	Educational Guidance & Counseling	2		
	GEOG 410	Research Methods in the Social Sciences	3				GEOG 430	Meteorology and Climatology	3		
	Z00L 448	Developmental Biology	3				GEOG 480	Independent Study in Geography	3		
	GEOG 326	Agricultural Geography	3				ZOOL 464	Systems Physiology	4		
	EDF0 403	Entrepreneurship Education	3				RELT 207	Christian Beliefs	3		
		Total	18					Total	17		

## Teaching Subjects: 1st...HOME SCIENCE ......... 2nd...BIOLOGY

### Four-Year Course Plan

YEAR		FIRST SEMESTER					SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3			EDF0 260	Philosophy of Education	2		
1st	EDFO 130	History of Education	2			EDTE 180	Health Education & Life skills	2		
	ENGL 105	Writing Skills	3			INSY 107	Information Technology Today	2		
	HOSC 116	Creative Needle Work	1			HOSC 150	Clothing Construction I	2	1	3
	H0SC 120	Introduction to Food Preparation	2	1	3	HOSC 170	Resource Management in the Family	3		
	BIOL 151	Fund Biol I/General Genetics	2	1	3	BIOL 153	Fund Biol III/Invert & Vertebrate Zoology	2	1	3
	BIOL 152	Fund Biol II/General Botany	2	1	3	BIOL 176	Introduction Microbiology	2	1	3
		Total	15	3	18		Total	15	3	18
	EDTE 210	Curriculum Development	3			EDTE 255	Principles & Methods of Teaching	3		
2nd	RELB 220	Life & Tchgs of Jesus	2			EDF0 280	Sociology & Comparative Education	3		
	EDPC 244	Educational Guidance &Counseling	2			HOSC 235	Pattern Drafting	3		
	HOSC 216	Clothing Construction II (with lab)	1			H0SC 250	Child Development and Growth	3		
	HOSC 230	Nutrition and Health	3			BIOL 286	General Ecology	2	1	3
	BIOL 296	History & Philosophy of Biology	3			BIOL 285	Biostatistics	3		
	BIOL 292	Fund of Cell and Molecular Biology	3	1	4		Total	17	1	18
		Total	17	1	18			I		
3rd	EDTE 301	Educational Communication & Technology	3			EDTM 323	Methods Tchng Home Science	3		
Ju	EDTE 326	Educational Measurement &Evaluation	3			EDTM 321	Methods Tchng Biology	3		
	HOSC 300	Family Living	2			EDTE 333	Research Method in Education	3		
	HOSC 318	Personal Hygiene and Good Grooming	3			HOSC 319	Design for Living	3		
	EDPC 238	Human Growth & Development	3			HOSC 330	Meal Preparation and Management	2	1	3
	BOTN 374	Systematic Botany	2	1	3	ZOOL 360	Parasitology & Immunology	2	1	3
		Total	16	1	17		Total	16	2	18
	INTE	RSEMESTER				EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3			EDF0 410	Environmental Education	2		
4th	EDF0 401	Planning & Economics of Education	3			HOSC 415	Tailoring	2	1	3
	HOSC 450	Food Demonstration Skills	2			HOSC 455	Quantity Food Management and Production	3		
	HOSC 400	Public Health and Community Nutrition	3			ZOOL 464	Systems Physiology	4		
	Z00L 448	Developmental Biology	2	1	3	RELT 207	Christian Beliefs	3		
	ENGL 106	Speech Communication	1			BOTN 432	Plant Physiology	2	1	3
	EDFO 403	Entrepreneurship Education	3				Total	17	1	18
		Total	17	1	18					



### Teaching Subjects: 1st...CHEMISTRY ...... 2nd...HOME SCIENCE Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	T
	EDPC 106	Educational Psychology	3			1	EDFO 260	Philosophy of Education	2		$\square$
1st	EDFO 130	History of Education	2	-		1	EDTE 180	Health Education & Life skills	2		$\square$
	ENGL 105	Writing Skills	3			1	INSY 107	Information Technology Today	2		$\square$
	CHEM 120	Fundamentals of Chemistry	2	1	3	1	CHEM 154	Analytical Chemistry I	2	1	3
	CHEM 130	Introduction to Organic Chemistry	2	1	3	1	CHEM 171	Organic Functional groups	2	1	3
	HOSC 116	Creative Needle Work	1			1	HOSC 150	Clothing Construction I	2	1	3
	HOSC 120	Introduction to Food Preparation	2	1	3		HOSC 170	Resource Management in the Family	3		
		Total	15	3	18			Total	15	3	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
Qued	EDPC 238	Human Growth & Development	3			-	EDF0 280	Sociology & Comparative Education	3		$\left  \cdot \right $
2nd	EDPC 230	Educational Guidance & Counseling	2			-	RELT 207	Christian Beliefs	3		$\square$
	CHEM 231	Physical Chemistry I	2	1	3	-	CHEM 235	Analytical Chemistry II	2	1	3
	CHEM 205	Atomic Structure & Bonding	3	1	5	-	HOSC 235	Pattern Drafting	3	1	5
	HOSC 216	Clothing Construction II	1			-	HOSC 250	Child Development and Growth	3		$\left  \right $
	HOSC 230	Nutrition and Health	3			-	11030 230	Total	17	1	18
	11030 230	Total	17	1	18			IUCAI	17		10
				-							
3rd	EDTE 301	Educational Communication & Technology	3				EDTM 324	Methods Tchng Chemistry	3		
ora	EDTE 326	Educational Measurement & Evaluation	3				EDTM 323	Methods Tchng Home Science	3		
	RELB 220	Life & Teachings of Jesus	2				CHEM 394	Heterocyclic chemistry and Stereochemistry	3		
	CHEM 341	Inorganic Chemistry I	2	1	3	]	HOSC 319	Design for Living	3		
	HOSC 300	Family Living	2			1	HOSC 330	Meal Preparation and Management	2	1	3
	HOSC 318	Personal Hygiene and Good Grooming	3				CHEM 271	Chemical Thermodynamics and Phase Equilibria	3		
	EDTE 333	Research Method in Education	3			1		Total	17	1	18
		Total	18	1	19	1					
	INTE	RSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3				EDFO 410	Environmental Education	2		$\square$
4th	EDF0 401	Planning & Economics of Education	3			1	EDF0 403	Entrepreneurship Education	3		$\square$
	CHEM 402	Transition metals Chemistry	2	1	3	1	CHEM 425	Electrochemistry	3		$\vdash$
	CHEM 405	Industrial Chemistry I	2	1	3		HOSC 415	Tailoring	2	1	3
	HOSC 450	Food Demonstration Skills	2			1	HOSC 455	Quantity Food Management and	3		$\square$
								Production			
	HOSC 400	Public Health and Community Nutrition	3				ENGL 106	Speech Communication	1		
		Total	15	2	17		CHEM 345	Synthetic Organic Chemistry	2	1	3
						1		Total	16	2	18
		Electives (optional)									
	CHEM 384	Coordination Chemistry	3								
	CHEM 419	Environmental Chemistry	3								

## Teaching Subjects: 1st..MATHEMATICS ........ 2nd...BUSINESS EDUCATION

### Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	] [	CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3				EDF0 260	Philosophy of Education	2		
1st	ENGL 105	Writing Skills	3			1	EDTE 180	Health Education & Life skills	2		
	MATH 124	Basic Mathematics and Analytical Geometry	3				ENGL 106	Speech Communication	1		
	STAT 150	Introduction to Probability and Statistics	3				INSY 118	Intro. to Business Information Processing	2		
	ACCT 111	Fundamentals of Accounting I	4				MATH 150	Linear Algebra I	3		
	MGMT 141	Business Law I	2			1 [	MATH 127	Differential Calculus	3		
		Total	18			1	MGMT 130	Fundamentals of Management	3		
						1 [	EDFO 130	History of Education	2		
								Total	18		
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 238	Human Growth & Development	3				EDF0 280	Sociology & Comparative Education	3		
	EDPC 244	Educational Guidance &Counseling	2			1	ACCT 112	Fundamentals of Accounting II	4		
	MATH 227	Integral Calculus	3			1 [	MATH 248	Ordinary Differential Equations I	3		
	MATH 240	Real Analysis I	3			] [	MATH 274	Complex Analysis I	3		
	MATH 240	Business Statistics I	3			1 [	RELB 220	Life & Tchgs of Jesus	2		
		Total	17					Total	18		
3rd	EDTE 301	Educational Communication & Technology	3				EDTM 325	Methods Tchng Mathematics	3		
Ju	EDTE 326	Educational Measurement & Evaluation	3				EDTM 329	Methods Tchng Business	3		
	MATH	Pure or Applied or Stat	3			] [	EDTE 333	Research Method in Education	3		
	MATH	Pure or Applied or Stat	3				MATH	Pure or Applied or Stat	3		
	MGMT 335	Human Behavior in Organization	3			1 [	RELT 207	Christian Beliefs	3		
	ECON 210	Principles of Microeconomics	3				MKTG 240	Customer Care and Relation Management	3		
		Total	18					Total	18		
	INTE	RSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
4-1	EDF0 400	Educational Policy & Management	3				EDF0 410	Environmental Education	2		
4th	EDFO 401	Planning & Economics of Education	3			1	EDFO 403	Entrepreneurship Education	3		
	MATH	Pure or Applied or Stat	3				MATH	Pure or Applied or Stat	3		
	MATH	Pure or Applied or Stat	3			] [	FNCE 287	Principles of Finance	3		
	FNCE 467	Investment Analysis and Portfolio Management	3				MGMT 330	Human Resource Management	3		
	MKTG 484	Distribution, Logistics and Pricing Management	3				MKTG 366	Sales Management	3		
		Total	18					Total	17		



## Teaching Subjects: 1st...GEOGRAPHY......2nd...BUSINESS EDUCATION

## Four-Year Course Plan

YEAR		FIRST SEMESTER					SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3			EDFO 260	Philosophy of Education	2		
1st	ENGL 105	Writing Skills	3			EDTE 180	Health Education & Life skills	2		
	GEOG 130	Introduction to Cartography, Map work and Land Surveying	3			ENGL 106	Speech Communication	1		
	GEOG 111	Fundamentals of Physical Geography I	3			INSY 118	Intro. to Business Information Processing	2		
	ACCT 111	Fundamentals of Accounting I	4			GEOG 121	Fundamentals of Human Geography I	3		
	MGMT 141	Business Law I	2			GEOG 100	Introduction To Geography	3		
		Total	18			MGMT 130	Fundamentals of Management	3		
						EDFO 130	History of Education	2		
							Total	18		
	EDTE 210	Curriculum Development	3			EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 238	Human Growth & Development	3			EDF0 280	Sociology & Comparative Education	3		
	EDPC 244	Educational Guidance &Counseling	2			RELT 207	Christian Beliefs	3		
	GEOG 211	Fundamentals of Physical Geography II	3			GEOG 226	Geography of Tourism and Leisure	3		
	GEOG 221	Fundamentals of Human Geography II	3			<b>FNCE 287</b>	Principles of Finance	3		
	ECON 210	Principles of Microeconomics	3			ACCT 112	Fundamentals of Accounting 2	4		
		Total	17			Total		19		
3rd	EDTE 301	Educational Communication & Technology	3			EDTM 313	Methods Tchng Geography	3		
oru	EDTE 326	Educational Measurement & Evaluation	3			EDTM 329	Methods Tchng Business	3		
	RELB 220	Life & Teachings of Jesus	2			EDTE 333	Research Method in Education	3		
	GEOG 313	Geography of East Africa	3			GEOG 326	Agricultural Geography	3		
	GEOG 321	Remote Sensing	3			GEOG 355	Geographical Information Systems (GIS)	3		
	MGMT 220	Business Statistics I	3			MKTG 240	Customer Care and Relation Management	3		
		Total	17				Total	18		
	INTE	RSEMESTER		-		EDTE 399	Teaching Practice in Secondary School	6		
4th	EDFO 400	Educational Policy & Management	3			EDFO 410	Environmental Education	2		
40	EDF0 401	Planning & Economics of Education	3			EDFO 403	Entrepreneurship Education	3		
	GEOG 410	Research Methods in the Social Sciences	3			GEOG 430	Meteorology and Climatology	3		
	FNCE 467	Investment Analysis and Portfolio Management	3			GEOG 480	Independent Study in Geography	3		
	MKTG 484	Distribution, Logistics and Pricing Management	3			MGMT 330		3		
	MGMT 335	Human Behavior in Organization	3			MKTG 366	Sales Management	3		
		Total	18				Total	17		

## Teaching Subjects: 1st...BIOLOGY ....... 2nd...BUSINESS EDUCATION

## Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3			1 [	EDFO 260	Philosophy of Education	2		
1st	ENGL 105	Writing Skills	3			] [	EDTE 180	Health Education & Life skills	2		
	BIOL 151	Fund Biol I/General Genetics	2	1	3	] [	ENGL 106	Speech Communication	1		
	BIOL 152	Fund Biol II/General Botany	2	1	3		INSY 107	Information Technology Today	2		
	ACCT 111	Fundamentals of Accounting I	4				BIOL 153	Fund Biol III/Invert & Vertebrate Zoology	2	1	3
	MGMT 141	Business Law I	2			] [	BIOL 176	Introduction to Microbiology	2	1	3
		Total	16	2	18		MGMT 130	Fundamentals of Management	3		
							EDFO 130	History of Education	2		
								Total	18		
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 244	Educational Guidance &Counseling					EDF0 280	Sociology & Comparative Education	3		
	BIOL 296	History & Philosophy of Biology	3			1	BIOL 286	General Ecology	2	1	3
	BIOL 292	Fund of Cell and Molecular Biology	3	1	4	1	BIOL 285	Biostatistics	3		
	MGMT 220	Business Statistics I	3			1 [	FNCE 287	Principles of Finance	3		
		Total	14	1	15	1	ACCT 112	Fundamentals of Accounting 2	4		
							Total			1	19
3rd	EDTE 301	Educational Communication & Technology	3				EDTM 329	Methods Tchng Business	3		
Ju	EDTE 326	Educational Measurement &Evaluation	3				EDTM 321	Methods Tchng Biology	3		
	RELB 220	Life & Teachings of Jesus	2			] [	EDTE 333	Research Method in Education	3		
	EDPC 238	Human Growth & Development	3				ZOOL 360	Parasitology & Immunology	2	1	3
	BOTN 374	Systematic Botany	2	1	3	1 [	MGMT 330	Human Resource Management	3		
	ECON 210	Principles of Microeconomics	3				MKTG 240	Customer Care and Relation Management	3		
		Total	16	1	17			Total	17	1	18
	INTE	RSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3				EDF0 410	Environmental Education	2		
4th	EDFO 401	Planning & Economics of Education	3				EDFO 403	Entrepreneurship Education	3		
	Z00L 448	Developmental Biology	2	1	3	1	Z00L 464	Systems Physiology	4		$\square$
	MKTG 484	Distribution, Logistics and Pricing Management	3				RELT 207	Christian Beliefs	3		
	MGMT 335	Human Behavior in Organization	3			] [	MKTG 366	Sales Management	3		
	BOTN 432	Plant Physiology	2	1	3	] [		Total	15	0	15
		Total	16	2	18	]					



# Teaching Subjects: 1st...BUSINESS EDUCATION....... 2nd...CHEMISTRY Four-Year Course Plan Key: Th - Theo

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3				EDF0 260	Philosophy of Education	2		
1st	ENGL 105	Writing Skills	3				EDTE 180	Health Education & Life skills	2		
	CHEM 120	Fundamentals of Chemistry	2	1	3		ENGL 106	Speech Communication	1		
	CHEM 130	Introduction to Organic Chemistry	2	1	3		INSY 118	Intro. to Business Information Processing	2		
	ACCT 111	Fundamentals of Accounting I	4				CHEM 154	Analytical Chemistry I	2	1	3
	MGMT 141	Business Law I	2				CHEM 171	Organic Functional groups	2	1	3
		Total	17	2	19		MGMT 130	Fundamentals of Management	3		
							EDFO 130	History of Education	2		
								Total	16	2	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		•
2nd	EDPC 238	Human Growth & Development	3				EDF0 280	Sociology & Comparative Education	3		
	CHEM 231	Physical Chemistry I	2	1	3		RELT 207	Christian Beliefs	3		
	CHEM 205	Atomic Structure & Bonding	3				CHEM 235	Analytical Chemistry II	2	1	3
	ECON 210	Principles of Microeconomics	3				CHEM 271	Chemical Thermodynamics and Phase equilibria	3		
	MGMT 220	Business Statistics I	3				FNCE 287	Principles of Finance	3		
		Total	17	1	18		ACCT 112	Fundamentals of Accounting 2	4		
								Total	17	1	18
	EDTE 301	Educational Communication &	3				EDTM 324	Methods Tchng Chemistry	3		
3rd		Technology									
	EDTE 326	Educational Measurement & Evaluation	3				EDTM 329	Methods Tchng Business	3		
	RELB 220	Life & Teachings of Jesus	2			] [	EDTE 333	Research Method in Education	3		
	CHEM 341	Inorganic Chemistry I	2	1	3		CHEM 394	Heterocyclic chemistry and Stereochemistry	3		
	MGMT 335	Human Behavior in Organization	3				CHEM 345	Synthetic Organic Chemistry	2	1	3
	MKTG 366	Sales Management	3				MKTG 240	Customer Care and Relation Management	3		
		Total	16	1	17			Total	17	1	18
	INTE	RSEMESTER									
4.1	EDF0 400	Educational Policy & Management	3				EDFO 410	Environmental Education	2		
4th	EDF0 401	Planning & Economics of Education	3				EDFO 403	Entrepreneurship Education	3		
	CHEM 402	Transition metals Chemistry	2	1	3		CHEM 425	Electrochemistry	3		
	CHEM 405	Industrial Chemistry I	2	1	3		MGMT 330	Human Resource Management	3		
	FNCE 467	Investment Analysis and Portfolio Management	3				EDPC 244	Educational Guidance & Counseling	2		
	MKTG 484	Distribution, Logistics and Pricing Management	3					Total	13	0	13
		Total	16	2	18						
		Electives (optional)									
	CHEM 384	Coordination Chemistry	3								
	CHEM 419	Environmental Chemistry	3								



## Teaching Subjects: 1st...GEOGRAPHY...... 2nd...AGRICULTURE

## Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	EDPC 106	Educational Psychology	3			1	EDF0 260	Philosophy of Education	2		
1st	EDF0 130	History of Education	2			1	EDTE 180	Health Education & Life skills	2		
	ENGL 105	Writing Skills	3			1	ENGL 106	Speech Communication	1		
	GEOG 130	Introduction to Cartography, Mapwork	3				INSY 107	Information Technology Today	2		
	GEOG 111 Agri 101	Fundamental of Physical Geography 1	3				GEOG 121	Fundamental of Human Geography	3		
		Crop Production Skills	1				GEOG 100	Introduction to Geography	3	1	7
	AGRI 116A	Agriculture Ecology	2				AGEN 115	Introduction to Farm Machinery and Mechanization	2	1	3
	AGRI 108	Introduction to Agriculture	1				AGRI 116B	Agriculture Ecology	1		
		Total	18	0	18		AGRI 102	Animal Production Skills	1		
								Total	17	1	18
	EDTE 210	Curriculum Development	3				EDTE 255	Principles & Methods of Teaching	3		
2nd	EDPC 238	Human Growth & Development	3				EDF0 280	Sociology & Comparative Education	3		
	EDPC 244	Educational Guidance & Counseling	2				RELT 207	Christian Beliefs	3		
	GEOG 211	Fund of Phys Geography 2	3				GEOG 226	Geography of Tourism and Leisure	3		
	CPSC 213	Introduction to Soils	2	1	3		CPSC 279	Crop Physiology	2	1	3
	ANSC 211	Introduction to Animal Science	2	1	3		GEOG 221	Fundamental of Human Geog II	3		
		Total	15	2	17			Total	17	1	18
3rd	EDTE 301	Educational Communication & Technology	3				EDTM 322	Methods Tchng Agriculture	3		
JIU	EDTE 326	Educational Measurement & Evaluation	3				EDTM 313	Methods Tchng Geography	3		
	AGRI 335	Mushroom Production	1	1	2	1	EDTE 333	Research Method in Education	3		
	GEOG 313	Geography of East Africa	3				GEOG 355	Geog Information Systems	3		
	CPSC 314	Crop Production I	2	1	3	1	CPSC 325	Crop Production II	2	1	3
	AGEC 345	Agricultural Economics	3				GEOG 321	Remote Sensing	3		
		Total	15	2	16			Total	17	1	18
	INTE	ERSEMESTER					EDTE 399	Teaching Practice in Secondary School	6		
	EDF0 400	Educational Policy & Management	3				EDF0 410	Environmental Education	2		
4th	EDF0 401	Planning & Economics of Education	3			-	EDF0 403	Entrepreneurship Education	3		
	GEOG 410	Research Methods in Social Sciences	3				GEOG 430	Meteorology and Climatology	3		
	GEOG 326	Agricultural Geography	3			]	GEOG 480	Independent Study in Geog	3		
	ANSC 411	Poultry Science	2	1	3	1	AGEC 413	Management of Agriculture	2	1	3
	CPSC 412	Crop Protection	2	1	3	1	ANSC 442	Dairy Production	2	1	3
		Total	16	2	18	1	RELB 220	Life & Teachings of Jesus	2		
								Total	17	2	18

# **Course Descriptions**

#### EDFO 130 History of Education

#### 2 Credits

This course introduces the highlights of the historical accounts of education from the known antiquities (Eden, Greek and Roman societies) to the present East African educational systems. Topics covered are the definitions of history, education and history of education: functions and roles of education in societies, significance of the study of history of education to the teaching profession; the Biblical accounts of education such as education in Eden, education of the patriarchs, the School in the Wilderness, the School of Prophets, and the School of Jesus Christ and His disciples; the ancient secular historical accounts such as African indigenous education, education in Eqypt. education in Mesopotamia. Greek education. Roman education, early Christian education; education of the period of renaissance to the age of humanism, education of missionaries in Africa, and history of education in pre-colonial and postcolonial Kenya, Uganda, and Tanzania.

#### EDFO 260 Philosophy of Education

#### 2 Credits

This course discusses a background to the study of philosophy for students pursuing a Bachelor of Education degree program. Topics include the Adventist philosophy of education as explained in the Bible and the Spirit of Prophecy; philosophical theories of education; a history and practice of world philosophies of education including idealism, realism, naturalism, pragmatism, existentialism, Ujamaa and the African philosophical thoughts. The course also considers the thoughts of world philosophers such as Socrates, Plato, Aristotle, St. Augustine, Immanuel Kant, William James, John Dewey, John Locke, Thomas Aquinas, John Amos Comenius, Ignatius Loyola, Jean J. Rousseau, Rene Descartes, Jean Paul Sartre, Fredrick W. Nietzesche, Karl Marx, Julius Nyerere, Milton Obote, Kwame Nkrumah, Robert Mugabe and their influence on the educational systems of the world.

#### EDFO 280 Sociology and Comparative 3 Credits Education

The course explains ways through which education and society impact on each other and compares educational systems of different countries. Discussion includes society and school, socialization process of education, the nature, roots and types of education; education and schooling in contemporary society; sociological theories; social stratification and education; education and employment; the role of a teacher in society as explained by the Christian church and the secular world; concepts of and development of comparative education; methods of studying education systems between Kenya and the East African Region; South Africa, United Kingdom, United States of America, Canada, Cuba, Japan and China.

#### EDFO 400 Education Policy and Management

#### **3 Credits**

This course provides the students with principles and functions of schools management; theories of educational administration; school as an organization: effective institutional governance, leadership and supervision, delegation and authority, communication and negotiation, conflict and conflict resolutions, legal provision in school management; policy formulation, policy implementation monitoring and evaluation, stakeholder participation in school management, management of school resource: finance, human and physical. Prerequisites: EDFO 120, EDFO 250 and EDFO 280.

#### EDFO 401 Planning and Economics of 3 Credits Education

This course discusses the meaning of educational planning; planning for resources: human, finance, physical; models of educational planning; resource appraisal and monitoring; principles of economics in education; micro and macroeconomics; economic issues in education; education and socio economic development; The relevance of national vision and educational planning; The evaluation procedures of a school and national educational goals are stressed. Prerequisites: EDF0 120, EDF0 250 and EDF0 280.

#### EDF0 410 Environmental Education 3 Credits

This course gives the definition of environment education; effects of human activity on environment; need for environmental education; pollution; history and philosophy of environmental education; society, development and environment; environmental management and sustainable development; instruction in environmental education; environmental education for sustainability in schools. Prerequisites: EDF0 120, EDF0 250 and EDF0 280.

#### EDFO 403 Entrepreneurship in Education 3 Credits

This course discusses the meaning, nature and purpose of entrepreneurship; Entrepreneurship and education; basic concepts in entrepreneurship: demand and supply, business opportunities in education; developing business plans in education; business policies in Kenya; business acumen; resources mobilization for entrepreneurship. Prerequisites: EDFO 120, EDFO 250 and EDFO 280.

#### EDPC 106 Educational Psychology

Basic concepts of psychology; historical perspective in psychology; schools and branches of psychology; general human development with special emphasis on adolescence; biological, social and cultural factors affecting human development; factors influencing behavior, intelligence, motivation, emotions, perception, sensation and learning; application of psychological concepts and principles; theories of learning; retention and transfer of knowledge.

2 Credits

#### EDPC 238 Human Growth and Development 3 Credits

Concepts of human development: biological, social, cultural and ecological development; childhood, adolescent and adulthood development; theories of development; physical motor, emotional, mental, moral language and personality development; relationship between growth, development and education.

#### EDPC 244 Educational Guidance 2 Credits and Counseling

Concepts and significance of guidance and counseling; methods and procedures in guidance and counseling; ethics in guidance and counseling; theories of guidance and counseling; career and occupational awareness; psychological and social factors underlying individual differences.

EDTE 180 Health Education and Life Skills 2 Credits The course introduces students to the principles of health of healthful living: NEWSTART; health education in schools; human anatomy: human organ system, their interdependence, significant disorders and care; communicable diseases and their control; emergency treatment; principles of physical and mental health; principles of physical and mental health; health and nutrition; recreation and sport; family health, family planning and population control; living with oneself; living with others, effective decision making; living values. Prerequisites: EDPC 106.

#### EDTE 210 Curriculum Development

**3 Credits** 

This course is an introductory study of concepts of curriculum and curriculum development; patterns of curriculum design; curriculum implementation and teacher education; curriculum evaluation; foundations of curriculum: historical, philosophical and psychological: dimensions of curriculum; elements/ components of curriculum; curriculum change and innovation; agencies involved in curriculum development, theories of curriculum development; principles and procedures of curriculum development; dimensions of curriculum; national goals of education, millennium development goals and Kenya vision 2030; the role of the National Curriculum Centre in Kenya. Prerequisites: EDTE 170 and EDPC 106.

#### EDTE 255 Principles and Methods of Teaching

**3 Credits** 

Concepts in teaching and learning; systems approach in teaching; methods, techniques, strategies of teaching; deriving goals and objectives of teaching; evaluation methods; learning theories; effective classroom communication; preparation for teaching: syllabus, scheme of work, lesson plan; and record of work; classroom organization and management; providing for individual differences; emerging issues in teaching. Prerequisites: EDPC 106 and EDPC 238. (Students taking this class are required to go for a field trip).

#### EDTE 301 Educational Communication and 3 Credits Technology

In this course the student is introduced to communication models and theories in learning; effective communication: visual, verbal and non-verbal; media for learning: electronic radio broadcast, print; learning resources; development of educational media and resources; basic skills in teaching: questioning, set, induction, stimulus variation and closure; design, development and evaluation of teaching and evaluation of teaching materials; management and use of teaching and learning resources. Prerequisites: EDTE 210, EDTE 255, EDPC 106 and EDPC 238.

#### EDTE 333 Research Methods in Education 3 Credits

Definition and purpose of research; types of research: basic and applied research; characteristics of research; ethics in research; techniques in research: quantitative and qualitative research; research process: problem identification, formulation of hypothesis; identification of variables; validity in research; literature review; tools for data collection; sampling methods; statistical tools of data analysis interpretation and hypothesis testing; writing research proposal and report; dissemination of research findings. To run for two semesters for data collection and analysis. Prerequisites: EDTE 210 and EDTE 326, ENGL 105.

#### EDTE 326 Educational Measurement and 3 Credits Evaluation

Concepts of evaluation and measurement; statistical analysis: measures of central tendency, variability, correlation, regression analysis, hypothesis testing, scales of measurements; philosophy and nature of educational testing: reliability, validity, discrimination index; test construction: types and test formats, tests construction and administration; characteristics of a good test. Prerequisite: EDTE 255.

#### EDTE 397 Teaching Practice

**3 Credits** 

This is a course designed to give student teachers an actual teaching experience in the classroom in the primary school for a minimum period of 12 to 13 weeks. Student teachers taking this course must prepare, teach and evaluate the work of children, under the supervision of the cooperating teacher in the subject areas taught. Prerequisites: EDTE 301 EDTE 326, EDPC 239 and any two relevant courses of the EDTM 311 to 338 applicable to the teaching subject areas, department committee action and attending an orientation seminar on teaching practice.[This course is an exemption designed for students who have taken a diploma in education teaching in primary school].

#### EDTE 398 Teaching Practice

**3 Credits** 

This is a course designed to give student teachers an actual teaching experience in the classroom in the secondary school for a minimum period of 12 to 13 weeks. Student-teachers taking this course must prepare, teach and evaluate the work of children, under the supervision of the cooperating teacher in the subject areas taught. Prerequisites: EDTE 301 EDTE 326, EDPC 239 and any two relevant courses of the EDTM 311 to 338 applicable to the teaching subject areas, department committee action and attending an orientation seminar on teaching practice. (This course is an exemption designed for students who have taken a diploma in education teaching secondary school).

#### EDTE 399 Teaching Practice in Secondary 6 Credits Schools

This is a course that gives the student teachers pursuing a Bachelor of Education (secondary option) actual experience in the classroom in the secondary school for a minimum period of 12 to 13 weeks. Student teachers prepare, teach and evaluate the work of pupils, under the supervision of the cooperating teachers in the subject areas taught. The students are expected to develop schemes of work and lesson plans. Students involved in teaching practice must stay within the cooperating school throughout the working hours of the day and must attend to all the activities of the school. Students are assessed by the teachers from the School of Education, Humanities, and Social Sciences, and the subject teachers with teacher training background from individual departments of the University responsible for the teaching subjects. Students are externally examined beginning the ninth week of teaching practice. The external examiner shall be recommended by the Department of Education and the School of Education, Humanities and Social Sciences and approved by the Administrative Board of the University. Prerequisites: EDTE 301, EDTE 326, EDPC 106, EDPC 238, EDPC 239 and any two relevant courses of the EDTM 311 to 338 applicable to the teaching subject areas, department committee action and attending an orientation seminar on teaching practice.

#### EDTM 311 Special Methods in Teaching 3 Credits History and Government

This course deals with selected methods and instructional aids used in teaching history in secondary schools. Students will be taught how to develop scheme of work, record of covered and lesson plans that incorporate creative methods of teaching, addressing the cognitive, affective, and psychomotor domains of teaching history. Some of the methods and techniques to be discussed will include inductive and deductive methods, lecture, discussion, group discussion, question and answer, study groups, panel discussions, brainstorming, role playing, simulation, project and assignment.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; study skills, administration and taking of tests; student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 312 Special Methods in Teaching 3 Credits Religious Education

This course deals with selected methods and instructional aids used in teaching religious education in secondary schools. Students will be taught how to develop schemes of work and lesson plans that incorporate creative methods of teaching religion addressing the cognitive, affective, and psychomotor domains of religious instruction. Methods to be discussed will include inductive and deductive teaching, lecture, discussion, group discussion, question and answer, study groups, panel, role playing, project, assignment, expository, topical and life application. The course stresses the relevance of teaching religious education as a subject in upholding and instilling moral and social values in modern society.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 313 Special Methods in Teaching 3 Credits Geography

This course deals with selected methods and instructional media/materials used in teaching geography as a subject. Students will be taught how to develop schemes of work and lesson plans that incorporate creative methods of teaching geography addressing the cognitive, affective, and psychomotor domains of instruction. Methods discussed include inductive and deductive teaching, lecture, discussion, group discussion, question and answer, study groups, field work, demonstration, and assignment. The use of maps, field trips, photographs, and map reading are highly emphasized.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum

lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 314 Special Methods in Teaching 3 Credits English language

This course deals with the development of language skills necessary for the teaching of the English language. The emphasis is on teachers-in-training developing a repertoire of strategies that enhance the learning of English as a second language. Students are expected to learn how to develop schemes of work and lesson plans based on the secondary school syllabus. Teaching methods applicable to the teaching of the English language such as role playing, simulation, lecture, discussion, recitation, drill, expository, story-telling, assignments, small study groups and others are discussed. Students are also involved in micro-teaching to sharpen their delivery skills. Cognizance is made of the fact that English language and literature are integrated in the Kenya Secondary School System.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106, EDPC 238.

#### EDTM 315 Special Methods in Teaching 3 Credits Literature in English

This course deals with the development of skills necessary for the teaching of literature in English. The teacher trainees are expected to acquire the skills to guide their learners in appropriating literature as the creative use of language. Methods of presenting both oral and written literature are addressed. Students are expected to learn how to develop schemes of work and lesson plans based on the secondary school syllabus. Trainees are exposed to the different methods of guiding their learners in critically analyzing literary works. Cognizance is made of the fact that literature and language are integrated in the Kenya Secondary School system.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106, EDPC 238.

#### EDTM 316 Special Methods in Teaching 3 Credits Kiswahili Language

This course deals with the development skills necessary for the teaching of Kiswahili language. The emphasis is on teachersin-training developing a repertoire of strategies that enhance a variety of learning in their students. Students develop schemes of work and lesson plans based on the secondary school syllabus with specific emphasis on Kiswahili language and literature. Teaching methods applicable to the teaching of language and literature such as role play, simulation, lecture, discussion recitation, drill, expository, story-telling, assignments, small study groups and others are discussed. Cognizance is made of the fact that literature and language in Kiswahili are integrated in Kenya Secondary School system.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 318 Special Methods in Teaching 3 Credits French

This course deals with the development of language skills necessary for the teaching of French as a second language. Emphasis is laid on teachers-in-training developing a repertoire of strategies that enhance a variety of learning methods in their students. Students develop schemes of work and lesson plans based on the secondary school syllabus with specific emphasis on French. Teaching methods applicable to the teaching of French language such as role playing, simulation, lecture, discussion, recitation, drill, expository, story-telling, assignments, small study groups and others are discussed.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 321 Special Methods in Teaching 3 Credits Biology

The meaning and goals of science education; the main viewpoints of science; the static and the dynamic view of science and their influence in science teaching; methods and approaches of biology teaching at secondary school level; a process based approach to biology teaching; an examination of the science process skills with special reference to skills of observation, recording, classifying, synthesizing, evaluation, interpretation etc.; critical view of biology recent developments in the discipline and the welfare of mankind; historical development of the biology syllabus in Kenya: critical analysis of different biology syllabi used in secondary schools; planning for biology teaching the syllabus, schemes of work, lesson planning, lesson notes and record of work covered; Teaching strategies class experiments, demonstration field trips and biology projects; exemplified project work in biology; resources and facilities for teaching biology; botanical techniques and resource building for biology teaching; laboratory design and management; assessment and evaluation in biology; professional growth after college; membership in subject panels, biology teacher associations, biology journals are topics included in this course. This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 105, EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 322 Special Methods in Teaching 3 Credits Agriculture

This course deals with the teaching of agriculture at the secondary school level. Students will be trained in the preparations of teaching objectives in agriculture in all the three instructional domains; cognitive, affective and psychomotor. Students will be trained to plan and implement lessons and scheme of work based on the subject matter taught at the Kenyan Secondary School level. Teaching methods applicable to the teaching of agriculture including experimentation, lecture, discussion, drill, assignments, demonstration, small study groups, field trips, field work, project and others are discussed.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 323 Special Methods in Teaching 3 Credits Home Science

This course deals with the teaching of home science at the secondary school level. Various methods and strategies are used in teaching aspects of food and nutrition, life and child development, clothing construction, livelihood and consumer science. Students will be trained in the preparations of teaching objectives in Home Science in all three instructional domains; cognitive, affective and psychomotor. Students will be trained to plan and implement lessons and scheme of work based on the Kenyan Secondary School level syllabus. Teaching methods applicable to the teaching of home science including experimentation, lecture, project, discussion, drill, demonstration, assignments, small study groups, project, field work and others are discussed.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 324 Special Methods in Teaching 3 Credits Chemistry

The meaning of science education; science as a dynamic process; scientific methods; (processes) and their applications in chemistry teaching; strategies of teaching chemistry; project work in chemistry; fabrication and improvisation

of simple chemistry teaching materials; laboratory design, organization and materials management; health and safety in the chemistry laboratory; preparation of solutions; secondary school syllabus and relevant reading materials, schemes of work and lesson planning in chemistry; the role of chemistry in society; qualities of a good chemistry teacher; assessment in chemistry; Conducting KCSE chemistry experiments are topics to be covered.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 325 Special Methods in Teaching 3 Credits Mathematics

This course is an introduction to mathematics education philosophy and foundations of mathematics; general goals and objectives of mathematics; the 8-4-4 secondary school mathematics curriculum and syllabus; syllabus, scheme of work and lesson plans in mathematics; methods and techniques of teaching mathematics lessons; test preparations, administration and scoring; use of test results; learning and instructional theories in teaching mathematics lessons; models for teaching and learning the objects of mathematics; teaching aids, constructing a valid and reliable mathematics examination and the marking scheme, teaching practice; strategy of teaching mathematics, project work in mathematics.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 326 Special Methods in Teaching 3 Credits Physics

This course discusses the meaning of science education; science as a dynamic process, scientific methods, brief history of physics; investigative techniques in physics Different types of tests, statistical analysis of tests, practical tests; practical testing; physics teaching in secondary schools; critical analysis of different physics syllabi used in secondary schools, scheme of work, lesson planning; teaching strategies class experiments, demonstration, projects, field trips; Assessments in physics writing examinations, different types of tests, practical assessments in physics, project assessments with emphasis on investigative and problem solving approach, laboratory facilities and teaching materials laboratory equipment procurement and storage, laboratory design and safety and management, appropriate physics text books.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum

lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 329 Special Methods in Teaching 3 Credits Business Studies

The course deals with various methods and strategies of teaching business studies, such accounts, bookkeeping, office management, typing, computer, commerce, economics, and shorthand. Students will be taught how to develop schemes of work and lesson plans that demonstrate creative methods of teaching business studies addressing the cognitive, affective, and psychomotor domains of instruction. Methods to be discussed will include inductive and deductive teaching, demonstration, lecture, discussion, drill, assignments, small study groups, demonstration, project, and others.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 337 Special Methods in Teaching 3 Credits Physical Education

This course deals with selected methods and instructional aids used in teaching physical education as a science subject. Students are taught how to develop schemes of work and lesson plans that demonstrate creative methods of teaching physical education as a science addressing the cognitive, affective, and psychomotor domains of instruction. Methods discussed include inductive and deductive teaching, experimentation, demonstration, lecture, discussion, drill, assignments, small study groups, project, field work and others.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 338 Special Methods in Teaching 3 Credits Computer Science

The course deals with various methods and strategies of teaching computer knowledge to pupils and students in a school setting. It covers practical and theoretical approaches to imparting knowledge on the hard and software aspects of the computer and its practical applications in the day-today life. Students will be taught how to develop schemes of work and lesson plans that demonstrate creative methods of teaching practical computer knowledge addressing the cognitive, affective, and psychomotor domains of instruction. Methods to be discussed will include demonstration, lecture, discussion, drill, assignments, small study groups, project, and others.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106, EDPC 238.

#### EDTM 351 Science Teaching Methods 3 Credits

The meaning and goals of science education; the main viewpoints of science; the static and the dynamic view of science and their influence in science teaching; methods and approaches of science; a process and practical based approach to sciences. Selected methods of instruction used for teaching science in primary schools. Subjects covered included mathematics, biology, chemistry and physics. Students develop schemes of work and lesson plans based on Kenya primary syllabi for the two subjects a student is specialized taught in primary schools.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 352 Social Science Teaching 3 Credits Methods

This course deals with selected methods of instruction used for teaching history, geography and religions in primary schools. Students develop schemes of work and lesson plans based on Kenya primary syllabi for the two social studies subjects a student is specialized in.

This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 106 and EDPC 238.

#### EDTM 353 Language Teaching Methods 3 Credits

This course deals with selected methods of instruction used for teaching English language and Lugha ya Kiswahili in primary schools. Students develop schemes of work and lesson plans based on Kenya primary syllabi for the two languages a student is specialized in. This course also gives hands on experience of teaching in a classroom setting. Students will be required present lessons in the teaching subject to their classmates in the curriculum lab under the guidance of experienced lecturers in the areas of teaching; The making and use of teaching portfolios; Study skills, administration and taking of tests; Student presentations and evaluation. Prerequisites: EDTE 210, EDTE 301, EDTE 326, EDPC 10 and EDPC 238.

#### EDUC 215 Philosophy of Christian 2 Credits Education

This course discusses a brief background to the study of philosophy in general, and a detailed study of the Adventist philosophy of Education as explained in the Bible and the Spirit of Prophecy in particular. Discussion center's around such aspects of the teaching learning process as philosophy, education, philosophy of education, sources of knowledge, aims of education, the significance of philosophy of education to the teaching profession; man, his nature before and after fall, metaphysics (reality), epistemology (knowledge), axiology (value or goals of education), the learner, the teacher, the school, methods of teaching/learning, curriculum, work program, and dressing. It may also include some philosophers whose philosophical thoughts have influenced the Christian philosophical world views such as Socrates, Plato, St. Augustine, Thomas Aquinas, and Ignatius Loyola. (This course is a general requirement for students who do not take a Bachelor of Education degree program).

#### PEAC 107 Physical and Recreational 1 Credits Activities

This course exposes students to the concepts, games and activities that enhance physical fitness through a series of organized physical activities. It includes the following recreation and physical activities: soccer, softball, basketball, volleyball, netball, lawn tennis, hockey and handball activities, rotation and circles, body stretching and balance, shoulder blades, trunk rolls, body plows, elbow thrusts, knee bends and circles, ordinary jumping jacks, knee-tap rhythms, stand-up balances, frog-jump moves, Masai jumps, complex jumping jacks, 4-count burps, step-kick and squat, squat-thrust and stretch, push-ups, crab-stretch movement, alternate knee to chest, double knee to chest, sit and reach, crab stretch, platter kicks, v-balance, knee flexion, sit-ups, leg-over, cycle kicks, arm circles, knee rotations and deep breath.

#### SOCI 121 Introduction to Sociology

2 Credits

The course is an introduction to the discipline of sociology, the theory and practice that attempts to describe an interpretative understanding of social causes, social relations and social actions in order thereby to arrive at a causal explanation of its course process and effects. It discusses social institutions, socialization, social grouping, social interactions, social conflicts, and social self-regulations.

## POST-GRADUATE DIPLOMA IN EDUCATION

The Department of Education offers a one year Post Graduate Diploma in Education to graduates from any recognized institution of higher learning without education. The candidate must hold a first degree with two areas of specialization that are taught at secondary school level. Applicants who did only one subject area in their Bachelor's degree program will be advised to make up the deficiency by adding a minimum of 24 semester credits from a second teaching subject area before going for teaching practice or else will not be allowed to graduate with a Post Graduate Diploma in Education. Applicants whose first degree did not address a subject taught at Secondary School level, are not qualified to take this program. Applicants who did a subject at degree level which they did not pass at Secondary school level with a minimum grade of C+ are also not qualified to enroll for a PGDE program.

#### **EXPECTED LEARNING OUTCOMES**

After going through a post graduate diploma course in Education, students should be able to:

- Prepare schemes of work/course outline, lesson plan and record of work in two subjects examined at secondary school level;
- 2. Teach two subject areas examined at secondary school level;
- 3. Lead an educational institution and organization;
- 4. Identify themselves and impact a positive influence on the youth;
- 5. Pursue post graduate studies in the field of education.

#### SUMMARY

Educational Foundations	9
Educational Communications and Technology	12
Educational Administration and	
Curriculum Development	6
Subject Teaching Methods	6
Teaching Practice	4
Total	<b>37 Credits</b>

EDUCATIONAL FOUNDATION 9 Credit					
EDPS 501	Psychology of human development and learning	3			
EDST 503	Statistics Applied to Education and Psychology	3			
EDF0 501	Historical and Philosophical Foundations of Education	3			

EDUCATIONAL COMMUNICATION AND TECHNOLOGY 12 Credits							
EDTE 515	Principles and Methods of Teaching	3					
EDTE 545	Tests, Measurement and Evaluation	3					
EDTE 547	Educational Research Methodology	3					
EDTE 548	Educational Communication and Technology	3					

## EDUCATIONAL ADMINISTRATION AND CURRICULUM DEVELOPMENT 6 Credits

EDAD 521	Educational Management and Planning	3
EDUC 531	Curriculum Planning and Development	3

#### SUBJECT TEACHING METHODS

6 Credits

A student is required to take two of the subject teaching method courses, selected from the list of subjects given below. The subject areas must correspond with the subjects the candidate will be teaching after graduating from the university. Each of the subject teaching methods has four extra contact hours per week of laboratory designed to review the secondary school syllabuses of the two subjects to be taught and to review all the practical exercises to be taught in secondary schools within the two areas of specialization.

EDTM 560	History Teaching Methods	3
EDTM 561	Religious Education Teaching Methods	3
EDTM 562	Geography Teaching Methods	3
EDTM 563	Biology Teaching Methods	3
EDTM 564	Chemistry Teaching Methods	3
EDTM 565	Physics Teaching Methods	3
EDTM 566	Mathematics Teaching Methods	3
EDTM 567	Business Education Teaching Methods	3
EDTM 568	Technology Teaching Methods	3
EDTM 569	Agriculture Teaching Methods	3
EDTM 570	English Language Teaching Methods	3
EDTM 571	English Literature Teaching Methods	3
EDTM 572	Kiswahili Language Teaching Methods	3
EDTM 574	French Teaching Methods	3
EDTM 575	Home Science Teaching Methods	3
EDTM 578	Special Methods in Teaching Computer Science	3

TEACHING PRACTICE 4 Crew			
EDTE 590	Teaching Practice	4	

# **Course Descriptions**

#### EDAD 521 Educational Management and Planning

**3 Credits** 

The course discusses concepts and definitions of school management. The managerial aspects of a school administrator; the need and role of the administration in a school society, various theories of administration and the administrative structures applicable to each of the theories is discussed. Administrative styles and school climate; the structure of the Ministry of Education right from the Minister's office down to a principal; The rights, benefits and roles of students, teachers and parents in the school society; It also explains process of planning educational programs and systems; The role and functions of the education strategies. Major approaches to educational planning, planning techniques and models, planning teaching requirements and supply; School size and location; Evaluating educational outcome.

#### EDFO 501 Historical and Philosophical 3 Credits Foundations of Education

This course discusses the historical and philosophical foundations of education. The historical aspect narrates the way education has been practiced throughout the known past to the present. It narrates the Biblical accounts of education including education in Eden, education of the Patriarchs, the School in the Wilderness, the School of Prophets, and the School of Jesus Christ and His disciples. It continues with the ancient secular historical accounts such as African indigenous education, education in Egypt, education in Mesopotamia, Greek education, Roman education, Early Christian education; education of the period of renaissance to the age of humanism, education of missionaries in Africa; post-colonial education in Kenya, Tanzania and Uganda; The philosophical aspect will give the meaning, sources, and branches of philosophy; general foundations of the Catholic and Protestant philosophies of education will be discussed; A detailed account of the Adventist Philosophy of education as explained in the Bible and the writings of Ellen G. White; It further discusses the philosophical understanding of education as explained by world philosophers including Socrates, Plato, Aristotle, St. Augustine, Immanuel Kant, William James, John Dewey, John Locke, Thomas Aquinas, John Amos Comenius, Ignatius Lovola, Jean J. Rousseau, Rene Descartes, Jean Paul Sartre, Fredrick W. Nietzesche, Karl Marx, Julius Nyerere, Kwame Nkrumah, Robert Mugabe and other in the light of such world views as philosophical thoughts including idealism, realism, naturalism, pragmatism, existentialism, Ujamaa, and the indigenous African thoughts.

#### EDPS 501 Psychology of Human 3 Credits Development and Learning

This course examines the physical and social changes of human growth including the prenatal period, infancy, babyhood, early childhood, late childhood, puberty, adolescence, and early adulthood. Discussion centers on each developmental stage, its goals, aspects factors influencing growth and development; self, parental, and cultural attitudes towards growth and developmental changes; Developmental tasks, a survey of the theories of social and cognitive development of a child including Erickson's psychosocial development theory, Freud's psychosexual development theory, and Kholberg's moral development theory; middle and old age; It explains process of teaching and learning based on the developmental stages; Methods employed in educational psychology, individual differences, nature and types of learning, theories of learning (association theories, field theories, cognitive, modeling) motivation and learning, transfer of learning, efficient learning(minimizing forgetting and maximizing transfer), learning of attitude, value and skills; handling children with disabilities.

#### EDST 503 Statistics Applied to Education 3 Credits and Psychology

Statistics and statistical methods, the development of statistics, descriptive and inferential statistics, purpose of studying statistics, basic steps in statistical analysis, collection and presentation of data, measures of location, measures of variability or dispersion, moments, measures of skewedness and kurtosis, probability theory, probability distribution, sampling estimation procedures, hypotheses testing, correlation and regression analysis, analysis of variance.

#### EDTE 515 Principles and Methods of 3 Credits Teaching

This course focuses on effective teaching. It also includes an examination of student involvement in the classroom and application of the principles of teaching. Discussion includes the concept of a teacher, teaching and teaching effectiveness, planning and preparations to teach which includes general principles of scheme of work and lesson planning (detailed, semi-detailed and brief lesson plans), classroom management and other professional responsibilities. The course also highlights on different models of teaching and general methods of teaching, such as inductive and deductive methods, cooperative learning, role playing, jurisprudential inquiry, scientific inquiry, assignments, presentations, non-directive teaching, mastery and program instruction, direct instruction and simulation.

#### EDTE 545 Tests, Measurement and 3 Credits Evaluation

This course enables students to construct teaching objectives under cognitive, affective and psychomotor domains, and prepare essay and objective (multiple choice, matching type, true and false, and structured or simple recall) type tests that are meant to measure the attainment of the instructional objectives. The concepts of reliability, validity, and simple item analysis of the teacher made tests; interpreting data from standardized tests, test administration, grading and reporting are discussed. Need for a marking scheme. Special attention is focused on grading systems using such measures as the mean, mode, median, standard deviation and their interpretations. Grading using the absolute norms, normal curve (Five eight, nine and eleven-point scales of passing), percentile rank, Stanine, T-Score, and Z-Score are also emphasized.

#### EDTE 547 Educational Research 3 Credits Methodology

This course introduces students to the needs and functions of research in education. Emphasis is placed on practical application of basic research techniques and designs. The development of research problem, objectives, hypothesis, significance, limitations and delimitations, review of literature, theoretical and conceptual framework, various methods of data collection, descriptive and inferential data analysis and their interpretation. The following terms shall be emphasized: variables, sampling, research validity, research reliability, degree of freedom, significance and non-significance of research findings. The use of computer in analyzing research findings may be highlighted.

#### EDTE 548 Educational Communication 3 Credits and Technology

This course examines technology applied to teaching. It presents the subject matter in the light of instructional technology (IT) as the theory and practice of design (instructional systems design, message design, instructional strategies), development (print technologies, audio-visual technologies, computer based technologies), utilization (media utilization, diffusion and innovation, implementation and institutionalization), management (project management, resources management, delivery system management, information management) and evaluation (problem analysis, criterion-references, measurement, formative evaluation) of processes and resources for learning.

#### EDTM 560 History Teaching Methods

3 Credits

This course deals with selected methods and instructional aids used in teaching history in secondary schools. Students will be taught how to develop scheme of work and lesson plans that incorporate creative methods of teaching, addressing the cognitive, affective, and psychomotor domains of teaching history. Some of the methods and techniques to be discussed will include inductive and deductive methods, lecture, discussion, group discussion, question and answer, study groups, panel discussions, brainstorming, role playing, simulation, project and assignment. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 561 Religious Education Teaching 3 Credits Methods

This course deals with selected methods and instructional aids used in teaching religious education in secondary schools. Students will be taught how to develop schemes of work and lesson plans that incorporate creative methods of teaching religion addressing the cognitive, affective, and psychomotor domains of religious instruction. Methods to be discussed will include inductive and deductive teaching, lecture, discussion, group discussion, question and answer, study groups, panel, role playing, project, assignment, expository, topical and life application. The course stresses the relevance of teaching religious education as a subject in upholding and instilling moral and social values in modern society. Prerequisites: EDPS 501, EDTE 515, EDTE 545, and EDTE 548.

#### EDTM 562 Geography Teaching Methods 3 Credits

This course deals with selected methods and instructional media materials used in teaching geography as a subject. Students will be taught how to develop schemes of work and lesson plans that incorporate creative methods of teaching geography addressing the cognitive, affective, and psychomotor domains of instruction. Methods discussed include inductive and deductive teaching, lecture, discussion, group discussion, question and answer, study groups, field work, demonstration, and assignment. The use of maps, field trips, photographs, and map reading are highly emphasized. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 563 Biology Teaching Methods 3 Credits

The meaning and goals of science education; the main viewpoints of science; the static and the dynamic view of science and their influence in science teaching; methods and approaches of biology teaching at secondary school level; a process based approach to biology teaching; an examination of the science process skills with special reference to skills of observation, recording, classifying, synthesizing, evaluation, interpretation etc.; critical view of biology recent developments in the discipline and the welfare of mankind: historical development of the biology syllabus in Kenya; critical analysis of different biology syllabi used in secondary schools; planning for biology teaching the syllabus, schemes of work, lesson planning, lesson notes and record of work covered; Teaching strategies class experiments, demonstration field trips and biology projects; exemplified project work in biology; resources and facilities for teaching biology; botanical techniques and resource building for biology teaching; laboratory design and management; assessment and evaluation in biology; professional growth after college; membership in subject panels, biology teacher associations, biology journals are topics included in this course. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 564 Chemistry Teaching Methods 3 Credits

The meaning of science education; science as a dynamic process; scientific methods; (processes) and their applications in chemistry teaching; strategies of teaching chemistry; project work in chemistry; fabrication and improvisation of simple chemistry teaching materials; laboratory design, organization and materials management; health and safety in the chemistry laboratory; preparation of solutions; secondary school syllabus and relevant reading materials, schemes of work and lesson planning in chemistry; the role of chemistry in society; qualities of a good chemistry teacher; assessment in chemistry; Conducting KCSE chemistry experiments are topics to be covered. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 565 Physics Teaching Methods

**3 Credits** 

This course discusses the meaning of science education; science as a dynamic process, scientific methods, brief history of physics; investigative techniques in physics Different types of tests, statistical analysis of tests, practical tests; practical testing; physics teaching in secondary schools; critical analysis of different physics syllabi used in secondary schools, scheme of work, lesson planning; teaching strategies class experiments, demonstration, projects, field trips; assessments in physics writing examinations, different types of tests, practical assessments in physics, project assessments with emphasis on investigative and problem solving approach, laboratory facilities and teaching materials laboratory equipment procurement and storage, laboratory design and safety and management, appropriate physics text books. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.



This course is an introduction to mathematics education philosophy and foundations of mathematics; general goals and objectives of mathematics; the 8-4-4 secondary school mathematics curriculum and syllabus; syllabus, scheme of work and lesson plans in mathematics; methods and techniques of teaching mathematics lessons; test preparations, administration and scoring; use of test results; learning and instructional theories in teaching mathematics lessons; models for teaching and learning the objects of mathematics; teaching aids, constructing a valid and reliable mathematics examination and the marking scheme, teaching practice; strategy of teaching mathematics, project work in mathematics. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 567 Business Education Teaching 3 Credits Methods

The course deals with various methods and strategies of teaching business studies, such accounts, bookkeeping, office management, typing, computer, commerce, economics, and short hand. Students will be taught how to develop schemes of work and lesson plans that demonstrate creative methods of teaching business studies addressing the cognitive, affective, and psychomotor domains of instruction. Methods to be discussed will include inductive and deductive teaching, demonstration, lecture, discussion, drill, assignments, small study groups, demonstration, project, and others. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 568 Technology Teaching Methods 3 Credits

The course deals with various methods and strategies of teaching practical arts such as woodwork, construction, mechanics, electronics and others. Students will be taught how to develop schemes of work and lesson plans that demonstrate creative methods of teaching technological knowledge and practice addressing the cognitive, affective, and psychomotor domains of instruction. Methods to be discussed will include demonstration, lecture, discussion, drill, assignments, small study groups, project, and others. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 569 Agriculture Teaching Methods 3 Credits

This course deals with the teaching of agriculture at the secondary school level. Students will be trained in the preparations of teaching objectives in agriculture in all the three instructional domains; cognitive, affective and psychomotor. Students will be trained to plan and implement lessons and scheme of work based on the subject matter taught at the Kenyan secondary school level. Teaching methods applicable to the teaching of agriculture including experimentation, lecture, discussion, drill, assignments, demonstration, small study groups, field trips, field work, project and others are discussed. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 570 English Language Teaching 3 Credits Methods

This course deals with the development of language skills necessary for the teaching of the English language. The emphasis is on teachers-in-training developing a repertoire of strategies that enhance the learning of English as a second

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language. Students are expected to learn how to develop schemes of work and lesson plans based on the secondary school syllabus. Teaching methods applicable to the teaching of the English language such as role playing, simulation, lecture, discussion, recitation, drill, expository, story-telling, assignments, small study groups and others are discussed. Students are also involved in micro-teaching to sharpen their delivery skills. Cognizance is made of the fact that English language and literature are integrated in the Kenya Secondary School System. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 571 English Literature Teaching 3 Credits Methods

This course deals with the development of skills necessary for the teaching of literature in English. The teach trainees are expected to acquire the skills to guide their learners in appropriating literature as the creative use of language. Methods of presenting both oral and written literature are addressed. Students are expected to learn how to develop schemes of work and lesson plans based on the secondary school syllabus. Trainees are exposed to the different methods of guiding their learners in critically analyzing literary works. Cognizance is made of the fact that literature and language are integrated in the Kenya Secondary School system. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 572 Kiswahili Language Teaching 3 Credits Methods

This course deals with the development skills necessary for the teaching of Kiswahili language. The emphasis is on teachersin-training developing a repertoire of strategies that enhance a variety of learning in their students. Students develop schemes of work and lesson plans based on the secondary school syllabus with specific emphasis on Kiswahili language and literature. Teaching methods applicable to the teaching of language and literature such as role play, simulation, lecture, discussion recitation, drill, expository, story-telling, assignments, small study groups and others are discussed. Cognizance is made of the fact that literature and language in Kiswahili are integrated in Kenya secondary school system. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 574 French Teaching Methods 3 Credits

This course deals with the development of language skills necessary for the teaching of French as a second language. Emphasis is laid on teachers-in-training developing a repertoire of strategies that enhance a variety of learning methods in their students. Students develop schemes of work and lesson plans based on the secondary school syllabus with specific emphasis on French. Teaching methods applicable to the teaching of French language such as role playing, simulation, lecture, discussion, recitation, drill, expository, story-telling, assignments, small study groups and others are discussed. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 575 Home Science Teaching Methods 3 Credits

This course deals with the teaching of home science at the secondary school level. Various methods and strategies are used in teaching aspects of food and nutrition, life and child development, clothing construction, livelihood and consumer

science. Students will be trained in the preparations of teaching objectives in Home Science in all three instructional domains; cognitive, affective and psychomotor. Students will be trained to plan and implement lessons and scheme of work based on the Kenyan Secondary School level syllabus. Teaching methods applicable to the teaching of home science including experimentation, lecture, project, discussion, drill, demonstration, assignments, small study groups, project, field work and others are discussed. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTM 578 Special Methods in Teaching 3 Credits Computer Science

The course deals with various methods and strategies of teaching computer knowledge to pupils and students in a school setting. It covers practical and theoretical approaches to imparting knowledge on the hard and software aspects of the computer and its practical applications in the day-to-day life. Students will be taught how to develop schemes of work and lesson plans that demonstrate creative methods of teaching practical computer knowledge addressing the cognitive, affective, and psychomotor domains of instruction. Methods to be discussed will include demonstration, lecture, discussion, drill, assignments, small study groups, project, and others. Prerequisites: EDPS 501, EDTE 515, EDTE 545 and EDTE 548.

#### EDTE 590 Teaching Practice

#### **4 Credits**

This course gives the candidate for the post Graduate Diploma in Education an actual experience in the classroom teaching and school environment in a secondary school for a period of 12 to 13 weeks. The practicing teacher prepares, teaches and evaluates the work of students under the supervision of a cooperating teacher, and the lecturers from the UEAB School of Education, Humanities and Social Sciences. The candidate also gets an exposure to the aspect of actual school administration in the school environment by being involved in all activities of the school in a particular school term of study. Prerequisites: EDPS 501, EDTE 515, EDTE 545, EDTE 548 and two course from EDTM 560 to EDTM 578.

#### EDUC 531 Curriculum Planning and 3 Credits Development

This course is an introductory study of principles of curriculum and instruction. Topics to be discussed are about the patterns of curriculum organization, evaluation, implementation, and the relationship of educational objectives to the educational plans. Strategies applied in the process of designing a new curriculum and improving the already existing one. The role of the Kenya Institute of Education, and other agencies in curriculum development.



## **DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES**

#### FACULTY

Angwenyi, E., MSA., PhD in progress (Acting Head of Department) Amba, P., BLA. Amenya, H, PhD. Baongoli, M, MA. Barno, H, MPhil., PhD in progress Machogu, O., MA. Mahlon, J., MA. (Study Leave) Malayi, A., MPhil., PhD in progress Mambo, M, MA. Metto J., MA. Mooka, E, MA. Musema, L., MA. Mutunga, E., BA. Mwita, M. PhD. Nyagwencha, P., MEd. Ochuodho S., MA., PhD in progress Ondari, H, MPhil. Onyango N., DMin. Oyiengo, J, MA. Too, S, MPhil. Wanderi, J, MA. Wilfred, O., MA

#### **PHILOSOPHY**

The Department of Humanities and Social Sciences holds that God is the Creator and Sustainer of the universe and life and indeed the source of knowledge. The entrance of sin caused man's alienation from God; therefore the knowledge in Humanities and Social Sciences, based on Christian Education through the process of integration of faith and learning, is to restore man's relationship with God.

#### **MISSION**

To provide and advance a wholistic quality Christian education, which develops men and women to be earnest seekers of truth and equipped with appropriate knowledge, skills and attitudes in Humanities and Social Sciences for the service of God and Humanity.

#### VISION

To be a center of excellence in higher education and research producing experts in Humanities and Social Sciences who are equipped with moral virtues.

#### **DEGREES OFFERED**

- 1. Bachelor of Arts in Counseling Psychology
- 2. Bachelor of Arts in Development Studies
- 3. Bachelor of Arts in English Language
- 4. Bachelor of Arts in French
- 5. Bachelor of Arts in History
- 6. Bachelor of Arts in Kiswahili
- 7. Bachelor of Arts in Journalism and Mass Communication with options in
  - a. Electronic Media
  - b. Print Media
  - c. Public Relations and Advertising

- 8. Bachelor of Arts in Music Performance
- 9. Bachelor of Arts/Science in Geography
- 10. Bachelor of Music in Music Education

#### **MINORS OFFERED**

- 1. Minor in Counseling Psychology
- 2. Minor in Development Studies
- 3. Minor in Electronic Media
- 4. Minor in English Language/Linguistics
- 5. Minor in Environmental Studies
- 6. Minor in French
- 7. Minor in Geographic Information Systems (GIS)
- 8. Minor in Geography
- 9. Minor in Health Psychology
- 10. Minor in History
- 11. Minor in Kiswahili
- 12. Minor in Literature
- 13. Minor in Music
- 14. Minor in Political Science
- 15. Minor in Print Media
- 16. Minor in Psychology
- 17. Minor in Public Relations and Advertising
- 18. Minor in Social Work

#### **EXPECTED LEARNING OUTCOMES**

#### **COUNSELING PSYCHOLOGY**

By the end of the program the students should be able to:

- Define terminologies applied in psychology including psychology, counseling, guidance, growth, development, adjustment, intelligence, testing, measurement, evaluation, psychometrics, and psychoanalysis;
- 2. Identify the branches of psychology as an area of study
- 3. Explain the history of the development of psychology and counseling as academic areas of study;
- Discuss concepts and major theories of human behavior, growth, personality and learning;
- 5. Identity major theories of counseling an psychotherapy;
- 6. Use appropriate counseling techniques in the process of helping clients resolve problem situations;
- 7. Carry out group an individual counseling on social, educational, economic an personal concerns;
- Organize counseling sessions on drug abuse (dependency), vocational (career) counseling, adolescent counseling, academic counseling, gerontology, crisis intervention an cross-cultural issues;
- 9. Establish counseling relationships (rapport) between counselors and clients;
- 10. Relate the influence of genetic and environmental factors on human behavior;
- Demonstrate qualities of an effective psychologist counselor such as honesty, punctuality, respect, confidentiality hard work, self-control and truthfulness;
- 12. Practice professional ethics for psychologist counselors;
- Demonstrate an application of counseling in a variety of settings such as schools, hospitals, rehabilitation centers, counseling centers, VCT centers, churches, an prisons;
- 14. Analyze client problem situations by using appropriate testing (psychological) instruments;
- 15. Apply a Christian approach to counseling;

- 16. Carry out research aimed at improving counseling services;
- 17. Organize, administer and manage counseling services;
- Pursue graduate a post-graduate programs to improve their counseling skills.

#### **DEVELOPMENT STUDIES**

By the end of the program, the students should be able to:

- Develop and promote mental and intellectual capacity to explain and justify the human-environment relationships, and demonstrate this through Christian life practices for community and society's wellbeing and progress.
- 2. Build capacity and inculcate appropriate attitude for adequate and efficient design, implementation and management of development projects in culturally diverse environments within the framework of partnership between government, non-governmental agencies and citizenry.
- 3. Prepare for postgraduate studies and advanced research in development studies.
- 4. Impart the principles and practice of job creation and productivity enhancement.

#### **ENGLISH**

By the end of the degree program in English language and literature, the student should be able to:

- 1. Define such terms as language, literature, poetry, prose, essay and linguistics;
- Explain the Biblical meaning, origins and functions of language;
- 3. Explain the historical development of the English language and literary writing in England, America, Australia and East Africa.
- 4. Describe the use of a language as an instrument of thought expression and communication;
- 5. Analyze information communicated through verbal expressions and in writing;
- 6. Identify parts of speech in sentence structures;
- 7. Identify grammatical words, lexical words, phonological words, semantic words and the process of word formation;
- 8. Critique literary writing of African, American and European authors in literature;
- 9. Apply theories of literature and stylistics to the reading literary texts;
- 10. Write compositions using common and uncommon expressions in English language;
- Submit a research projects with such topics as the introduction, review of literature, theoretical frame work, presentation of data, interpretation of data, summary, conclusion and recommendations;
- Demonstrate in writing a mastery of English grammar through essays, poetry and news reporting;
- 13. Deliver a thirty minutes speech in English language.
- 14. Pursue graduate studies in linguistics or literature.

#### FRENCH

By the end of the degree program in French, the student should be able to:

- 1. Read and write a letter, essay, short speech and poem in French;
- Explain the Biblical meaning, origins and functions of language;
- Explain the fundamentals of French grammar, conversation, comprehension and conversational skills;

- Use French International Phonetic Alphabet by giving out correct pronunciations, dictations, reading loud, listening, role play, dialogues and expositions;
- Discuss phonological structure, orthography, grammar, and vocabulary;
- 6. Explain the origins and spread of French in Europe, the Americas, Africa and Asia;
- Identify principles and concepts of areas and branches of contemporary French language;
- Analyze and critique French literary work, including, style and stylistic, schools of styles, theories and approaches;
- 9. Identify and use French semantic and lexicon;
- 10. Read and interpret French literature written in Africa, Europe and the Americas;
- Demonstrate in writing and speech specialized in technical language related to hotel, tourism, telephone calls, fax messages, welcoming guests, dishes and excursion as expressed in French language and culture;
- 12. Carry out a research or project in French language;
- 13. Give out at least a thirty minute speech in French;
- 14. Pursue graduate studies in French language.

#### **GEOGRAPHY AND ENVIRONMENTAL STUDIES**

- By the end of the program, the students should be able to:
- Be endowed with critical knowledge on the global view of an organized earth, its resource opportunities and challenges with a view to optimize the management and utility of the opportunities and mitigate the challenges and issues that arise for the good of humankind.
- Impart geographical, environmental and Development Studies knowledge and skill in interpreting spatial phenomena in order to enhance spiritual development of and reinforce the students' faith in God as the creator, His wonderful creation and human stewardship of the world.
- 3. Develop ability to locate and appraise the availability, quality and quantity and use of natural resources in the environment and to provide a sound explanation for their rational utilization, management and sustainability.
- 4. Develop ability to compare and contrast physical and human characteristics of the world in order to appreciate the nature and interdependence of the world peoples, their social organizations, economic activities and their impact on the environment.

#### **HISTORY**

By the end of the program, the students should be able to:

- 1. Appreciate the value of historical knowledge, historical thought, historiography and trends in historical development.
- Have basic intellectual tools to help them think critically and creatively about basic historical questions and contemporary issues.

Prepare for post-graduate studies and advanced research in the field of history and in other social sciences.

#### **KISWAHILI**

By the end of the degree program in Kiswahili language and literature, the student should be able to:

- Define such words as Kiswahili, Swahili, Mswahili, Lungha, and other terminologies associated with Kiswahili as a language;
- Explain the historical backgrounds of Kiswahili language and its significance in the nations of Africa and Eastern Europe;

- - 3. Explain the Biblical meaning, origins and functions of language;
  - Discuss historical development of Kiswahili language in Tanzania, Kenya, Uganda and Congo before and after World II;
  - 5. Read, write and translate texts from English to Kiswahili and from Kiswahili to English language;
  - Explain the application of phonetic science to the process of acquiring and transmitting proper pronunciation of Kiswahili words as a Bantu language;
  - 7. Examine the theory, practice and techniques of translating and interpreting literary texts from Kiswahili to English and from English to Kiswahili;
  - Interpret Kiswahili syntax theories including: traditional grammar, structuralism, transformational generative grammar, structural grammar, dependency grammar, government and binding, systemic and stratification grammar;
  - Analyze and interpret traditional short stories, modern short stories in newspapers, and specific short stories by selected authors;
  - Examine syntax structure of Kiswahili sentences by exploring words, groups, clauses, phrases, and word order;
  - Discuss theories and approaches of various scholars on the meaning and function of Kiswahili language and literature;
  - 12. Demonstrate Kiswahili oral mode of transmission of knowledge and culture by examining its genres.
  - Read and critique literary writings of at least five major authors;
  - 14. Carry out a research or project in Kiswahili language;
  - 15. Give out at least a thirty minute speech in Kiswahili;
  - 16. Pursue graduate studies in Kiswahili.

#### **JOURNALISM AND MASS COMMUNICATION**

By the end of the degree program in Journalism and Mass Communication, the student should be able to:

- 1. Give the meaning, functions and types of communication, journalism, and mass communication;
- Outline media tools as used in the media ministries in the Seventh-day Adventist Church focusing on the print and electronic media.
- Analyze the relationship between mass media, culture and society;
- Examine the important legal and ethical issues that affect professional journalists in electronic media, print media, public relations and advertising by integrating ethical values to their messages as they share information with their respective audiences;
- 5. Gather information using different tools of modern technology, as well as develop and deliver messages;
- Work in radio or television broadcasting, print media, public relations and advertising;
- Apply basic numerical and statistical concepts in mass media research;
- Conduct research and evaluate information by methods appropriate to the communications professions in which they work by using appropriate research methods to answer relevant questions in mass communication
- 9. Pursue postgraduate studies in journalism and mass communication.
- 10.Teach journalism and mass communication at middle level media training colleges.

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#### **MUSIC**

By the end of the degree program in music, the learner should be able to:

- 1. Expound concepts that constitute music which include elements and structure of musical composition.
- Sing from staff notations using different systems of solemnization.
- Identify, analyze and compose music with the principles of voice leading and part writing with various harmonic concept and syntax.
- 4. Transcribe, compose and arrange songs fitting various ages and groups.
- 5. Identify and classify music to the different musical periods, composers, and genre based on its characteristics.
- 6. Carry out structural and comparative analysis of different genre and form of music from different musical periods.
- 7. Explain the principles and concepts of music for worship founded on the Biblical principles and Spirit of Prophecy.
- 8. Give the role of music in personal life, school programs, public evangelism, church service, and family worship.
- 9. Differentiate and provide the appropriate music for church services and various community functions.
- 10. Select materials relevant to worship services
- 11. Lead a church, school or community choir.
- Accompany church congregation with piano and other musical instruments.
- 13. Create materials for worship from African/local music heritage by critical contextualization methods.
- 14. Facilitate in training music leaders, pianists/ instrumentalist and church choristers.
- Perform with at least two applied performance skill in concentration and minor area for concert purpose and worship service.
- Teach in concentration area of the applied performance skill with wide range of knowledge in literature, repertoire and materials.
- 17. Play music using different indigenous instruments.
- 18. Collect African music and use it for teaching materials.
- Present seminar in music which includes areas of church music, musicology, history and literature, performance practice and music education.
- 20. Carry out a research on any one aspect of music.
- 21. Organize and participate in music programs
- 22. Pursue further studies in music.

#### **CAREER OPPORTUNITIES**

#### **Counseling Psychology**

Counseling, as a profession, prepares the student for possibilities in social services, employment agencies, industry, hospitals, educational institutions, clinics rehabilitation centers, private practice, NGOs, public and international organizations, business organizations, international organizations, church organizations, etc.

#### History, Geography, and Development Studies

Courses are designed to provide men and women with knowledge essential in various employments or careers. History prepares students for careers in government service, positions with local and national archives, museums, research, law, print and electronic media journalism, private and public sectors, NGOs, politics, and creative writing and secondary schools teaching among other careers. Geography and Environmental Studies prepare students for careers in physical and land use planning, demography, meteorology, climatology, environmental and resource management, the military, Civil Service, NGOs, foreign missions, GIS as well as teaching in secondary etc. Development Studies Program prepares students to be facilitators of development projects besides serving as experts in the various aspects of the development process.

#### Languages, Journalism and Mass Communication

Graduates will be able to pursue careers in the following fields: teaching (English, French, Kiswahili, literature, linguistics) translation, interpretation, writing, editing (copy-editing, design editing, typesetting, proofreading, revising), communication (TV anchoring, TV reporting, radio reporting, radio announcing, TV announcing, news reading, anchoring, freelance journalism, freelance correspondence), law, publishing (book-publishing, newspaper-publishing, magazine-publishing, electronicpublishina. desktop-publishing...), film industry, acting. playwriting, language consultancy, linguistics, academics, lexicography, researching, reporting, public relations specialist, secretariat (administrative secretary, diplomatic secretary, bilingual secretary, private assistant...), marketing, advertising, international relations, diplomacy, hotel industry, tourism, research etc.

#### Music

A graduate in music and/or music education has a wide variety of career opportunities. There are opportunities for careers such as music teachers in schools or teacher training colleges; private tutor; composers; conductors; music director; musician; producer; church musicians; singer or instrumentalist in an orchestra or band.

#### **ENTRANCE REQUIREMENTS**

#### DIRECT ENTRY

#### **Development Studies or Counseling Psychology**

Admission into the Development Studies program and the Counseling Psychology program require that a candidate meets the basic requirements of any of the degree program offered at UEAB

## English, Kiswahili, French, or Journalism and Mass Communication

In addition to meeting University entrance requirements, a grade of C+ in English, Kiswahili, and/or French respectively in KCSE or its equivalent is required. Note: The BA in Journalism and Mass Communication is pending approval by the Commission for University Education. No applications for BA in Journalism and Mass Communication will be accepted until the program has been fully approved by the Commission for University Education

#### **Geography or Environmental Studies**

Students wishing to take Geography and Environmental Studies are expected to have passed Geography, Math and/or other science subjects at their KCSE levels. Otherwise, they are advised to take remedial Mathematics courses, such as MATH 107.

#### History

Students wishing to pursue studies leading to a Bachelors' degree in History must have a minimum grade of a C+ or better in respective subjects at the KCSE, or its equivalent.

#### Music

Students who wish to major in music must have a departmental interview, placement examination, and audition in order to evaluate their qualification, and potential. Students who have successfully completed the music minor requirements may qualify for the award of the Bachelor of Arts in Music Performance or Bachelor of Music in Music Education degree by completing the rest of the requirements for a full degree program shown in this bulletin. Prospective music students should possess musicality, primary and secondary performing skills, and a knowledge of elementary music theory and should give evidence of previous serious music study. A pass in music at secondary school certificate level is an added advantage.

#### INTERDEPARTMENTAL TRANSFER

#### **Counseling Psychology**

Those transferring from other departments to the Counseling Psychology program are required to have a minimum of C plain in PSYC 101 (Introduction to Psychology) and SOCI 121 (Principles of Sociology). Students who join the counseling program after doing PSYC 101 will only need to do PSYC 111 in addition. (PSYC 101 to take the place of PSYC 110.)

#### English, Kiswahili, French, or Journalism and Mass Communication

Students transferring from another department into English, Kiswahili, French or Journalism and Mass Communication must have a grade of C+ in English, Kiswahili, and/or French respectively in KCSE or its equivalent.

#### Music

A student with no prior musical training may minor in music. However, if the student shows excellent growth and potential he/she may be allowed to change to a major by completing the process of majoring in music.

#### **GRADUATION REQUIREMENTS**

#### English, French, Kiswahili or Journalism and Mass Communication

- 1. A minimum cumulative GPA of 2.00
- 2. A minimum overall GPA of 2.25 is required for a major in English, French and Kiswahili.
- 3. A minimum GPA of 2.00 for a minor
- 4. Those majoring in English language, Kiswahili, or French must take a minor in any of the given options.
  - a. An English Language and Literature major can take a minor in Journalism and Mass communication
  - b. A French major may take a minor of at least 25 credit hours in the languages or any other relevant area of their choice.
  - c. A Journalism and Mass Communication major may take a minor in Kiswahili, French, or English Language and Literature.



#### History, Geography, Developmental Studies or Counseling Psychology

- 1. An overall, cumulative GPA of 2.00 or better.
- 2. A GPA of 2.25 is required for the major area.
- 3. A minor chosen in consultation with the major advisor or the Department Chair.

#### BA Music and BMus.Mus.Ed

- 1. An overall cumulative GPA of 2.50.
- A GPA of 2.67 is required for the concentration and the core. A minimum grade of B- for each course in the concentration and the core is required.
- A minimum of 136 credits for Bachelor of Arts in Music Performance, and a minimum of 142 credits for Bachelor of Music in Music Education.
- A pass in grade five of both Music Theory and one's major instrument (either voice or piano) in the Associated Board of Royal Music Schools (ABRSM) examinations.

# **Course Listing**

## BACHELOR OF ARTS IN COUNSELING PSYCHOLOGY

#### SUMMARY

General Requirement Courses	39
Core courses	55
Electives	6
Cognates	13
Minor	30
Total	143 Credits

Counseling Psychology majors should not choose PSYCH 101 Introduction to Psychology from the Social Sciences section as the contents of this course are covered in PSYC 110 General Psychology I and PSYC 111 General Psychology II.

GENERAL	EDUCATION REQUIREMENTS 39 Credi	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2

INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
<b>PHYS 100</b>	Concepts of Physical Sciences	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

#### Any one of the following

HIST 111	Concepts of World Civilization	2
HIST 119	Issues in Development Studies	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

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AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
WOOD 100	Woodwork	1

CORE COURSES 54 Credits		ts
EDPC 122	Foundation of Counseling	3
EDPC 126	HIV/AIDS Counseling	2
EDPC 150	Techniques of Counseling	3
EDPC 262	Abnormal Psychology	2
EDPC 270	Ethics in Counseling	2
EDPC 275	Christianity and Counseling	3
EDPC 295	Premarital Counseling	3
EDPC 374	Crisis Counseling	3
EDPC 385	Child and Adolescent Counseling	3
EDPC 386	Group Counseling	2
EDPC 387	Marriage and Family Counseling	3
EDPC 391	Theories of Personality	2
EDPC 393	Concepts of Chemical Dependency	3
EDPC 396	Depression and Stress Management	2
EDPC 397	Current Theories in Counseling and Physiotherapy	3
EDPC 398	Organizational Psychology	2

EDPC 479	Psychological Testing and Assessment	3
EDPC 480	Counseling Research Methods	3
EDPC 484	Cross-Cultural Counseling	2
EDPC 489	Counseling Practicum	2
PSYC 110	General Psychology I	2
PSYC 111	General Psychology II	2

COGNATE COURSES 13 Credits		ts
DEST 100	Concepts and History of Development	2
EDPC 238	Human Growth and Development	3
RELT 426	Writing and Philosophy of E. G White	3
SWCA 356	Child and Spouse Abuse	2
SWHS 473	Human Sexuality	3

ELECTIVE	COURSES 6 Credi	ts
EDPC 119	Principles of Self Esteem	2
EDPC 175	Career Choice	2
EDPC 255	Counseling and Aging	2
EDPC 280	Academic Counseling	2
EDPC 331	Counseling Services Management	2
EDPC 333	Chemical Dependency in Diverse Population	2
EDPC 465	Topics in Counseling	2

## BACHELOR OF ARTS IN DEVELOPMENT STUDIES

#### **SUMMARY**

Total 14	43-144 Credits
Minor Courses	30
Elective Courses	4-5
Cognates	5
Core Courses	67
<b>General Educational Courses</b>	37

Students of Development Studies are exempted from the following General Education Requirements

MGMT 103	Basic Management and Entrepreneur Skills	2
HIST 119	Issues in Development Studies	2

GENERAL	EDUCATION REQUIREMENTS 37 Cred	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
<b>KISW 114</b>	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2

PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles (For Non-Health Science Majors)	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology (Non-science majors)	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physical Sciences	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Any one of the following

HIST 111	Concepts of World Civilization	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

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AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
WOOD 100	Woodwork	1

CORE COL	JRSES 67 Credit	ts
DEST 100	History, Theories and Concepts of	3
	Development	
DEST 101	Politics in and of Development	3
DEST 121	Culture and Development	3
DEST 215	Human Rights	3
DEST 240	Community Leadership and Development	3
DEST 250	Gender Issues in Development	3
DEST 265	Environmental Impact Assessment	3
DEST 280	NGOs: Management and Leadership	3
DEST 307	Research Methods for Development	3
DEST 350	Conflict Management and Resolution	3



DEST 370	Project Planning, Implementation, Monitoring and Evaluation	4
DEST 373	Disaster Preparedness, Mitigation and Management	3
DEST 375	Rural Development	3
DEST 380	Studies in Community Health	3
DEST 390	Principles of Population and Demography	3
DEST 394	Field Attachment	3
DEST 410	Proposal and Grant writing	3
DEST 432	Entrepreneurship, Business Management and Financial Accountability	3
DEST 450	Ethics in Development	3
DEST 457	Studies on Displaced Persons	3
DEST 470	Sustainable Development	3
DEST 485	Independent Study in Development Studies	3

COGNATE COURSES 5 Credit		ts
ECON 201	Principles of Economics	2
GEOG 401	Statistics & Computer-Aided Data Analysis	3
	in Social Sciences	

ELECTIVE	COURSES 6 Credit	ts
DEST 170	Communication in development	2
DEST 260	Co-Operative and other Social Movements in Development	2
DEST 363	Urbanization and Development	2
DEST 386	The Mass Media in Development	2
DEST 392	Development perspectives of Globalization	2
DEST 396	Aid and Development	2
DEST 403	Human Resource Development and Management	3
DEST 405	Developments in the Legal Framework	2
<b>DEST 427</b>	Regional Development Planning	2

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## BACHELOR OF ARTS IN ENGLISH LANGUAGE AND LITERATURE

#### SUMMARY

Total	143 Credits
Minor	30
Electives	3
Core courses	71
General Requirements	39

Students majoring in English Language and Literature take LITE 151 Introduction to Literary Appreciation as a part of their core requirements

GENERAL	EDUCATION REQUIREMENTS 39 Credi	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
0FTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Any one of the following

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1

ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE COL		
ENGL 130	Introduction to the Study of Language	3
ENGL 148	English Grammar and Usage I	3
ENGL 216	Origins and Development of English	3
ENGL 217	Phonetics and Phonology	3
ENGL 218	Morphology and Syntax	3
ENGL 222	Theory, Practice of Translation and Interpretation	3
ENGL 244	Discourse Analysis	3
ENGL 305	Semantics and Pragmatics	3
ENGL 342	Sociolinguistics	3
ENGL 346	English for Specific Purposes	3
ENGL 347	Second Language Acquisition	3
ENGL 435	Editing Skills	3
ENGL 443	Writing for the Media	3
ENGL 465	Principles of Creative Writing	3
ENGL 469	Research Project/Seminar3	
ENGL 480	Language & Communication Attachment	3
LITE 151	Introduction to Literary Appreciation	2
LITE 154	Introduction to Oral Literature	
LITE 159	Themes in East African Literature	3
LITE 165	Stylistics	3
LITE 260	Children's Literature	3
LITE 346	Introduction to Literary Theory and Criticism	3
LITE 348	European Literature	3
LITE 455	Theory, Fieldwork and Research Skills	3

ELECTIVES 3 Credits		ts
COMM 230	News Gathering & Reporting	3
ENGL 114	Introduction to the Description of English	3
ENGL 219	English Grammar and Usage II	3
ENGL 302	Language Policy and issues	3
ENGL 358	Business English	3
ENGL 442	Language and Gender	3
ENGL 445	Historical and Comparative Linguistics	3
ENGL 450	Lexicography and Lexicology	3
ENGL 456	Varieties of English	3
LITE 350	African American Literature	3
LITE 363	The African Novel	3
LITE 364	Women Writers	3
LITE 449	Modern Poetry	3

LITE 450	Theatre Arts	3
LITE 451	Major Author	3
LITE 466	Research/Creative Writing Project	3

## **BACHELOR OF ARTS IN FRENCH**

#### **SUMMARY**

Total	137 Credits
Minor in another area	30
Electives	9
Core Requirements	59
General Education Requirements	39

Students taking the Bachelor of Arts in French are exempted from FREN 103 Beginning French II in the General Education Requirements.

GENERAL	EDUCATION REQUIREMENTS 39 Credi	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Four credits from the following:

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2



## Any one of the following

	<u> </u>	
AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE REQUIREMENTS 59 Credits		
FREN 104	Introduction to French Language	3
FREN 112	Structure of the French Language	3
FREN 130	Oral Expression and Aural Comprehension	3
FREN 131	Written Expression and French Grammar I	3
FREN 140	History and Modern Trends of the French Language	3
FREN 210	Introduction to General Linguistics in French	3
FREN 220	French Phonetics and Phonology	3
FREN 230	Panorama of Francophone Literature	3
FREN 310	French Oral Literature	3
FREN 315	French for General, Academic and	3
	Professional Purposes	
FREN 327	Written Expression and French Grammar II	3
FREN 337	Introduction to French Literature	3
FREN 414	Semantics and Lexicology	3
FREN 415	Socio-Linguistics in French	3
FREN 421	French Morphology and Syntax	3
FREN 435	The French Novel and Philosophical Works	3
FREN 454	Academic Research: Basic Principles and Methods	3
FREN 455	Project Paper	3
FREN 460	Attachment	5

ELECTIVE	S 9 Credi	ts
FREN 211	Introduction to translation	3
FREN 225	Introduction to French Literature and	3
	Literary Analysis	
FREN 241	Culture and Civilization of France	3
FREN 334	Applied Linguistics	3
FREN 335	Caribbean Literature	3
FREN 336	Translation and Interpretation	3
FREN 340	Textual Analysis in French	3
FREN 430	French for the Hotel, Tourism and Travel Industries	3
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FREN 440	French for Management and Administration	3
FREN 445	French Drama	3
FREN 446	Introduction to Francophone African	3
	Literature	
FREN 450	French Poetry	3

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## BACHELOR OF ARTS/SCIENCE IN GEOGRAPHY

## SUMMARY

General Education Requirements	41	
Core Courses	55	
Elective Courses	15	
Minor Courses	30	
Total	141	Credits

GENERAL	EDUCATION REQUIREMENTS 41 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Four credits from the following:

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1

1
1
1
1
1
1
1
1
1

CORE COURSES 55 Credits		
GEOG 100	Introduction to Geography	3
GEOG 102	World Regional Geography	3
GEOG 111	Fundamentals of Physical Geography I	3
GEOG 121	Fundamentals of Human Geography I	3
GEOG 130	Introduction to Cartography, Mapwork and Land Surveying	3
GEOG 211	Fundamentals of Physical Geography II	3
GEOG 221	Fundamentals of Human Geography	3
GEOG 311	Geography of Kenya	3
GEOG 312	Geography of Development	2
GEOG 313	Geography of East Africa	3
GEOG 323	Remote Sensing	3
GEOG 334	The Arid and Semi-Arid Lands	3
GEOG 355	Geographic Information Systems	3
GEOG 401	Statistics and Computer-Aided Data Analysis in Social Sciences	3
GEOG 410	Research Methods in Social Sciences	3
GEOG 430	Meteorology and climatology	3
GEOG 450	Selected Topics in Geography	2
GEOG 480	Independent Study in Geography	3
GEOG 482	Geographical Practicum	3

#### **ELECTIVES**

#### **15 Credits**

Students are free to choose electives from either option A or B but with at least 12 credits from one option and at least 3 from the other.

OPTION A		
GEOG 210	Economic Geography	3
GEOG 224	Urbanization, Planning and Land Survey	2
GEOG 226	The geography of Tourism and Leisure	3
GEOG 314	Geography of Africa	3
GEOG 315	Population Geography	3
GEOG 321	Cultural and Behavioral Geography	3
GEOG 326	Agricultural Geography	3
GEOG 348	Urban Rural Settlement Geography	3
GEOG 400	Geographical Perspectives on Modern Society	3
GEOG 412	Urbanization in Developing Countries	3
GEOG 414	Location Theory and Land Use Analysis	3
GEOG 416	Transport Geography	3
GEOG 455	People, Land and Food	3
GEOG 470	Demography	3

<b>OPTION B</b>		
GEOG 328	Geomorphology	3
GEOG 332	Biogeography	3
GEOG 358	Medical Geography	3
GEOG 411	Geography of Natural Hazards	3
GEOG 415	Soil Geography	3
GEOG 417	Oceanography	3
GEOG 421	Applied Land Use and Potential	3
GEOG 422	Computers Science for Geographers	3
GEOG 425	Geo-Data Processing	3
GEOG 435	Applied Geomorphology	3
GEOG 440	Advanced environmental Remote Sensing	3

## **BACHELOR OF ARTS IN HISTORY**

#### **SUMMARY**

General Education Requirements	41
Core requirements	54
Electives	12
Cognates	6
Minor	30
Total	143 Credits

GENERAL	EDUCATION REQUIREMENTS 41 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Four credits from the following:

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake	1
	Decoration	
W00D 100	Woodwork	1

CORE REQUIREMENTS 54 Credits		
HIST 120	History of Kenya I to 1900	3
HIST 121	History of Kenya II since 1900	3
HIST 130	History of Africa I before 1900	3
HIST 131	History of Africa II since 1900	3
HIST 200	History of USA I	3
HIST 201	History of USA II	3
HIST 225	History of Europe 1789-1919	3
HIST 227	History of Europe 1919-1990	3
HIST 230	History of USSR 1917-1991	3
HIST 305	Fundamentals of Historiography	3
HIST 313	Themes in East African History	3
HIST 333	Economic History of Africa	3
HIST 411	Selected Topics in Modern African History	3
HIST 415	History of Science and Technology	3
HIST 421	Imperialism, Colonialism and Nationalism	3
HIST 445	Historical Research Methods	3
HIST 450	Topics in History of Post-Independent Kenya	3
HIST 490	Independent Study	3

COGNATES 6 Credit		ts
GEOG 102	World Regional Geography	3
GEOG 401	Statistics & Computer-Aided Data Analysis in Social Sciences	3

CORE REQUIREMENTS 54 Credits		ts
HIST 120	History of Kenya I to 1900	3
HIST 121	History of Kenya II since 1900	3
HIST 130	History of Africa I before 1900	3
HIST 131	History of Africa II since 1900	3
HIST 200	History of USA I	3
HIST 201	History of USA II	3
HIST 225	History of Europe 1789-1919	3
HIST 227	History of Europe 1919-1990	3
HIST 230	History of USSR 1917-1991	3
HIST 305	Fundamentals of Historiography	3
HIST 313	Themes in East African History	3
HIST 333	Economic History of Africa	3
HIST 411	Selected Topics in Modern African History	3
HIST 415	History of Science and Technology	3
HIST 421	Imperialism, Colonialism and Nationalism	3
HIST 445	Historical Research Methods	3
HIST 450	Topics in History of Post-Independent Kenya	3
HIST 490	Independent Study	3

ELECTIVES 12 Credits		ts
Note: Choose only one course from HIST 314 to HIST 316.		
ARCH 200	Archaeology of East Africa	3
ARCH 220	Foundations of archaeology	3
ARCH 310	Studies on Origins of Modern Man and Society	3
HIST 217	History of Latin America	3
HIST 314	History of North Africa since 1890 Or	2
HIST 315	History of West Africa since 1800 Or	2
HIST 316	History of Central and Southern Africa	2
HIST 410	Introduction to Environmental History	2
HIST 425	History of Conflict and Diplomacy in Africa from 1960s	3
HIST 450	Topics in History of Post - Independent Kenya	3
HIST 451	Topics in History	2
HIST 455	African Diaspora and Pan-Africanism	3
HIST 475	Intellectual History of Africa	3
<b>RELH 180</b>	History of Adventist Church	2



## **BACHELOR OF ARTS IN KISWAHILI**

#### **SUMMARY**

General Education Requirements	39	
Core Requirements	51	
Electives	9	
Minor	30	
Total	129	Credits

Students taking the Bachelor of Arts in Kiswahili are exempted from KISW 114 Language Use in Kiswahili in the General Education Requirements.

GENERAL	EDUCATION REQUIREMENTS 39 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
0FTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Four credits from the following:

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1

FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE REC	QUIREMENTS 51 Credi	ts
KISW 105	Language Skills in Kiswahili I	3
KISW 110	Introduction to Study of Language	3
KISW 111	Historical Development of Kiswahili	3
<b>KISW 120</b>	Phonetics and Phonology	3
KISW 205	Introduction to the Study of Literature	3
KISW 210	Introduction to Theory and Practice of Translation	3
KISW 225	Morphology and Syntax	3
KISW 265	Language Skills in Kiswahili II	3
KISW 285	Second Language Learning	3
KISW 315	Theories of Literary Criticism	3
KISW 350	Oral Literature in Kiswahili	3
KISW 365	Contemporary Kiswahili Novel & Play	3
KISW 395	Research Methods in Language & Literature	3
KISW 420	Semantics and Pragmatics	3
KISW 422	Textual & Discourse Analysis	3
KISW 425	Kiswahili Poetry	3
KISW 460	Language Policy & Planning	3

ELECTIVES 9 Credits		ts
KISW 240	Theory and Practice of Translation and	3
	Interpretation II	
KISW 270	Kiswahili Short Stories	3
KISW 310	Stylistics in Kiswahili	3
KISW 320	Sociolinguistics in Kiswahili	3
KISW 370	Comparative Literature in Kiswahili	3
KISW 380	Theatre Arts in Kiswahili	3
KISW 415	Editing Skills in Kiswahili	3
KISW 430	Creative Writing in Kiswahili	3
KISW 440	Psycholinguistics in Kiswahili	3
KISW 455	Historical Comparative Linguistics in Kiswahili	3



#### SUMMARY

General Education Requirements	41
Foundation Courses	15
Specialization	49
Minor	30
Electives	4
Total	139 Credits

GENERAL	EDUCATION REQUIREMENTS 41 Credi	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2
Four oro	dits from the following:	

#### Four credits from the following:

132

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake	1
	Decoration	
W00D 100	Woodwork	1

FOUNDATION COURSES 15 Credit		ts
COMM 121	Fundamentals of Journalism	3
COMM 122	Introduction to Mass Communication	3
COMM 126	Media Law and Ethics	3
COMM 128	Mass Media, Culture, and Society	3
COMM 129	Adventist Media Ministries	3

SPECIALIZ	ATION IN ELECTRONIC MEDIA 49 Credits	S
CMMT 411	Sound and Video Production	3
COEM 20	Introduction to Electronic Media	3
COEM 211	Language of Broadcasting	3
COEM 221	Studio Equipment Operations	3
COEM 301	Script Writing for Electronic Media	3
COEM 311	Modern Radio Production	3
COEM 321	Television Production	3
COEM 331	Film Production	3
COEM 341	Editing in Electronic Media	3
COEM 401	Broadcast Programming	3
COEM 421	Broadcast News Production	3
COMM 230	News Gathering and Reporting	3
COMM 240	Writing Skills for the Mass Media	3
COMM 481	Research Methods in Mass Media	1
COMM 482	Research Methods in Mass Media II	2
COMM 490	Internship in Mass Media	3
COPA 343	Advertising in Mass Media	3

ELECTIVES IN ELECTRONIC MEDIA 4 Credit		ts	
COEM 231	Voice and Diction for Broadcasting		2
COEM 271	Citizen Journalism		2
COEM 308	Video Recording and Editing		2
COMM 309	Sports Journalism		2
COMM 360	Investigative Journalism		2
ELCT 100	Basic Electronic Maintenance		1
ELCT 111	Fundamentals of Electronics		4

SPECIALIZ	ATION IN PRINT MEDIA 49 Credit	S
COMM 230	News Gathering and Reporting	3
COMM 240	Writing Skills for the Mass Media	3
COMM 260	Online Journalism	3
COMM 481	Research Methods in Mass Media I	2
COMM 482	Research Methods in Mass Media II	2
COMM 490	Internship in Mass Media	3
COPA 343	Advertising in Mass Media	3
COPM 200	Introduction to the Print Media	3
COPM 210	Language of the Press	3
COPM 220	Graphics Designs and Desktop Publishing	3
COPM 300	Editing Skills for Print Media	3
COPM 310	Photography and Photojournalism	3
COPM 315	School Yearbook Production	3
COPM 320	Feature and Editorial Writing	3
COPM 400	Newspaper and Magazine Production	3
COPM 450	Book Writing and Publishing	3
COPM 460	Literature Evangelism for Print Media	3

ELECTIVES IN PRINT MEDIA 4 Credit		
COMM 309	Sports Journalism	2
COMM 360	Investigative Journalism	2
COPM 330	Article Writing for Print Media	2
COPM 390	Advanced Photography & Photojournalism	2

SPECIALIZ	ATION IN PUBLIC RELATIONS 49 Credi	ts
COMM 240	Writing for the Mass Media	3
COMM 481	Research Methods in Mass Media I	2
COMM 482	Research Methods in Mass Media II	2
COMM 490	Internship in Mass Media	3
COPA 203	Introduction to Public Relations	3
COPA 204	Fundamentals of Advertising	3
COPA 233	Language of Advertising	3
COPA 248	Advertising and Promotion	3
COPA 303	Public Relations Writing	3
COPA 313	Public Relations Campaign	3
COPA 323	Advertising Research	3
COPA 333	Contemporary Advertising	3
COPA 343	Advertising in the Mass Media	3
COPA 353	Advertising Management	3
COPA 403	Public relations and Social Media	3
COPA 413	International Public Relations	3
COPA 423	International Advertising and Promotion	3

# ELECTIVES IN PUBLIC RELATIONS<br/>AND ADVERTISING49 CreditsCOPA 312New Technology in Public Relations2COPA 324Advertising Campaign Strategy2COPA 325Marketing and Public Relations2

	Foreign Language (any foreign language offered at the university)	2
COPA 327	Internet Advertising	2

## **BACHELOR OF ARTS IN MUSIC**

This concentration will lead to a Bachelor of Arts in Music. It is recommended for students who are interested to specialize in a particular applied instrument. This degree also includes liberal arts and sciences.

#### SUMMARY

Total	136 Credits
Electives Courses	6
Core Courses	68
Specialization Courses	23
General Education Requirements	39

Music majors and minors are exempted from GCAS 107 Music Appreciation.

GENERAL	EDUCATION REQUIREMENTS 39 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physics	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

#### Four credits from the following:

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2

PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

### Any one of the following

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

#### **SPECIALIZATION COURSES**

23 Credits

Kindly Note that the BA in Music has two concentrations: Piano or Voice. All music students must take a major and a minor instrument. Students taking Piano as a major instrument are required to take Voice as a minor instrument and students taking Voice as a major instrument must take piano as a minor instrument. A minor instrument comprises of Concentrations I-IV of the said instrument. All music majors are also required to take ABRSM grade VII for their major instrument, and grade V ABRSM examinations for their minor instrument before graduation.

#### Piano Major/Voice Minor

riano major/ voice minor			
MUPF 110	Piano Concentration I	2	
MUPF 111	Piano Concentration II	2	
MUPF 210	Piano Concentration III	2	
MUPF 211	Piano Concentration IV	2	
MUPF 310	Piano Concentration V	2	
MUPF 311	Piano Concentration VI	2	
MUPF 410	Piano Concentration VII	2	
MUPF 411	Piano Recital	1	
MUPF 120	Voice Concentration I	2	
MUPF 121	Voice Concentration II	2	
MUPF 220	Voice Concentration III	2	
MUPF 221	Voice Concentration IV	2	
or			
Voice Maj	or/Piano Minor		
MUPF 120	Voice Concentration I	2	
MUPF 121	Voice Concentration II	2	
MUPF 220	Voice Concentration III	2	
MUPF 221	Voice Concentration IV	2	
MUPF 320	Voice Concentration V	2	
MUPF 321	Voice Concentration VI	2	
MUPF 420	Voice Concentration VII	2	

MUPF 110	Piano Concentration I	2
MUPF 111	Piano Concentration II	2
MUPF 210	Piano Concentration III	2
MUPF 211	Piano Concentration IV	2

CORE COU	RSES 49 Credi	ts
MUCH 244	Church Music	2
MUCH 225	Introduction to Hymnology	2
MUCO 217	Choral Conducting I	2
MUCO 218	Choral Conducting II	2
MUHL 270	Survey of Music History I	3
MUHL 271	Survey of Music History II	3
MUHL 272	Introduction to Ethnomusicology	2
MUHL 370	Survey of Music History III	3
MUHL 315	Piano Literature (Piano Majors)	1
	or	
MUHL 325	Vocal Literature (Voice Majors)	1
MUHL 491	Research Methods in Music	2
MUHL 493	Music Research Project	2
MUPF 114	Applied Music – Brass	1
MUPF 115	Applied Music – Woodwind	1
MUPF 116	Applied Music – Guitar	1
MUPF 117	Applied Music – Strings	1
MUPF 125	Aural Training and Sight Singing I	2
MUPF 126	Aural Training and Sight Singing II	2
MUPF 225	Advanced Sight Singing	2
MUPF 335	University Chorale	2
MUPF 346	Instrumental Ensemble	2
MUTC 237	Introduction to Music Technology	2
MUTH 100	Fundamentals of Music	3
MUTH 101	Music Theory I	3
MUTH 102	Music Theory II	3
MUTH 200	Music Theory III	3
MUTH 201	Music Theory IV	3
MUTH 206	African Music Theory and Practice	2
MUTH 306	Transcription of African Music	3
MUTH 400	Form and Analysis	2
MUTH 401	Introduction to Counterpoint	2
MUTH 402	Composition and Vocal Arranging	2
MUTH 403	Orchestration	2

ELECTIVES 6 C		6 Credit	ts
MUED 103	Introduction to Music Education		2
MUED 203	Music Education Methodology		2
MUHL 315	Piano Literature		1
MUHL 325	Vocal Literature		1
MUED 316	Piano Pedagogy		2
MUED 326	Vocal Pedagogy		2
MUPF 226	Singer's Diction		1
MUPF 314	Art of Accompaniment		2

1

MUPF 421 Voice Recital



## BACHELOR OF MUSIC IN MUSIC EDUCATION

This degree is intended for those who wish to teach professionally in various music teaching setting, both classroom and studio. Applied performance skill is also highlighted to qualify the teacher in performing their selected instrument.

#### SUMMARY

General Education Requirements	30
Specialization Courses	20
Core Courses	76
Cognates	12
Electives Courses	4
Total	142 Credits

Students in the Bachelor of Music in Music Education program are exempted from the following General Education Requirements:

GCAS 107	Music Appreciation	2
MATH 100	Foundations of Math	3
ENVI 227	Environmental Studies	2
AGRI 105	Principles of Agricultural Technology	2
PHYS 100	Concepts of Physical Sciences	2

#### GENERAL EDUCATION REQUIREMENTS 30 Credits

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
<b>KISW 114</b>	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2
Four credits from the following:		

	5	
HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
	HIST 111 HIST 119 PSYC 101	HIST 119 Issues in Development Studies

SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

#### Any one of the following

	5	
AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	

#### SPECIALIZATION COURSES

Kindly Note that students taking BMusMEd take two instruments: Piano and Voice up to level V. They are also required to take Grade V ABRSM examinations for both Piano and Voice before graduation.

20 Credits

135

#### Piano

Pidilu		
MUPF 110	Piano Concentration I	2
MUPF 111	Piano Concentration II	2
MUPF 210	Piano Concentration III	2
MUPF 211	Piano Concentration IV	2
MUPF 310	Piano Concentration V	2
Voice		
MUPF 120	Voice Concentration I	2
MUPF 121	Voice Concentration II	2
MUPF 220	Voice Concentration III	2
MUPF 221	Voice Concentration IV	2
MUPF 320	Voice Concentration V	2

CORE COURSES		76 Credits	
MUCH 225	Introduction to Hymnology		2
MUCH 244	Church Music		2
MUCO 217	Choral Conducting I		2
MUCO 218	Choral Conducting II		2
MUED 103	Introduction to Music Education		2
<b>MUED 203</b>	Music Education Methodology		2
MUED 316	Piano Pedagogy or		2
MUED 326	Vocal Pedagogy		2
<b>MUED 405</b>	Teaching Practice		3
MUHL 270	Survey of Music History I		3
MUHL 271	Survey of Music History II		3
MUHL 272	Introduction to Ethnomusicology		2
MUHL 370	Survey of Music History III		3
MUHL 491	Research Methods in Music		2
MUHL 493	Music Research Project		2
MUPF 125	Aural Training and Sight Singing I		2

MUPF 126	Aural Training and Sight Singing II	2
MUPF 225	Advanced Sight Singing	2
MUPF 114	Applied Music – Brass	1
MUPF 115	Applied Music – Woodwind	1
MUPF 116	Applied Music – Guitar	1
MUPF 117	Applied Music - Strings	1
MUPF 335	University Chorale	2
MUPF 346	Instrumental Ensemble	2
MUTC 237	Introduction to Music Technology	2
MUTH 100	Fundamentals of Music	3
MUTH 101	Music Theory I	3
MUTH 102	Music Theory II	3
MUTH 200	Music Theory III	3
MUTH 201	Music Theory IV	3
MUTH 206	African Music Theory and Practice	2
MUTH 306	Transcription of African Music	3
MUTH 400	Form and Analysis	2
MUTH 401	Introduction to Counterpoint	2
MUTH 402	Composition and Vocal Arranging	2
MUTH 403	Orchestration	2

COGNATES 12 Credit		ts
EDPC 106	Educational Psychology	3
EDTE 210	Curriculum Development	3
EDTE 255	Principles and Methods of Teaching	3
EDTE 326	Education Measurement and Evaluation	3

ELECTIVES	6 4 Credi	ts
MUED 316	Piano Pedagogy or	2
MUED 326	Vocal Pedagogy	2
MUHL 315	Piano Literature	1
MUHL 325	Vocal Literature	1
MUPF 226	Singer's Diction	1
MUPF 311	Piano Concentration VI	2
MUPF 314	Art of Accompaniment	2
MUPF 321	Voice Concentration VI	2
MUPF 410	Piano Concentration VII	2
MUPF 411	Piano Recital	1
MUPF 420	Voice Concentration VII	2
MUPF 421	Voice Recital	1
<b>MUTC 240</b>	Introduction to Video Production	3
MUTC 241	Introduction to Sound Production	3

# **Minors**

### MINOR IN COUNSELING PSYCHOLOGY

#### SUMMARY

General Education Requirements	30
Core Courses	16
Cognate	3
Electives	7
Total	26 Credits

CORE COU	RSES 16 Credi	ts
EDPC 122	Foundations of Counseling	3
EDPC 150	Techniques of Counseling	3
EDPC 262	Abnormal Psychology	2
EDPC 391	Theories of Personality	2
EDPC 397	Current Theories in Counseling and Psychotherapy	3
EDPC 479	Psychological Testing and Assessment	3

COGNATE COURSES		<b>3 Credits</b>	
EDPC 238	Human Growth and Development		3

CORE COURSES 7 Credits		S
EDPC 126	HIV/AIDS Counseling	2
EDPC 270	Ethics in Counseling	2
EDPC 295	Premarital Counseling	3
EDPC 386	Group Counseling	2
EDPC 387	Marriages and Family Counseling	3

## **MINOR IN DEVELOPMENT STUDIES**

#### SUMMARY

Core Courses	28
Elective Course	4-5
Total	32-33 Credits

CORE COU	RSES 28 Credit	S
DEST 100	History, Theories and Concepts of Development	3
DEST 240	Community Leadership and Development	3
DEST 250	Gender Issues in Development	3
DEST 280	NGOs: Management and Leadership	3
DEST 350	Conflict Management and Resolution	3
DEST 370	Project Planning, Implementation, Monitoring and Evaluation	4
DEST 373	Disaster Preparedness, Mitigation and Management	3
DEST 410	Proposal and Grant writing	3
DEST 432	Entrepreneurship, Business Management	
	and Financial Accountability	3



ELECTIVE	COURSES 4-5 Credi	ts
DEST 170	Communication in development	2
DEST 260	Co-Operative and other Social Movements in Development	2
DEST 363	Urbanization and Development	2
DEST 386	The Mass Media in Development	2
DEST 392	Development perspectives of Globalization	2
DEST 396	Aid and Development	2
DEST 403	Human Resource Development and Management	3
DEST 405	Developments in the Legal Framework	2
DEST 427	Regional Development Planning	2

#### MINOR IN ENVIRONMENTAL STUDIES

#### **SUMMARY**

Core Courses	24
Elective Courses	4
Total	28 Credits

<b>CORE COU</b>	RSES 24 Credi	ts
ENVI 110	Introduction to Environmental Science	3
ENVI 113	Fundamentals of Physical Environment	3
ENVI 210	Environment and Development	3
ENVI 310	Environmental Ethics	3
ENVI 336	Hydrology and Water Resources	3
ENVI 356	Environment and Development Policy	3
ENVI 442	Water Resources, Environment and Development	3

ELECTIVES COURSES	4 Credits
4 Credits, excluding credits already studied	in major and/
or minor areas in Geography, at least 3 cr	edits must be
400-level classes).	

ENVI 350	Forum on the Environment	2
ENVI 460	Natural Resources Evaluation,	3
	Management and Development	
ENVI 470	Special Topics in Environment	2
PHEH 360	Liquid Waste Management	2
GEOG 355	Geographical Information Systems	3

#### **MINOR IN FRENCH**

#### **SUMMARY**

Core Courses	27
Electives	3
Total	30 Credits

CORE COU	RSES 27 Credi	ts
FREN 111	The French Language and Grammar	3
FREN 114	French Grammar and Usage	3
FREN 130	Oral Expression and Aural Comprehension	3
FREN 210	Introduction to General Linguistics in French	3

FREN 230	Panorama of Francophone Literature	3
FREN 310	French Oral Literature	3
FREN 330	Culture and Civilization of the French- speaking Community	3
FREN 420	Introduction to Translation and Interpretation	3
FREN 440	French for Management and Administration	3

ELECTIVE	COURSES 3 Credit	ts
FREN 140	History and Modern Trends of the French Language	3
FREN 240	The French African Novel and Short Stories	3
FREN 320	French Semantics and Lexicology	3
FREN 340	Textual Analysis in French	3
FREN 430	French for the Hotel, Tourism and Travel Industries	3

#### MINOR GEOGRAPHIC INFORMATION SYSTEMS

#### **SUMMARY**

Core Courses	26
Elective Courses	6
Total	32 Credits

CORE COL	JRSES 26 Credi	ts
GEOG 130	Intro. to Cartography, Map-work and Land Surveying	3
GEOG 207	Geospatial Programming Fundamentals	3
GEOG 255	Principles of Geographic Information Systems	2
GEOG 276	Database Design	3
GEOG 321	Remote Sensing	3
GEOG 355	Geographical Information Systems	3
GEOG 357	Web-mapping	3
GEOG 401	Statistics & Computer-aided Data Analysis in Social Sciences	3
GEOG 423	Geospatial Modeling and Analysis	3

**ELECTIVE COURSES** 6 Credits (At least 6 Credits, all of them from the same cluster) **CLUSTER A** GEOG 436 Application of GIS in Urban and Rural Land 3 use Planning Application of GIS in Landscape Architecture 3 GEOG 448 **CLUSTER B** GEOG 433 Application of GIS in Telecommunication 3 GEOG 458 Intelligent Transportation Systems 3 **CLUSTER C** GEOG 449 Application of GIS in Disaster Management 3 3 GEOG 451 Application of GIS in Environmental Management Application of GIS in Public Health 3 GEOG 464

GEOG 469	Application of GIS in Climatology	3
CLUSTER D		
GEOG 472	Application of GIS in Agriculture	3
GEOG 485	Application of GIS in Tourism	3
GEOG 493	Application of GIS in Conservation Biology	3
CLUSTER E		
GEOG 467	Application of GIS in Archeology	3
GEOG 486	Application of GIS in Criminal Justice	3
GEOG 499	GIS in Public Administration	3

#### **MINOR IN GEOGRAPHY**

#### SUMMARY

Core Courses	24
Elective Courses	4
Total	28 Credits

CORE COU	RSES 24 Credi	ts
GEOG 111	Fundamentals of Physical Geography I	3
GEOG 121	Fundamentals of Human Geography I	3
GEOG 130	Introduction to Cartography, Mapwork and Land Surveying	3
GEOG 211	Fundamentals of Physical Geography II	3
GEOG 221	Fundamentals of Human Geography II	3
GEOG 313	Geography of East Africa	3
GEOG 401	Statistics & Computer-Aided Data Analysis in Social Sciences	3
GEOG 430	Climatology and Meteorology	3

#### **ELECTIVE COURSES**

4 Credits

4 Credits, excluding credits already studied in major and/ or minor areas in Geography, at least 3 credits must be 400-level classes

#### MINOR IN HEALTH PSYCHOLOGY

#### SUMMARY

Core Courses	18
Cognate	3
Electives	4
Total	25 Credits

CORE COURSES 24 Credits		ts
EDPC 126	HIV/AIDS Counseling	2
EDPC 150	Techniques of Counseling	3
EDPC 262	Abnormal Psychology	2
EDPC 333	Chemical Dependency in Diverse Population	2
EDPC 374	Crisis Counseling	2
EDPC 386	Group Counseling	2
EDPC 393	Concepts of Chemical Dependency	3
EDPC 396	Depression and Stress Management	2
PSYC 340	Motivation and Behavior Change	2
PSYC 450	Social Psychology	2

PSYC 488	Topics in Health Psychology	2
PSYC 496	Senior Project in Health Psychology	2

## **MINOR IN HISTORY**

## SUMMARY

Core Courses	27
Elective Courses	6
Total	33 Credits

CORE COU	RSES	27 Credit	ts
HIST 120	History of Kenya I: to 1900		3
HIST 121	History of Kenya II: Since 1900		3
HIST 130	History of Africa I: before 1900		3
HIST 131	History of Africa II: since 1900		3
HIST 200	History of USA I		3
HIST 201	History of USA II		3
HIST 225	History of Europe 1789-1919		3
HIST 227	History of Europe 1919-1990		3
HIST 230	History of USSR 1917-1991		3

ELECTIVE COURSES 6 Credits		ts
HIST 305	Fundamentals of Historiography	3
HIST 313	Themes in East African History Or	3
HIST 314	History of North Africa since 1890 Or	2
HIST 315	History of West Africa since 1800 Or	2
HIST 316	History of Central and Southern Africa	2
HIST 333	Economic History of Africa	3
HIST 445	Historical Research Methods	3

## MINOR IN KISWAHILI

#### SUMMARY Core Courses

Core Courses	30
Total	30 Credits

CORE COU	RSES 30 Credi	ts
KISW 105	Language Skills in Kiswahili I	3
KISW 110	Introduction to Study of Language	3
KISW 111	Historical Development of Kiswahili	3
KISW 120	Phonetics and Phonology	3
KISW 205	Introduction to the Study of Literature	3
KISW 210	Introduction to Theory and Practice of Translation	3
KISW 350	Oral Literature in Kiswahili	3
KISW 315	Theories of Literary Criticism	3
KISW 365	Contemporary Kiswahili Novel and Play	3
KISW 420	Semantics	3

#### MINOR IN LITERATURE IN ENGLISH

#### **SUMMARY**

Core Courses	
Total	

<b>CORE COU</b>	RSES 30 Credi	ts
LITE 151	Introduction to Literary Appreciation	3
LITE 154	Introduction to Oral Literature	3
LITE 165	Stylistics	3
LITE 210	East African Prose	3
LITE 212	East African Poetry	3
LITE 214	East African Drama	3
LITE 260	Children's Literature	3
LITE 346	Introduction to Literary Criticism	3
LITE 348	European Literature	3
LITE 450	Theatre Arts	3

30 30 Credits

## Minor in Journalism and Mass Communication

### **MINOR IN PRINT MEDIA**

#### SUMMARY

Core Courses	33
Total	33 Credits

CORE COURSES 33 Credits		ts
COMM 230	News Gathering and Reporting	3
COMM 240	Writing Skills for the Mass Media	3
COMM 490	Internship in Mass Media	3
COPM 200	Introduction to the Print Media	3
COPM 210	Language of the Press	3
COPM 220	Graphics Design and Desktop Publishing	3
COPM 300	Editing Skills for Print Media	3
COPM 310	Photography and Photojournalism	3
COPM 315	School Yearbook Production	3
COPM 320	Feature and Editorial Writing	3
COPM 400	Newspaper and Magazine Production	3

#### MINOR IN ELECTRONIC MEDIA

#### SUMMARY

Core Courses	33
Total	33 Credits

<b>CORE COU</b>	RSES 33 Credi	ts
CMMT 411	Sound and Video Production	3
COEM 201	Introduction to Electronic Media	3
COEM 211	Language of Broadcasting	3
COEM 221	Studio Equipment Operations	3
COEM 301	Script Writing for Electronic Media	3

COEM 311	Modern Radio Production	3
COEM 321	Television Production	3
COEM 331	Film Production	3
COEM 401	Broadcast Programming	3
COMM 490	Internship in Mass Media	3
COPA 343	Advertising in Mass Media	3

#### MINOR IN PUBLIC RELATIONS AND ADVERTISING

#### **SUMMARY**

Core Courses	
Total	

33	
33	<b>Credits</b>

CORE COURSES 33 Credits		s	
COMM 490	Internship in Mass Media		3
COPA 203	Introduction to Public Relations		3
COPA 204	Fundamentals of Advertising		3
COPA 233	Language of Advertising		3
COPA 303	Public Relations Writing		3
COPA 313	Public Relations Campaign		3
COPA 323	Advertising Research		3
COPA 353	Advertising Management		3
COPA 403	Public relations and Social Media		3
COPA 413	International Public Relations		3
COPA 423	International Advertising		3

#### **MINOR IN MUSIC**

#### SUMMARY

Specialization	8
Core Courses	22
Total	<b>30 Credits</b>

Music majors and minors are exempted from GCAS 107 Music Appreciation.

SPECIALIZATION 8 Credit		8 Credits
Piano		
MUPF 110	Piano Concentration I	2
MUPF 111	Piano Concentration II	2
MUPF 210	Piano Concentration III	2
MUPF 211	Piano Concentration IV	2
	or	
Voice		
MUPF 120	Voice Concentration I	2
MUPF 121	Voice Concentration II	2
MUPF 220	Voice Concentration III	2
MUPF 221	Voice Concentration IV	2

CORE COURSES 22 Credit		ts
MUCH 244	Church Music	2
MUCO 217	Choral Conducting I	2
MUHL 170	Introduction to Music History	3
MUHL 272	Introduction to Ethnomusicology	2



MUPF 125	Ear Training and Sight Singing I	2
MUPF 335	University Chorale	2
MUTH 100	Fundamentals of Music	3
MUTH 101	Music Theory I	3
MUTH 102	Music Theory II	

#### MINOR IN POLITICAL SCIENCE

#### SUMMARY

Core Courses	24
Elective Courses	6
Total	<b>30 Credits</b>

CORE COURSES 24 Credits		ts
POLS 221	Introduction to Political Science	3
POLS 207	Political systems of Developing Nations	3
POLS 210	Introduction to International Relations	3
POLS 300	Political Economy of Developing Countries	3
POLS 310	Politics and Government in Kenya	3
POLS 435	Developed and Developing Nations: Comparative Politics	3
POLS 440	History of Political Thought	3
POLS 443	African Political Thought	3

ELECTIVE COURSES 6 Credits		ts
DEST 101	Politics in and of Development	3
POLS 220	Africa in International Relations	3
POLS 320	Local Government Politics in Kenya	3
POLS 430	Politics and Environmental Welfare	3

#### MINOR IN PSYCHOLOGY

#### SUMMARY

Core Courses	18
Cognate	3
Electives	4
Total	25 Credits

CORE COURSES 18 Credits		its
EDPC 150	Techniques of Counseling	3
EDPC 262	Abnormal Psychology	2
EDPC 391	Theories of Personality	2
EDPC 484	Cross-Culture Counseling	2
PSYC 340	Motivation and Behavior Change	2
PSYC 393	Cognition	2
PSYC 450	Social Psychology	2
EDPC 479	Psychological Testing and Assessment	3

COGNATE COURSE		3 Credits	
SWMD 275	Marriage Dynamics and Growth		3
		/ Crodit	e

ELECTIVE COURSES 4		ts
EDPC 119	Principles of Self Esteem	2
EDPC 317	Psychology of the Exceptional Child	2
EDPC 393	Concepts of Chemical Dependency	2

### **MINOR IN SOCIAL WORK**

## SUMMARY

Total	35 Credits
Cognates	14
Core Courses	21

Students taking Minor in Social Work are exempted from the following General Education Courses

PSYC 101	Introduction to Psychology (taken as a cognate)	2
SOCI 121	Introduction to Sociology (taken as a cognate)	2

CORE COURSES 21 Credits		ts
SOWK 111	Introduction to Social Work	3
SOWK 112	Principles and Methods of Social Work	3
SOWK 230	Social Work Theory and Practice	3
SOWK 240	Family and Child Welfare	3
SOWK 300	Social Policy and Administration	3
SOWK 320	Social Deviation and Rehabilitation	3
SOWK 400	Social Law	3

COGNATE COURSES 14 Credits		ts
DEST 240	Community Leadership and Development	3
DEST 370	Project Planning, Implementation, Monitoring and Evaluation	4
DEST 410	Proposal and Grant Writing	3
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2



## **BACHELOR OF ARTS IN COUNSELING PSYCHOLOGY**

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENG 105	Writing Skills	3	ENG 106	Speech Communication	1
1st	LITE 151/ GCAS 107	Introduction to Literary Appreciation Music Appreciation	2	RELT 207	Christian Beliefs	3
		Electives	2	HELD 110	Health Principles	1
	MATH 100/ MATH 101	Fundamentals of Mathematics/ Pre-Calculus	3	INSY107/ INSY 108	Information Technology Today/ Information Technology Today for Health Profession	2
	OFTE 120	Keyboarding	0		Vocational Skills	1
	RELH 155	Adventist Heritage	2	PHYS 100	Concepts of Physical Sciences	2
	PSYC 110	General Psychology I	2	PSYC 111	General Psychology II	2
	EDPC 122	Foundations of Counseling	3	EDPC 126	HIV/AIDS Counseling	2
		Minor Courses	4	EDPC 150	Techniques of Counseling	3
		Total	21		Minor Course	3
					Total	20
		Dringinka of Arris Taskaslary			Internetion to Obviction Ethics	2
	AGRI 105	Principles of Agric. Technology	2	RELT 255	Introduction to Christian Ethics	2
2nd	RELB 220	Life and Teachings of Jesus Christ	2	EDUC 215	Introduction to Philosophy of Christian Education	
	HIST 119/ HIST 111	Issues in Dev. Studies/Concepts of World Civilization	2	BIOL 105	Human Biology	2
	PEAC 107	PEAC 107 Physical & Recreational Activities	1	MGMT 103	Basic Management	2
		Electives	2	EDPC 270	Ethics in Counseling	2
	KISW 114/	Language Use in Kiswahili/Beginning	2	EDPC 275	Christianity & Counseling	3
	FREN 103	French	2	LDFG Z/J		J
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/Environmental Science/Safety Education	2	DEST 100	Concepts and History of Development	3
	EDPC 238	Human Growth & Dev.	3		Minor Courses	5
	EDPC 262	Abnormal Psychology	2		Total	21
		Minor Course	3			1
		Total	21			
	EDPC 295	Premarital Counseling	3	EDPC 391	Theories of Personality	2
3rd	EDPC 374	Crisis Counseling	2	EDPC 393	Concepts of Chemical Dependency	3
ord	EDPC 385	Child & Adolescent Counseling	3	EDPC 397	Current Theories in Counseling & Psychotherapy	3
	EDPC 386	Group Counseling/Dynamics	2	EDPC 396	Depression & Stress Management	2
	EDPC 387	Marriage & Family Counseling	3	EDPC 398	Organizational/Industrial Psychology	2
	SWHS 473	Human sexuality	3	RELT 426	Writings & Philosophy of E.G. White	2
		Minor Area	6	SWCA 356	Child and Spouse Abuse	2
		Total	22		Minor Area	3
					Total	19
	EDPC 480	Counseling Research Methods	3	EDPC 489	Counseling Practicum	2
4th	EDPC 484	Cross Cultural Counseling	2	EDPC 403	Psychological Testing and Assessment	3
401		Minor	6	2010 110	Total	5
		Electives	6		lotai	J
		Total	17			
		IUtai	1/			



## **BACHELOR OF ARTS IN DEVELOPMENT STUDIES**

YEAR	FI	RST SEMESTER				SECOND SEMESTER	
	CODE	COURSE TITLE	CR		CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3		ENGL 106	Speech Communication	1
1st	LITE 151/ GCAS 107	Introduction to Literary Appreciation/ Music Appreciation	2		RELT 207	Christian Beliefs	3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2		HELD 110	Health Principles	1
	MATH 100/ MATH 101	Foundations of Mathematics/ Pre-Calculus	3		INSY 107/ INSY 108	Information Technology Today/ Information Technology for Health Principles	2
	OFTE 120	Key boarding	0			Vocational Skills	1
	RELT 155	Adventist Heritage	2		PHYS 100	Concepts of Physical Sciences	2
	DEST 100	History and Concepts of Development	3		DEST 121	Culture and Development	3
	DEST 101	Politics in Development	3		DEST 240	Community Leadership and Development	3
		Minor	2			Minor	4
		Total	20			Total	20
	AGRI 105	Principles of Agricultural Technology	2		RELT 155	Introduction to Christian Ethics	2
2nd	RELB 220	Life and Teaching of Jesus	2		EDUC 215	Intro. To Philo. Of Christian Education	2
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/ Environmental Science/ Safety Education	2		BIOL 105	Human Biology	2
	PEAC 107	Physical & Recreational Activities	1		MGMT 103	Basic Management & Entrepreneurial Skills	2
	KISW 114/ FREN 103	Language use in Kiswahili/ Beginning French II	2		ECON 210	Principles of Microeconomics	3
	DEST 215	Human Rights	3			Elective	3
		Minor	5			Minor	6
		Total	17			Total	20
	DEST 265	Environmental Impact Assessment	3		DEST 394	Field Attachment	3
3rd	DEST 280	NGOs Management and Leadership	3				
	DEST 307	Research Methods in Development	3				
	DEST 410	Proposal and Grant Writing	3	ľ			
	DEST 450	Ethics in Development	3				
		Minor	4	ľ			
		Elective	2				
		Total	21				
4th	DEST 390	Principles of Population and Demography	3		GEOG 401	Statistics and Computer-aided Analysis in Social Sciences	3
	DEST 370	Project Planning, Implementation, Monitoring and Evaluation	4		DEST 380	Studies in Community Health	3
	DEST 432	Entrepreneurship, Business Management and Financial Accountability	3		DEST 470	Sustainable Development	3
	DEST 375	Rural Development	3		DEST 457	Studies on Displaced Persons	3
	DEST 485	Independent Studies in Development	3		DEST 373	Disaster Preparedness, Mitigation, and Management	3
		Minor	6		DEST 350	Conflict Management and Resolution	3
		Total	22			Minor	3
						Total	21



## **BACHELOR OF ARTS IN ENGLISH LANGUAGE AND LITERATURE**

YEAR	FI	RST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
1st	MATH 100/ MATH 101	Foundations of Mathematics/ Pre-Calculus	3	ENGL 106	Speech Communication	1
	ENGL 105	Writing Skills	3	INSY 107	Information Technology Today	2
	RELH 155	Adventist Heritage	2		Vocational Skills	1
	OFTE 120	Keyboarding (2 credits)	0	ENGL 148	English Grammar and Usage I	3
	LITE 151	Introduction to Literary Appreciation	2	LITE 154	Introduction to Oral Literature	3
	ENGL 130	Introduction to the Study of Language	3	LITE 159	Themes in East African Literature	3
	LITE 165	Stylistics	3	<b>RELT 207</b>	Christian Beliefs	3
	PSYC101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	HLED 110	Health Principles	1
	PEAC 107	Physical & Recreational Activities	1	PHYS 100	Concepts of Physical Sciences	2
		Total	19		Total	19
	KISW 114	Language Use in Kiswahili	2	ENGL 218	Morphology and Syntax	3
2nd	ENGL216	Origins and Development of English	3	ENGL 244	Discourse Analysis	3
	ENGL 217	Phonetics and Phonology	3	LITE 260	Children's Literature	3
	ENGL 222	Theory, Practice of Translation and Interpretation	3	RELT 255	Introduction to Christian Ethics	2
	AGRI 105	Principles of Agricultural Technology	2	EDUC 215	Introduction to Philosophy of Christian Education	2
	RELB 220	Life and Teachings of Jesus	2	BIOL 105	Human Biology	2
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Development Studies	2	MGMT 103	Basic Management & Entrepreneurial Skills	2
	ENVI 227/ CHEM 200/ TCED 231	Environment & Society/ Environmental Science/ Safety Education	2		Total	17
		Total	19			
	ENGL 346	English for Specific Purposes	3	LITE 348	European Literature	3
3rd	ENGL 342	Sociolinguistics	3	ENGL 305	Semantics and Pragmatics	3
	LITE 346	English for Specific Purposes	3	ENGL 347	Second Language Acquisition	3
		Minor	9		Minor	9
		Total	18		Total	18
	ENGL 435	Editing Skills	3	ENGL 465	Principles of Creative Writing	3
4th	ENGL 443	Writing for the Media	3	ENGL 480	Language & Communication Attachment	3
	LITE 455	Theory, Fieldwork and Research Skills	3		Minor	6
	ENGL 469	Research Project/Seminar	3		Total	15
		Minor	6			
		Total	18			

## **BACHELOR OF ARTS IN FRENCH**

YEAR	FI	RST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
1st	MATH 100/ MATH 101	Foundations of Mathematics/ Pre-Calculus	3	ENGL 106	Speech Communication	1
100	ENGL 105	Writing Skills	3	INSY 107	Information Technology Today	2
	RELH155	Adventist Heritage	2		Vocational Skills	1
	0FTE 120	Keyboarding	0	<b>RELT 207</b>	Christian Beliefs	3
	GCAS 107/	Music Appreciation/	2	HLED 110	Health Principles	3
	LITE 151	Introduction to Literary Appreciation				
	FREN 104	Introduction to French Language	3	PHYS 100	Concepts of Physical Sciences	3
	FREN 112	Structure of the French Language	3	FREN 130	Oral Expression and Aural comprehension	3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	FREN 131	Written Expression and French Grammar I	3
	PEAC 107	Physical & Recreational Activities	1	FREN 140	History and Modern Trends of the French Language	3
		Total	17		Total	17
2nd	FREN 210	Introduction to General Linguistics in French	3	FREN 220	French Phonetics and Phonology	3
	FREN 230	Panorama of Francophone Literature	3		Minor	3
		Minor	3		Elective	3
	AGRI 105	Principles of Agricultural Technology	2	RELT 255	Introduction to Christian Ethics	2
	RELB 220	Life and Teachings of Jesus	2	EDUC 215	Introduction to Philosophy of Christian Education	2
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Development Studies	2	BIOL 105	Human Biology	2
	ENVI 227/ CHEM 200/ TCED 231	Environment & Society/ Environmental Science/ Safety Education	2	MGMT 103	Basic Management & Entrepreneurial Skills	2
		Total	17		Total	17
	FREN 310	French Oral Literature	3		Elective	3
3rd	FREN 315	French For General, Academic and Professional Purposes	3		Minor	3
	FREN 327	Written Expression and French Grammar	3	FREN 337	Introduction to French Literature	3
		Elective	3		Minor	3
		Minor	3		Minor	3
		Minor	3		Total	17
		Total	17			
	FREN 414	Semantics and Lexicology	3	FREN 421	French Morphology and Syntax	3
4th	FREN 415	Socio-Linguistics in French	3	FREN 435	The French Novel and Philosophical Works	3
	<u> </u>	Minor	3	FREN 455	Project Paper	3
		Minor	3	FREN 460	Attachment t	5
		Minor	3			14
	FREN 454	Academic Research: Basic Principles and Methods	3		Total	17
		Total	17			



## **BACHELOR OF ARTS IN GEOGRAPHY**

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	RELT 207	Christian Beliefs	3
1st	LITE 151/ GCAS 207	Introduction to Literary Appreciation/ Music Appreciation	2	HLED 110	Health Principles	1
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	INSY 107/ INSY 108	Information Technology Today/Information Technology for Health Professionals	2
	MATH 100/ MATH 101	Foundations of Mathematics/ Pre-Calculus	3		Vocational Skills	1
	OFTE 120	Keyboarding	0	PHYS 100	Concepts of Physical Sciences	2
	RELH 155	Adventist Heritage	2	GEOG 102	World Regional Geography	3
	GEOG 100	Introduction to Geography	3	GEOG 121	Funds of Human Geography I	3
	GEOG 111	Fundamentals of Physical Geography I	3	GEOG 130	Introduction to Cartography, Map-work and Land Survey	3
		Minor	2		Total	19
		Total	20			
	AGRI 105	Principles of Agricultural Technology	2	 RELT 255	Introduction to Christian Ethics	2
2nd	RELB 220	Life and Teachings of Jesus	2	EDUC 215	Introduction to Philosophy of Christian Education	2
	HIST 111/ HIST 119	Concepts of World Civilization/Issues in Development Studies	2	BIOL 105	Human Biology	2
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/Environmental Science/Safety Education	2	MGMT 103	Basic Management & Entrepreneurial Skills	2
	PEAC 107	Physical & Recreational Activities	1	GEOG 311	Geography of Kenya	3
	KISW 114/ FREN 103	Language Use in Kiswahili/Beginning French II	2		Minor	6
		Minor	3		Total	17
	GEOG 211	Funds of Physical Geography II	3			
	GEOG 221	Fundamentals of Human Geography II	3			
		Total	20			
	GEOG 312	Geography of Development	2	GEOG 334	The Arid & Semi-Arid Lands	3
3rd	GEOG 313	Geography of East Africa	3	GEOG 355	Geographical Information Systems	3
		Minor	7	GEOG 401	Quantitative Techniques and Computer- aided Data Analysis in Social Sciences	3
	GEOG 323	Remote Sensing	3		Option A or B course	3
		Option A or B course	3		Option A or B course	3
		Option A or B course	3		Minor	6
		Total	21		Total	21
	GEOG 410	Research Methods in Social Sciences	3	 GEOG 482	Geographical Practicum	3
4th	GEOG 430	Meteorology and Climatology	3		Total	3
	GEOG 450	Selected Topics in Geography	2			
	GEOG 480	Independent Study in Geography	3			
		Option A or B course	3			
		Minor	6			
		Total	20			

## **BACHELOR OF ARTS IN HISTORY**

## Four-Year Course Plan

146

YEAR	F	RST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	ENGL 106	Speech Communication	1
1st	ENGL 105	Writing Skills	3	<b>RELT 207</b>	Christian Beliefs	3
	LITE 151/	Introduction to Literary Appreciation/	2	HLED 110	Health Principles	2
	GCAS 107	Music Appreciation				
	PSYC 101/	Introduction to Psychology/	2	INSY 107/	Information Technology Today/	2
	SOCI 121/ SWFI 207	Sociology/ Family Issues		INSY 108	Information Technology for Health Professions	
	MATH 100/	Foundations of Mathematics/	3		Vocational Skills	1
	MATH 101	Pre-Calculus				
	0FTE 120	Keyboarding	0	PHYS 100	Concepts of Physical Sciences	2
	RELH 155	Adventist Heritage	2	HIST 121	History of Kenya II	3
	PEAC 107	Physical & Recreational Activities	1		Minor	3
	HIST 120	History of Kenya I	3		Total	18
	GEOG 102	World Regional Geography	3			
		Total	19			
	AGRI 105	Principles of Agricultural Technology	2	RELT 255	Introduction to Christian Ethics	2
2nd	RELB 220	Life and Teachings of Jesus	2	EDUC 215	Intro. to Phil. of Christian Education	2
	HIST 119/	Issues in Development Studies/	2	BIOL 105	Human Biology	2
	HIST 111	Concepts of World Civilization				
	ENVI 227/	Environment and Society/	2	MGMT 103	Basic Management & Entrepreneurial	2
	CHEM 200/ TCED 231	Environmental Science/ Safety Education			Skills	
	PEAC 107	Physical & Recreational Activities	1	HIST 204	History of Africa II	3
	KISW 114/	Language Use in Kiswahili/	2	HIST 201	History of the USA II	3
	FREN103	Beginning French II				
	HIST 203	History of Africa I	3		Minor	3
	HIST 200	History of USA I	3		Total	17
		Minor	3			
		Total	19			
	HIST 305	Fundamentals of Historiography	3	HIST 313	Themes in East African History	3
3rd	HIST 225	History of Europe 1789-1919	3	HIST 227	History of Europe 1919-1990	3
ora	HIST 333	Themes in East African History	3	HIST 230	History of USSR 1917-1991	3
		Elective	3		Elective	3
		Minor	3		Minor	3
		Minor	3		Minor	3
		Total	18		Total	18
	GEOG 401	Statistics and Computer-Aided Data	3	HIST 490	Independent Study	3
4th	2200 101	Analysis in Social Sciences				Ŭ
	HIST 411	Selected Topics in Modern African History	3	HIST 421	Imperialism and Nationalism in 3rd World	3
	HIST 415	History of Science and Technology	3	HIST 450	Topics in History of Post-Independent Kenya	3
	HIST 445	Historical Research Topics	3		Elective	3
		Elective	3		Minor	3
		Minor	3		Minor	3
		Total	18		Total	18



## BACHELOR OF ARTS IN KISWAHILI Four-Year Course Plan

YEAR	FI	RST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	KISW 110	Introduction to Linguistics in Kiswahili	3	KISW 111	Historical Development of Kiswahili	3
1st	KISW 105	Language Skills in Kiswahili	2	KISW 205	Introduction to the Study of Literature	3
	RELT 155	Adventist Heritage	2	ENGL 106	Speech Communication	1
	ENGL 105	Writing Skills	3	RELT 207	Christian Beliefs	3
	LITE 151	Introduction to Literary Appreciation	2	HLED 110	Health Principles	1
	PEAC 107	Physical and Recreational Activities	1	INSY 107	Information Technology for Today	2
	PSYC 107/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	PHYS 100	Concepts of Physical Sciences	2
	MATH 100/ MATH 101	Fundamentals of Math/ Pre-Calculus	3		Vocational Skills	1
	OFTE 120	Keyboarding	0		Total	17
		Total	18			
_	KISW 120	Phonetics and Kiswahili Phonology	3	KISW 225	Kiswahili Morphology and Syntax	3
2nd	AGRI 105	Principles of Agriculture Technology	2	KISW 265	Language Skills in Kiswahili II	3
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Development Studies	2	BIOL 105	Human Biology	2
	RELB 220	Life and Teachings of Jesus	2	RELT 255	Christian Ethics	2
	CHEM 200/ ENVI 227/ TCED 231	Environmental Science/ Environment and Society/ Safety Education	2	MGMT 103	Basic Management and Entrepreneurial Skills	2
	KISW 210	Theory and Practice of Translations I	3	EDUC 215	Introduction to Philosophy of Christian Education	2
		Total	17		Minor	3
					Total	17
	KISW 285	Second Language Learning	3	 KISW 350	Oral Literature in Kiswahili	3
3rd	KISW 315	Theories of Literary Criticism	3	KISW 365	Kiswahili Novel and Play	3
		Elective	3		Elective	3
		Minor	9		Minor	6
		Total	18		Total	15
4th	KISW 422	Textual and Discourse Analysis in Kiswahili	3	KISW 420	Semantics and Pragmatics in Kiswahili	3
	KISW 395	Research Methods in Language and Literature	3	KISW 460	Language Policy and Planning	3
	KISW 425	Kiswahili Poetry	3		Elective	3
		Minor	6		Minor	6
		Total	15		Total	15

# BACHELOR OF ARTS IN JOURNALISM AND MASS COMMUNICATION (ELECTRONIC MEDIA OPTION)

## Four-Year Course Plan

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YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	ENGL 106	Speech Communication	1
1st	LITE 151/ GCAS 107	Introduction to Literary Appreciation/ Music Appreciation	2	RELT 207	Christian Beliefs	3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	HLED 110	Health Principles	1
	MATH100/ MATH 101	Foundations of Mathematics/ Pre-Calculus	3	INSY 107/ INSY 108	Information Technology Today/ Information Technology for Health Professions	2
	OFTE120	Keyboarding	0		Vocational Skills	1
	RELH155	Adventist Heritage	2	PHYS 100	Concepts of Physical Sciences	2
	PEAC 107	Physical & Recreational Activities	1	COMM 128	Mass Media, Culture and Society	3
	COMM 121	Fundamentals of Journalism	3	COMM 126	Media Law and Ethics	3
	COMM 122	Introduction to Mass Communication	3	COMM 129	Adventist Media Ministries	3
		Total	19		Total	19
	AGRI 105	Principles of Agricultural Technology	2	RELT 255	Introduction to Christian Ethics	2
2nd	RELB 220	Life and Teachings of Jesus	2	EDUC 215	Introduction to Philosophy of Christian Education	2
	HIST 119/ HIST 111	Issues in Development Studies/ Concepts of World Civilization	2	BIOL 105	Human Biology	2
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/ Environmental Science/ Safety Education	2	MGMT 103	Basic Management & Entrepreneurial Skills	2
	KISW 114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2	COEM 221	Studio Equipment Operations for Radio	3
	C0EM 201	Introduction to Electronic Media	3	COMM 230	News Gathering and Reporting	3
	C0EM 211	Language of Broadcasting	3	COMM 240	Writing for the Mass Media	3
		Total	16		Total	17
	COEM 341	Editing in Electronic Media	3	C0EM 321	Television Production	3
3rd	C0EM 301	Script Writing for Electronic Media	3	C0EM 331	Film Production	3
-	C0EM 311	Modern Radio Production	3	COPA 343	Advertising in Mass Media	3
		Elective	2	MINOR	Courses in minor	9
	MINOR	Courses in minor	6		Total	18
		Total	17			
	INITE	D OFMEDTED		COMM 490	Internship in Mass Media	3
	INTE	R SEMESTER			Total	3
	C0EM 401	Broadcast Programming	3	C0EM 421	Broadcast in News Production	3
4th	CMMT 411	Sound and Video Production	3	COMM 482	Research Methods in Mass Media II	2
	COMM 481	Research Methods in Mass Media I	2	Elective		2
	MINOR	Courses in minor	6	MINOR		9
		Total	14		Total	16

# BACHELOR OF ARTS IN JOURNALISM AND MASS COMMUNICATION (PRINT MEDIA OPTION)

YEAR	FI	RST SEMESTER				SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE		COURSE TITLE	CR
	ENGL 105	Writing Skills	3	ENGL 1	06	Speech Communication	1
1st	LITE 151/ GCAS 107	Introduction to Literary Appreciation/ Music Appreciation	2	RELT 2	07	Christian Beliefs	3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	HLED 1	10	Health Principles	1
	MATH 100/ MATH 101	Foundations of Mathematics/ Pre-Calculus	3	INSY 10 INSY 10		Information Technology Today/ Information Technology for Health Professions	2
	0FTE 120	Keyboarding	0			Vocational Skills	1
	RELH 155	Adventist Heritage	2	PHYS 1	00	Concepts of Physical Sciences	2
	PEAC 107	Physical & Recreational Activities	1	COMM	128	Mass Media, Culture and Society	3
	COMM 121	Fundamentals of Journalism	3	COMM	126	Media Law and Ethics	3
	COMM 122	Introduction to Mass Communication	3	COMM	129	Adventist Media Ministries	3
		Total	19			Total	19
	AGRI 105	Principles of Agricultural Technology	2	RELT 2	55	Introduction to Christian Ethics	2
2nd	RELB 220	Life and Teachings of Jesus	2	EDUC 2	215	Introduction to Philosophy of Christian Education	2
	HIST 119/ HIST 111	Issues in Development Studies/Concepts of World Civilization	2	BIOL 10	)5	Human Biology	2
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/ Environmental Science/ Safety Education	2	MGMT	103	Basic Management & Entrepreneurial Skills	2
	KISW114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2	COPM	220	Graphics Design and Desktop Publishing	3
	COPM 200	Introduction to Print Media	3	COMM	230	News Gathering and Reporting	3
	COPM 210	Language of the Press	3	COMM	240	Writing for the Mass Media	3
	MINOR	Courses in Minor	3			Total	17
		Total	19				
	COMM 260	Online Journalism	3	COPM	320	Feature and Editorial Writing	3
3rd	COPM 300	Editing Skills for Print Media	3	COPA 3	343	Advertising in Mass Media	3
	COPM 315	School Yearbook Production	3	MINOR	2	Courses in minor	12
	COPM 310	Photography and Photojournalism	3			Total	17
		Elective	2		I		_
	MINOR	Courses in minor	3				
		Total	17				
	INTE	R SEMESTER		COMM	490	Internship in Mass Media	3
	INTE	R SEMESTER				Total	3
	COPM 450	Book Writing and Publishing	3	COPM	460	Literature Evangelism in Print Media	3
4th	COPM 400	Newspaper and Magazine Production	3	COMM	482	Research Methods in Mass Media II	2
	COMM 481	Research Methods in Mass Media I	2			Elective	2
	MINOR	Courses in minor	6	MINOR	2	Courses in minor	6
	I	Total	14			Total	13



# BACHELOR OF ARTS IN JOURNALISM AND MASS COMMUNICATION (PUBLIC RELATIONS AND ADVERTISING OPTION)

YEAR	FI	RST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	ENGL 106	Speech Communication	1
1st	LITE 151/ GCAS 107	Introduction to Literary Appreciation/ Music Appreciation	2	RELT 207	Christian Beliefs	3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	HLED 110	Health Principles	1
	MATH 100/ MATH 101	Foundations of Mathematics/ Pre-Calculus	3	INSY 107/ INSY 108	Information Technology Today/ Information Technology for Health Professions	2
	OFTE 120	Keyboarding	0		Vocational Skills	1
	RELH 155	Adventist Heritage	2	PHYS 100	Concepts of Physical Sciences	2
	PEAC 107	Physical & Recreational Activities	1	COMM 128	Mass Media, Culture and Society	3
	COMM 121	Fundamentals of Journalism	3	COMM 126	Media Law and Ethics	3
	COMM 122	Introduction to Mass Communication	3	COMM 129	Adventist Media Ministries	3
		Total	19		Total	19
	AGRI105	Principles of Agricultural Technology	2	RELT 255	Introduction to Christian Ethics	2
2nd	RELB220	Life and Teachings of Jesus	2	EDUC 215	Introduction to Philosophy of Christian Education	2
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Development Studies	2	BIOL 105	Human Biology	2
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/ Environmental Science/ Safety Education	2	MGMT 103	Basic Management & Entrepreneurial Skills	2
	KISW114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2	COPA 233	Language of Advertising	3
	COPA 203	Introduction to Public Relations	3	COMM 240	Writing for the Mass Media	3
	COPA 204	Fundamentals of Advertising	3	COPA 248	Advertising and Promotion	3
		Total	16		Total	17
	COPA 303	Public Relations Writing	3	COPA 333	Contemporary Advertising	3
3rd	COPA 313	Public Relations Campaign	3	COPA 343	Advertising in the Mass Media	3
JIU	COPA 323	Advertising Research	3	COPA 353	Advertising Management	3
		Elective	2	MINOR	Courses in minor	9
	MINOR	Courses in minor	6		Total	18
		Total	17			
				COMM 490	Internship in Mass Media	3
	IN	IER SEMESTER			Total	3
	COPA 403	Public Relations and Social Media	3	COMM 482	Research Methods in Mass Media II	2
4th	COPA 413	International Public Relations	3		Elective	2
	COPA 423	International Advertising	3	MINOR	Courses in minor	9
	COMM 481	Research Methods in Mass Media I	2		Total	13
		Courses in minor	6			



## **BACHELOR OF ARTS IN MUSIC** Four-Year Course Plan

(Kindly Note: that the BA in Music has two concentrations: Piano or Voice. All music students must take a major and a minor instrument. Students taking Piano as a major instrument are required to take Voice as a minor instrument and all students taking Voice as a major instrument must take piano as a minor instrument. A minor instrument comprises of Concentration I-IV of the said instrument. They are also required to take ABRSM grade VII for their major instrument and grade V ABRSM examinations for their minor instrument before graduation.)

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	MUTH 100	Fundamentals of Music	3	MUTH 101	Music Theory I	3
1st	MUPF 125	Aural Training and Sight Singing I	2	MUPF 126	Aural Training and Sight Singing II	2
	MUPF 110/	Piano Concentration I/	2	MUPF 111/	Piano Concentration II/	2
	MUPF 120	Voice Concentration I		MUPF 121	Voice Concentration II	
	0FTE 120	Keyboarding	0	PHYS 100	Concepts of Physical Sciences	2
	MATH 100/ MATH 101	Foundations of Mathematics/ Pre-Calculus	3	HLED 110	Health Principles	1
	PEAC 107	Physical and Recreational Activities	1	INSY 107	Information Technology Today	2
	RELH 155	Adventist Heritage	2	<b>RELT 207</b>	Christian Beliefs	3
	PSYC 101/ Soci 121/ Swfi 207	Introduction to Psychology/ Sociology/ Family Issues	2		Total	17
		Total	15			
2nd	KISW 114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2	MUPF 211/ MUPF 221	Piano Concentration IV/Voice Concentration IV	2
	MUPF 210/ MUPF 220	Piano Concentration III/Voice Concentration III	2	MUTH 200	Music Theory III	3
	MUTH 102	Music Theory II	3	MUC0 217	Choral Conducting I	3
	UHL 270	Survey of Music History I	3	MUC0 217	Choral Conducting I	2
	MUPF 225	Advanced Sight Singing	2	XXXX XXX	Minor Instrument I	2
	GRI 205	Principles of Agriculture Technology	2	RELT 255	Introduction to Christian Ethics	2
	RELB 220	Life and Teachings of Jesus	2	MGMT 103	Basic Management and Entrepreneurial Skills	2
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/ Environmental Science/ Safety Education	2	EDUC 215	Introduction to Philosophy of Christian Education	2
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Developmental Studies	2	BIOL 105	Human Biology	2
		Total	20		Total	17
	MUTH 201	Music Theory IV	3	MUHL 370	Survey of Music History III	3
3rd	MUCO 218	Choral Conducting II	2	MUTH 206	African Music Theory and Practice	2
	MUHL 271	Survey of Music History II	3	MUPF 117	Applied Music – Strings	1
	MUPF 310/	Piano Concentration V/	2	MUPF 311/	Piano Concentration VI/	2
	MUPF 320	Voice Concentration V		MUPF 321	Voice Concentration VI	
	MUCH 244	Church Music	2	UPF 115	Applied Music – Woodwind	1
	MUTC 237	Introduction to Music Technology	2	MUHL 491	Research Methods in Music	2
	XXXX XXX	Minor Instrument II	2	MUPF 335	University Chorale	2
	MUHL 272	Introduction to Ethnomusicology	2	MUCH 225	Introduction to Hymnology	2
		Total	20	XXXX XXX	Minor Instrument III	2
					Total	17



		Total	18
	MUPF 346	Instrumental Ensemble	2
	MUTH 306	Transcription of African Music	3
	XXXX XXX	Minor Instrument IV	2
	MUPF 114	Applied Music – Brass	1
		Elective	2
	MUHL 493	Music Research Project	2
	MUPF 410/ MUPF 420	Piano Concentration VII/ Voice Concentration VII	2
4th	MUTH 401	Introduction to Counterpoint	2
	MUTH 400	Form and Analysis	2

MUTH 402	Composition and Vocal Arranging	2
MUTH 403	Orchestration	2
MUPF 411/	Piano Recital/	1
MUPF 421	Voice Recital	
	Elective	2
	Elective	2
MUPF 116	Applied Music – Guitar	1
MUHL 315/	Piano Literature (Piano Majors)/	1
MUHL 325	Vocal Literature (Voice Majors)	
Total		
		•

## **BACHELOR OF MUSIC IN MUSIC EDUCATION**

## **Four-Year Course Plan**

(Kindly Note: that the BA in Music has two concentrations: Piano or Voice. All music students must take a major and a minor instrument. Students taking Piano as a major instrument are required to take Voice as a minor instrument and all students taking Voice as a major instrument must take piano as a minor instrument. A minor instrument comprises of Concentration I-IV of the said instrument. They are also required to take ABRSM grade VII for their major instrument and grade V ABRSM examinations for their minor instrument before graduation.)

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	MUTH 100	Fundamentals of Music	3	MUTH 101	Music Theory I	3
1st	MUPF 125	Aural Training and Sight Singing I	2	MUPF 126	Aural Training and Sight Singing II	2
	MUPF 110	Piano Concentration I	2	MUPF 111	Piano Concentration II	2
	0FTE 120	Keyboarding	0	ENGL 106	Speech Communication	1
	ENGL 105	Writing Skills	3	HLED 110	Health Principles	1
	PEAC 107	Physical and Recreational Activities	1		Vocation Skill	1
	RELH 155	Adventist Heritage	2	INSY 107	Information Technology Today	2
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	RELT 207	Christian Beliefs	3
		Total	15		Total	15
2nd	KISW 114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2	MUPF 211	Piano Concentration IV	2
Lind	MUPF 210	Piano Concentration III	2	MUTH 200	Music Theory III	3
	MUTH 102	Music Theory II	3	MUC0 217	Choral Conducting I	2
	MUPF 225	Advanced Sight Singing	2	MUPF 120	Voice Concentration I	2
	MUHL 270	Survey of Music History I	3	<b>RELT 255</b>	Introduction to Christian Ethics	2
	RELB 220	Life and Teachings of Jesus	2	MGMT 103	Basic Management and Entrepreneurial Skills	2
	HIST 111/ HIST 119	Concepts of World Civilization/ Issues in Developmental Studies	2	EDUC 215	Introduction to Philosophy of Christian Education	2
		Total	16	BIOL 105	Human Biology	2
					Total	17

	MUTH 201	Music Theory IV	3		MUHL 370	Survey of Music History III	3
3rd	MUCO 218	Choral Conducting II	2		MUTH 206	African Music Theory and Practice	2
	MUHL 271	Survey of Music History II	3		MUPF 117	Applied Music - Strings	•
	MUPF 310	Piano Concentration V	2		MUPF 220	Voice Concentration III	2
	MUCH 244	Church Music	2	ĺ	MUPF 115	Applied Music – Woodwind	
	MUTC 237	Introduction to Music Technology	2		MUHL 491	Research Methods in Music	2
	EDPC 106	Educational Psychology	3		MUPF 335	University Chorale	2
	MUPF 121	Voice Concentration II	2		MUCH 225	Introduction to Hymnology	2
	MUHL 272	Introduction to Ethnomusicology	2		EDTE 255	Principles and Methods of Teaching	3
	Total		21		Total		18
	MUED 103	Introduction to Music Education	2		MUTH 400	Form and Analysis	
4.1							_
4th	MUED 316/ MUED 326	Piano Pedagogy/ Voice Pedagogy	2		MUTH 401	Introduction to Counterpoint	
	MUED 203	Music Education Methodology	2		EDTE 326	Education Measurement and Evaluation	
	MUTH 402	Composition and Vocal Arranging	2		MUHL 493	Music Research Project	12
	MUTH 403	Orchestration	2			Elective	í
	MUPF 320	Voice Concentration IV	2		MUPF 321	Voice Concentration V	12
		Elective	2		MUTH 306	Transcription of African Music	3
	EDTE 210	Curriculum Development	3		MUPF 346	Instrumental Ensemble	2
	MUPF 116	Applied Music – Guitar	1	ĺ		Total	1
	MUPF 114	Applied Music – Brass	1				
	Total		19				
	MUED 405	Teaching Practice (Option: This can be done	3				
5th	MUED 405	in one of the summer semester programs to make fours year duration)					
		Total	3				

## **Course Descriptions**

#### ARCH 101 Principles of Archaeology

The meaning, role and functions of archaeology, the evolution and development of archaeology as a discipline of study during the 19th and 20th centuries will be studied. The interdisciplinary nature of archaeological research; the nature of the archaeological record; locating and dating archaeological sites; the preservation and recovery of archaeological finds; contributions of archaeology to the development of world civilizations; history and other areas of study for example religion will be explored.

#### ARCH 200 Archaeology of East Africa 3 Credits

This course introduces the students to archaeological activities; significance of material culture and the major archaeological sites in East Africa. They study Early Stone Age; Middle Stone Age; Late Stone Age; the Metallurgy Age and the lifestyle and civilization of prehistoric man in East Africa will be attempted.

#### ARCH 220 Foundations of Archaeology

**3 Credits** 

**3 Credits** 

The meaning, role and functions of archaeology, the evolution and development of archaeology as a discipline of study during the 19th and 20th centuries will be studied. The interdisciplinary nature of archaeological research; the nature of the archaeological record; locating and dating archaeological sites; the preservation and recovery of archaeological finds; contributions of archaeology to the development of world civilizations; history and other areas of study for example religion will be explored.

#### ARCH 310 Studies on Origins of Modern 3 Credits Man and Society

This course will expose the students to various theories on the origin of man. Evolution theory (Darwinian and other theories) and their shortcomings; creation theory; scientific theories and their impact on society will be explored. Material evidence supporting of man's occupancy of earth through millennia.

#### **COEM 201** Introduction to Electronic Media 3 Credits

This is an introductory course covering electronic media with focus on television, radio, recording industry, motion picture industry, and internet and game industries. The course introduces students to the history, characteristics, concepts related to electronic media. Some of the topics to be covered include meaning of electronic media, brief history consisting of invention and development, uses of different electronic media, telephony, video, navigation, radar, digital radio, amateur radio service, unlicensed radio services, radio control (RC), electromagnetic spectrum etc. Other topics to be covered include early TV stations, early programming, evolution of television entertainment, film, satellite, video cassette, internet, mobile phone, computers etc. Three lecture hours and one session of three hours practicum per week. Prerequisite: COMM 121.

#### COEM 211 Language for Broadcasting 3 Credits

This course examines the type of language that is used in broadcasting using English as illustration. Language of broadcasting a type of language for special purposes meant for television or radio broadcasting. Some of the topics to be covered include language specialization for broadcasting, the nature of broadcasting language, the function of broadcasting, features of broadcasting language, different kinds of broadcasting language, what to look for in broadcasting language, spoken versus written language, language of the ear, language of the eyes, good pronunciation and accent, good grammar, diction etc. Three lecture hours and one session of three-hour practicum each week.

#### COEM 221 Studio Equipment and 3 Credits Operations

This course has both the theoretical and hands-on sections. The course is aimed to train students with basic skills of operating different equipment in the studio for radio and television broadcasting. Some of the basic equipment that students should familiarize themselves include setting and operating different types of microphones, how to operate the consoles (mixer), loudspeakers and monitoring, analogue recording, digital audio tape recorders, equalizers, compressors and limiters, equipment and software for noise reduction, television cameras operations and picture composition, types of cameras, cameras lenses, sound techniques, etc. The course also introduces electronics which can assist students in the wiring of the studio in order to fix basic technical problems. Students will go for a field trip to visit a few television and radio studios in some media houses. Three lecture hours and one session of three hours practicum per week.

### COEM 231 Voice and Diction for Broadcasting

This course aims at training students' voice and diction for radio and television broadcasting purposes. Some of the topics to be covered in this course include functions of sound, producing speech, listening and hearing, pace of voice, pitch of voice, tone of voice, the use of diction in radio and television, sound wave, frequency of pitch, amplitude and loudness, etc. The course will also look at voice using a Christian perspective by using Jesus Christ as a model. Other topics to be discussed include clarity and purity of utterance, importance of general health for a clear voice, proper use of the voice, danger of excessive emotion, effects of words etc. The student will practice the training of voice until they reach the recommended standards. Two lecture hour and one session of three hours practicum per week.

#### COEM 271 Citizen Journalism

2 Credits

2 Credits

This course is an exploration of the concept of citizen journalism. Some of the topics to be covered include the meaning of citizen journalism, the development of citizen journalism, citizen journalism versus traditional journalism, citizen content, ethics in citizen journalism, blogosphere and citizen journalism, trends in citizen journalism, internet impact on the media, blogs and citizen journalism, citizen journalism in Africa, advantages and disadvantages of citizen journalism. Two lecture hour and one session of three hours practicum per week.

#### COEM 301 Script Writing for Electronic 3 Credits Media

This course trains students in writing a scripts for electronic media such as radio, television, films program etc. Some of the topics to be covered include the importance of a script in radio and television broadcasting, script conventions for radio and television, script writing for films, printed script versus electronic script, elements of a script such as header, story, story tags, lead-in to voice report, the use spoken language in script for radio and television, the use of punctuation marks, jargon and technical words, active versus passive voice, being professional and being creative in script writing, writers' jobs and writers' markets etc. Three lecture hours and one session of three hours practicum each week. Prerequisite: COMM 240.

#### COEM 308 Video Recording and Editing 2 Credits

The course provides the student with the theoretical and practical skills needed for sound and video production. Some of the topics to be covered include thorough grounding in the basics of digital video, basic tools for video recording, camcorder, computer software for video editing, preparation for shooting videos, editing, basic camera anatomy, camera care, the camera and the computer, the rule of thirds, using multiple cameras, special projects: how to shoot wedding, graduations and other ceremonies. Two lecture hour and one session of three hours practicum per week.

#### **COEM 311 Modern Radio Production**

#### **3 Credits**

This course covers the general principles of radio production. techniques, and communication theory. Some of the topics to be covered include the meaning of radio production, the producer evolution, radio broadcasting, radio production studios, preproduction stages, structuring a program, post-production editing, crew for production, audio editing, recording and playback devices, microphones and sounds, writing for radio, electronic editing, recorded program production, live, on-air production, computer in radio production, the console, dramatic element in radio production, commercial production, news production, the radio studios, ethics, writing for the ear, news policy and practice, interviewing, news reading and presentation, digital editing, creating an audio library, participation, making radio commercials, recording and playback devices, microphones and sound, electronic editing, recorded program production, commercial production, news production, remote and sports production, production, programming, and the modern format. Three lecture hours and one session of three hours practicum per week.

#### **COEM 321 Television Production**

#### **3 Credits**

This course covers the general principles and techniques about television production. Some of the topics to be covered include the foundation of television production, the television production process, the producer in preproduction, the script, the director in preproduction, analogue and digital television, the television camera, lenses, camera operation and picture composition, creating an effective image, television graphics, make-up and costumes, audio sound pickup and control, lighting, techniques of television talent, the director in production, field production and big remotes, production techniques, post-production editing, editing functions and principles, distributing your production. Two lecture hours and one session of three hours practicum per week.

#### **COEM 331** Film Production

#### **3 Credits**

This course covers the general principles of film production. Some of the topics to be covered include the basics of film production, the role of the production team, basic equipment required for film production, the production office, basic accounting in film production, the importance of script in film production, stages involved in film production, insurance requirements, the use of music in film production, safety issues in film production, selecting a good location for film shooting, traveling and housing, making a low budget for film production, commercial production, post production overview, the importance of editing in film production, etc. Three lecture hours and one session of three hours practicum per week.

#### COEM 341 Editing in Electronic Media 3 Credits

The course is a study of editing in the electronic media mainly for audio, video and films. Some of the topics to be covered include meaning of editing in electronic media, types of editing software used in electronic media, editing functions, editing principles, nonlinear editing, nonlinear editing system, pre-editing phase, preparation phase, video editing phase, audio editing phase, editing for continuity, complexity editing, transitions in complexity editing. Three lecture hours and one session of three hours practicum each week.

#### COEM 401 Broadcast Programming 3 Credits

This course is an introduction to broadcast programming strategies and practices. Some of the topic to be covered include introduction to programming, the meaning of broadcast programming, frameworks for media programming, understanding key programming practices, audio programming practices, television programming practices, non-prime time network programming, television station programming strategies, music programming, informational programming, program selection, scheduling and elevation, network primetime programming, network program types, television programming, public broadcasting, radio programming, general programming regulations, techniques and strategies used in the programming industry. Three lecture hours and one session of three hours practicum per week.

#### COEM 421 Broadcast News Production 3 Credits

The course provides the student with the theoretical and practical skills needed for broadcast news production. Some of the topics to be covered include the meaning of news, newsroom structure, the producer's role in the newsroom, the evolution of news production, the producing process, writing, producing for television, producing for radio and the internet, weather and sports, surviving the newsroom, newsroom relationships, issues in producing, the job market, finding a producing job. Three lecture hours and one session of three hours practicum each week.

#### COMM 121 Fundamentals of Journalism 3 Credits

This course looks at the most basics and important aspects of journalism. Some of the topics to be covered include various definitions of journalism, history of journalism, different areas of specialization for journalism such as business journalism, entertainment journalism, fashion journalism, environmental journalism, political journalism, sports journalism, weather forecasting journalism, types of journalism such as advocacy journalism, blogging journalism, broadcast journalism, citizen journalism, civic journalism, investigative journalism, new journalism, online journalism, photojournalism, fourth estate, freedom of the press, code of ethics for journalists in Kenya, the role of the journalist in a democratic society. Students for this course must register with the Media Council of Kenya as student journalist. Three lectures hours and a one session of practicum each week.

#### COMM 122 Introduction to Mass Communication

**3 Credits** 

An overview of communication and mass communication which discusses the meaning of communication, mass communication, types of mass communication, the nature and history of mass communication, traditional mass communication organization, models for studying mass communication, the role of mass communication, functions of mass communication for society, the future of mass media. This course provides a foundation to major areas of mass communication which include Print Media (books, newspapers, and magazines), Electronic Media (Radio, Television, the internet and the world wide web, motion pictures), Public Relations and Advertising. There will be a field trip to some media houses for print media, electronic media and public relations. Three lecture hours and one three hours session of practicum each week.

#### COMM 126 Media Law and Ethics

#### 3 Credits

This course is an examination of important legal and ethical issues that affect professional journalists in radio broadcasting, print media, television broadcasting, and public relations. It includes topics such as the meaning of media law, media ethics, the application of Christian ethics in the media, journalistic ethics, copyright law, intellectual property, fair use, understanding libel, obscenity, defamation and privacy, freedom of information, freedom of speech, freedom of the press, code of ethics for a journalist, Kenya Media Act 2007, Kenya Media Bill 2010, access to information laws and procedures, the bases of ethical systems, as well as issues raised by the growth of the internet, the use of digital technologies, and the creation of media content. Students will have an educational trip to the Media Council of Kenya and KECOBO in Nairobi.

#### COMM 128 Mass Media, Culture and 3 Credits Society

This course is an examination of the relationship between mass communication and society which include institutional functions and socio-economic, structural-cultural and other factors affecting mass communication processes. The course is critical investigation into the operation of mass media and it explores the relationship between competing social, cultural and economic agendas, and how these agendas are filtered through the press and broadcast media. Competing theoretical approaches are introduced to help students think critically about the place of the mass media in society. Students will have field work to research on the culture of the community.

#### COMM 129 Adventist Media Ministries 3 Credits

The course is a description of the media ministries as used by the Seventh-day Adventist Church. There are a number of media ministries associated with the Seventh-day Adventist Church. These come in print and electronic forms mainly radio, television, and new media. Some of the topics to be covered include historical background of the media ministries in the SDA Church, goals and objectives of media ministries in the SDA Church, print media in the SDA Church, and electronic media in the SDA Church. In the print media, the course will focus on the publishing ministry looking into the early history of the publishing work, establishment and operation of publishing houses, perils facing publishing-house leaders, the output of the publishing house, successful field publishing leadership, counsels for marketing church literature etc. Students will have an educational field trip to visit some of the media centers of the SDA Church within the country and gain first-hand experience on how the SDA media ministries function. This will include publishing houses, radio stations, television stations etc. Three lectures hours and one session of a three-hour practicum per week.

#### COMM 230 News Gathering and Reporting 3 Credits

This course is an examination of how news is gathered and reported. The course looks at the process of collecting news and recording it. Some of the topics to be covered include the meaning of news, qualities and qualifications of a news reporter, characteristics and determinants of news, organization and management of newspaper establishment, elements of good news story writing, the inverted pyramid, the five "W"s and the "H", the craft of interviewing for effective news story, quotes and attribution, searches for information for news story, news sources, news releases, covering speeches etc. Three lecture hours and one session of three-hour practicum per week.

#### COMM 240 Writing Skills for Mass Media 3 Credits

This is a course is an overview for writing in different types of mass media. Some of the topics to be covered include basic tools of writing, style and the style book, writing in the media environment, writing for print, writing for the web, writing for broadcast, writing advertising copy, writing for public relations, the writer and the law. The emphasis is placed on clarity, accuracy, completeness, the audience and readability. Students will apply the skills in this course and produce a project at the end of the course. Three lecture hours and one session of three-hour practicum per week.

**3 Credits** 

2 Credits

#### COMM 260 Online Journalism

This course is an overview of online and digital journalism. The course deals with topics such as the foundations of online and digital journalism, history of online and digital journalism, traditional journalism and new media, what makes online journalism different, how to identify different kinds of multimedia formats, the role of interactivity in journalism, how to start online newspapers, magazine or journals, content and design of online newspapers, magazine or journals, the basics of setting up an online newspaper, getting source materials, designing the look of publication, web site development, blogging, etc. Students will work as a group and come up with a project of online newspaper, magazine or journal. Three lecture hours and one session of three-hour practicum per week.

#### COMM 309 Sports Journalism

This course introduces sports journalism by looking at an overview of sports journalism from its origins up to now. Some of the topics to be discussed include the meaning of sports journalism, the origins of sports journalism, different types of sports that are reported in the media, terminology used in sports journalism, reporting sports journalism in print media,

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reporting sports journalism in electronic media, research in sports journalism, the use of language in sports journalism, challenges in reporting sports journalism. Students will practice sport journalism in print or electronic media by reporting on local sports. Two lecture hour and one session of three hours practicum per week.

#### COMM 360 Investigative Journalism 2 C

2 Credit

This course examines investigative journalism as it is used in mass media. Some of the topics to be discussed include the meaning of investigative journalism, the objectives of investigative journalism, how to carry research in investigative reporting, the origins of investigative journalism, media law and investigative journalism, challenges of investigative journalism, rise of American investigative journalism, models of investigative journalism centers, investigative reporters, Muckraking Investigative Journalism, some case studies of investigative reporters. Two lecture hour and one session of three hours practicum per week.

#### COMM 481 Research Methods in Mass 2 Credits Media I

The first part of the two sections-series course will introduce students to research methods in the mass media with application in print media, electronic media, public relations and advertising. In this part, students will be guided to write a research proposal on a topic within their area of specialization. The proposal will contain the basic three chapters which include the introduction, literature review and research methodology. Other topics to be discussed include meaning of research, elements of a research proposal, research ethics, scientific method, sampling, qualitative research methods. The research proposal will be presented at the end of the semester as a part of the final examination. Prerequisite: ENGL 105.

#### COMM 482 Research Methods in Mass 2 Credits Media II

This second part of the course will guide the students to write a research project using the research proposal prepared in part I. The main focus of the course will be to guide the student write the main sections of the research project namely the introduction, literature review, research methodology, results and discussion, conclusion and recommendations. The course will also discuss the preliminary sections and appendices such as writing an abstract, preparing a cover page, table of content, writing the bibliography, appendixes etc. Other topics to be discussed include introduction to statistics, hypothesis testing, basic statistical procedures, data analysis etc. By the end of the course, the student guided by the supervisor approved by the department will write a major project between 10,000 to 12,000 words and defend it. Prerequisite: COMM 481

#### COMM 490 Internship in Mass Media

#### **3 Credits**

This is a ten (10) to twelve (12) weeks hands-on experience whereby students are attached to a mass media organization in order to acquire first-hand experience. Students are given an opportunity to apply the theory that they were taught and combine the same theory with career experience in mass media industry. At least 30 hours per week must be devoted to different tasks in different departments and the student must clock a minimum of 300 hours during the ten to twelve weeks internship. The student will be evaluated by both the direct supervisor in each department within the print media organization and the course instructor. There will be a weekly report written by the student and at the end of the internship, the student will produce a comprehensive report that will contain as exhibits the work done in different departments during the period of the internship. Prerequisite: must complete all the courses in the area of specialization.

#### COPA 203 Introduction to Public Relations 3 Credits

This course introduces students to the field of public relations. Some of the topics to be covered include different definitions and role of public relations, the history and growth of public relations, ethics and professionalism in public relations, communication in public relations, difference between advertising and PR, PR program, tools of PR, qualities of a public relations officer, image of PR and crisis management, code of ethics for PR firms, role of photography in PR, importance of marketing research for PR practitioners, Internal communication, careers in public relations, the value of public relations, Planning for results, Theoretical framework, Specialist PR, Corporate PR, Crisis PR.

#### COPA 204 Fundamentals of Advertising 3 Credits

This course introduces students to the field of advertising. Some of the topics to be covered include advertising defined, evolution of the definition of advertising, the components of modern advertising, roles and types of advertising, the key players in advertising, the development of advertising, advertising and publicity, history of advertising, objectives of advertising, advertising role in marketing, advertising and society, difference between advertising and marketing, designing advertising materials, the role of technology in advertising, the advertising business, advertising in contemporary culture. Three lecture hours and one session of a three-hour practicum per week.

#### COPA 233 Language of Advertising

This is a language for special purposes course focusing on the language used for advertising. The course provides a theoretical and practical foundation for a persuasive type of language to be used in advertising. Some of the topics to be covered include the nature of advertising, the function of advertising, features of advertising language, types of advertising, ethical issues in language used in advertising, advertising in print and electronic media, international advertising, analyzing language use in different adverts, translation of advertising messages etc. Students will apply the theory by preparing different types of adverts in English and any other language(s) they intend to use. Three lecture hours and one session of a three-hour practicum per week.

**3 Credits** 

#### COPA 248 Advertising and Promotion 3 Credits

This course covers different aspects of advertising and promotion. Some of the topics to be covered include introduction to advertising and promotion, the role of communication in advertising, promotion, media planning and selection, sales promotion techniques and procedures, evaluating of advertising effectiveness, advertising and promotion budgeting, theorizing advertising, the brand and integrated marketing communications planning, advertising agencies – organizing creative work, strategy and creativity, promotional media in the digital age, non-advertising promotion, international advertising, ethics and regulations of advertising and promotion, research in advertising, managing adverting agencies. Three lecture hours and one session of three hours practicum per week.

#### **COPA 303** Public Relations Writing

**3 Credits** 

This course introduces relevant writing skills for PR professionals. Students will be exposed to different types of writing that they are likely to encounter in their work. They will learn writing skills for advertising, marketing communication and public relations. Some of the topics to be covered include meaning of public relations writing, the tools of public relations writer, the process of public relations writing, planning and research, choosing the right message and medium, media relations and placement, design, printing, and desktop publishing, news releases and backgrounders, newsletters, magazines, and feature writing, brochures and other information places, print advertising, television and radio, speeches and presentations, computer writing and the internet, ethics and public relations writing, website design etc. Three lecture hours and one session of three hours practicum per week.

#### COPA 312 New Technologies in Public 2 Credits Relations

This course will equip students with the knowledge and practical skills in the use of new technologies for effective public relations. Some of the topics to be covered in this course include working smart using new tools, the computer, the internet and public relations, dictation and voice generation, public relations management tools, desktop publishing, mailing lists, online conferences, graphics design and photography, facsimile transmission, news release delivery, video and audio news release distribution, television, radio, and web monitoring services, teleconferencing, web conferencing, satellite media tours, cell phones, personal digital assistants, electronic blackboards, social media etc. Students will have a hands-on experience on the use of different tools in the laboratory. Three lecture hours and one session of three hours practicum per week.

#### COPA 313 Public Relations Campaign

#### ign 3 Credits

This course will equip students with a step by step approach on the strategic campaign process used in public relations practice. Some of the topics to be covered include the knowledge of developing campaign for public relations, the meaning of public relations campaign, campaign development process, identifying the target market, writing and placing news release, maximizing alternative press tools, creating press kits, creating brochures, communicating through newsletters, producing annual reports, understanding advertising, pitching and placing radio and TV, producing videos and DVDs, Using the internet, planning dinners and special events, reviewing and revising PR plan. Three lecture hours and one session of three hours practicum per week.

#### **COPA 323** Advertising Research

#### 3 Credits

This course introduces students to the concepts of research in advertising. Some of the topics to be covered include meaning research, anthropology and research, sociology and advertising, social class and stratification, CUBE Concept: Consumer behavior Research, family Life Cycle and buying Behavior, Psychology and advertising, research and the invisible brand, the changing role of research, the series of research steps in advertising, market, product, competitive, and consumer research, creative research and success in advertising, advertising strategy or message research, testing creative research, post-test research etc. Three lecture hours and one session of three hours field research for advertising per week.

#### COPA 324 Advertising Campaign Strategy 2 Credits

This course aims to empower students with essential skills to develop campaign in advertising. Some of the topics to be covered include meaning of advertising campaign, steps involved in advertising campaign, consumer mindset, laying the research foundation, understanding the company and consumer, map out the situation: knows the market, product and competition, turning findings into marketing and communication goals, building the marketing strategy, outlining the communication strategy and messaging, devising the campaign concept, defining the consumer touchpoint, planning the media strategy and tactics, evaluating the effectiveness of the campaign, locking down the pitch, Evaluating the effectiveness of the campaign. Three lecture hours and one session of three hours practicum per week.

#### COPA 325 Marketing and Public Relations 2 Credits

This course is an introduction to marketing and public relations. Some of the topics to be covered include the meaning of marketing, difference between marketing and public relations. how to use marketing in public relations, the promotional mix, the role of advertising and promotion in the marketing process, marketing strategy and plan, the four P's in marketing, developing a marketing program, marketing research, media relations, building beneficial partnerships, public relations and fund raising, the marketing plan, making budget decisions, the global perspective, ethics in marketing and PR, the marketing communications mix, marketing public relations and the organization it serves, the MPR Framework - Objectives, Target, Connectors, Message & Measure, About the Media, Non Media Connectors and word of mouth. Building a connectors List. The Press Kit and Press release, social Media, events, experts and interviews, crisis management, how to market a school. Three lecture hours and one session of three hours practicum per week.

#### COPA 327 Internet Advertising

2 Credits

**3 Credits** 

This course provides both the theoretical and practical skills in the use of the internet for advertising purposes. Some of the topics to be covered include the importance of the internet in advertising, internet regulation, web design, web advertising, advantages of web advertising, disadvantages of web advertising, internet directory advertising, internet customer service, ethics in internet advertising, legal restrictions and cautions, targeting techniques, online models, direct marketing, web measurements, pricing models, selling ads, market research, international advertising, legal issues, advertising for free, how to buy advertising space on someone web page, how to sell advertising space from your web site. Two lecture hour and one session of three hours practicum per week.

#### COPA 333 Contemporary Advertising

This course examines advertising as it is used in mass media. The course looks at the meaning of contemporary advertising, the dimensions of advertising, the social, ethical and regulatory aspects of advertising, the advertising business, the importance of marketing and consumer behavior to advertising, market segmentation and the marketing mix, marketing and advertising research, marketing and advertising planning, creative copywriting, creative art direction, creative production, media planning and selection, print media, electronic media, direct mail, outdoor advertising, transit and supplementary media, direct marketing and sales promotion, Creation of samples of contemporary advertising. Three lecture hours and one session of three hours practicum per week.

#### COPA 343 Advertising in Mass Media

#### **3 Credits**

This course examines advertising as it is used in mass media. The course looks at the meaning of advertising, seven basic media strategy, using television advertising, using radio advertising, using newspapers advertising, using magazines advertising, using outdoor advertising, using direct response and direct mail advertising, creating advertising, research in advertising, creating the copy, advertising ethics, print production, the television commercial, the radio commercial, the complete campaign. It examines how to produce advertising for print media, electronic media and public relations. Other topics include sponsorship in advertising, advertising agencies, the power of advertising, monitoring advertising, ethics in advertising, the use of computer technology in advertising, brochures, pamphlets, posters, banners, business cards, how to design a good advert, language used in advertising, the use of graphics in advertising decision making, the use of space, etc. Three lecture hours and one session of three hours practicum each week.

#### COPA 353 Advertising Management

#### **3 Credits**

This course is an examination of the field of advertising management which is made up of a system of interacting different elements. Some of the topic to be covered include the meaning of advertising management, advertising planning and decision making, the budget decision, setting advertising objectives, image and competitive position, attitude and market structure, creating and producing a copy, copy testing, developing the media plan, media research, the social and economic effects of the advertising, advertising regulation. Two lecture hours and one session of three hours practicum per week.

#### COPA 403 Public Relations and Social 3 Credits Media

This course introduces students to the use of social media in public relations. Some of the topics to be covered include the meaning of social media, the role of social media in public relations, the history of social media, different types of social media, public relations and the internet, the use of websites for public relations, blogs, social networking sites, twitter, Facebook, WhatsApp, the darker side of social media, the future of PR and social media, the social media strategy wheel, the eight social media skills for PRO. Three lecture hours and one session of three hours practicum per week.

#### COPA 413 International Public Relations 3 Credits

This course is designed to train PRO to deal with aspects of public relations that apply to different institutions and nations of the world. Some of the topics to be covered include meaning of international public relations, international corporate public relations, the importance of foreign language in international public relations, cultural differences, representing foreign corporations, international government public relations, the rise of NGOs, foreign public relations organizations, theories of international relations, diplomacy and mediation, peace building, causes of conflict among states, the importance of foreign languages in international relations, language of diplomacy, etc. Students will make an educational field trip in at least one organization practicing international PR. Three lecture hours and one session of three hours practicum per week.

#### COPA 423 International Advertising and 3 Credits Promotion

This course exposes students to the knowledge and skills for international advertising. Some of the topics to be covered include the meaning of international advertising, the role of international advertising and promotion, the international environment, the language factor in international advertising, global versus localized advertising, advantages of global advertising, problems with global advertising, global products local messages, decision areas in international advertising, advertising research, creative decisions, media selection, international advertising media, the role of other promotional mix elements. Three lecture hours and one session of three hours practicum per week.

#### COPM 200 Introduction to Print Media 3 Credits

This course is a foundation to print media and covers the entire spectrum of modern print media production. It is an overview of print media and some of the topics to be covered in this course include basic definitions used in print media, concepts and history of print media, development of books, invention and spread of printing press, characteristics and types of books, newspapers as the first medium for the mass society, different types of print media such as books, newspapers, magazines etc., organization of print media, newspaper and magazine writing, the impact of new technology on print media, print media in Kenya, etc. Students will have a field trip to visit at least a printing press. Three lecture hours and one session of three hours practicum per week.

#### COPM 210 Language of the Press 3 Credits

This course examines language for special purpose as used in the press. The course focuses on the language of newspapers as a case study. Some of the topics to be covered include meaning of language of the press, the nature of newspaper language, the functions of newspaper language, features of newspaper language, and types of newspaper reports. The course also looks at the difference between written and spoken language, style and vocabulary used in the print media, formal and informal language, vocabulary building, the importance of grammar, the use of reference tools such as dictionaries, thesauri etc. Three lecture hours and one session of three-hour practicum per week.

#### COPM 220 Graphics Design and Desktop 3 Credits Publishing

This course involves a practical introduction to the use of graphics design and desktop publishing (DTP) systems in the print media. Some of the topics include the meaning of DTP, different graphics design software used in DTP, designing principles, practical use of DTP software and other supporting software for preparing text and graphics, with the emphasis on text and typography. Some work in the area of electronic document publication such as web pages is also undertaken. Students are required to present a project by designing a document using DTP principles. The main software to be used for graphics design is in-design. The student will have a handson experience on using the software to design and create different documents. Three lecture hours and one session of three-hour practicum per week.

#### COPM 300 Editing Skills for Print Media 3 Credits

This course is designed to develop students editing skills in print media through theory and practice. The course covers topics such as the different stages of the writing process, meaning of editing, evolution of editing, definition of editor, functions of editor, rules of editing, editing of print media materials, basic editorial set up of a daily newspaper, the editing process, editing symbols, writing leads, language skills, writing headlines, newspaper editing, magazine editing, book editing, editing using a computer etc. The course has an editing project done either as a group or individual. The instructor will assign the project to the students and they will present it at the end of the semester. Three lecture hours and one session of three hours practicum per week.

#### COPM 310 Photography and Photojournalism

#### **3 Credits**

This course introduces photography and photojournalism. It presents the history and methods of photojournalism and examines the evolution and role of photography in print media. Some of the topics to be covered include the meaning of photojournalism, photographic camera, getting to know your camera, uses and kind of photography, history and development of photography, elements of photography, photographic equipment, photo editing, photography lighting techniques, twenty ways to improve your photos, essential qualities for photojournalism. Students will develop through practical work, the techniques of the photojournalist. Attention is also given to ethics and of image manipulation. Three lecture hours and one session of three hours practicum per week.

#### COPM 315 School Yearbook Production

**3 Credits** 

This course is a practical approach that guides the students on how to prepare a school yearbook. The course deals with both the organization and content of the school yearbook. Topics to be covered include meaning of a school yearbook, planning for the yearbook, determining the format, choosing the theme, yearbook sections, writing captions for the yearbook photos, preparing the index, copy editing the yearbook, developing a style guide, proofreading, writing headlines, cropping photos, layout of the yearbook, designing the yearbook, graphics, producing the yearbook, the role of the editor-in-chief, choosing the printer, deciding on the yearbook cover, financing the yearbook, staff organization of the yearbook such as sponsor, editor-chief, layout editor, art editor, photo editor, copy editor, writers, photographers, copy readers, proofreaders. Students taking this course will prepare a school yearbook as a project that will be part of their final grade. Three lecture hours and one session of three-hour practicum per week. Prerequisite: COPM 220, COPM 300 and COPM 310.

#### COPM 320 Feature and Editorial Writing 3 Credits

This course has two parts: writing a feature story and editorial writing. In the first part, feature story is introduced. Topics discussed in this part include different styles of feature stories (e.g.: anecdotal features, suspended interest features, profiles, question and answer etc.), characteristics of feature writing, parts of a feature story, the rules, planning, the news feature, feature ideas, the long story, organizing the story, The second part of the course deals with editorial writing. It covers what is editorial writing, how to prepare an editorial, structure of editorials, types of editorials, recent trends and challenges in editorial writing. Three lecture hours and one session of three hours practicum per week. Prerequisite: COMM 240.

#### COPM 330 Article Writing for Print Media 2 Credits

This course is designed to equip students with the skills of writing an article meant for publication in a newspaper, magazine or newsletter. Some of the topics to be discussed include stages involved in the writing process, the use of Whyquestions in article writing, the importance of grammar and punctuation marks, the use of a computer in article writing. The course will also discuss how to write different types of articles such as how-to-do articles, the interview article, the personality profile article, the general expository article, writing a good story, writing headlines, captions, sub-heads, using the inverted pyramid, selecting and using stories, selecting the appropriate picture for the story, editing for tightness, accuracy and style etc. Two lecture hours and one session of three-hour practicum per week.

#### COPM 390 Advanced Photography and 2 Credits Photojournalism

This course is a continuation on photography and photojournalism. It examines more skills required by a photojournalist. Some of the topics to be covered include different types of photographic camera, digital cameras, photo editing, software used for photo editing, making a portfolio, uses and kind of photography, elements of photography, photographic equipment, photo editing, photography lighting techniques, photos, essential qualities for photojournalism. Students will develop through practical work, the techniques of the photojournalist. Attention is also given to ethics and of image manipulation. Two lecture hours and one session of three hours practicum per week.

#### COPM 400 Newspaper and Magazine 3 Credits Production

This course is a combination of theory and practice of newspaper and magazine publishing. The course has two parts: part one looks at newspaper production and management while part two looks at magazine production and management. This is a hands-on, practical course that will take students through the process of designing a newspaper or magazine from scratch up to its publication. Students will conceive, design and produce a prototype magazine and newspaper up to cameraready stage. They will learn to generate story ideas, edit copy, gather and edit pictures, fact check, organize content, select typography, and design pages. They will produce a weekly newsletter to apply the theoretical skills taught in class. The course includes an educational field trip to a few media houses where students will be exposed to the process of newspaper and magazine production first hand. Three lecture hours and one session of three-hour practicum per week. Prerequisite: COMM240, COPM 300, and COPA 343.

#### COPM 450 Book Writing and Publishing 3 Credits

This course covers the process of book writing and publishing. Some of the topics to be covered in this course include the role of books, the origins of books, early books and the elite, books and their audiences, scope and structure of the book industry, trends and convergence in book publishing, stages of book writing and publishing, different sections of a book, censorship, new technology and books, traditional books, electronic books, author/publisher relationship, legal matters, editing a book, book binding, promotion and sales, essential aspects of book publishing etc. Students must undertake at least one educational trip to some publishing firms and printing press in order to get first-hand information on the publishing and printing process. Three lecture hours and one session of threehour practicum per week.

#### COPM 460 Literature Evangelism for Print 3 Credits

This course covers the theory and practice of literature evangelism as used in the SDA Church. Some of the topics to be covered in this course include the meaning of literature evangelism, the mission of Church literature, selection of colporteur evangelist, students and colporteur evangelism, points of selling, the colporteur evangelist and finance, books that give the message, health publications, magazine ministry, the first literature evangelists, the pioneers of Adventist work regarding publications, the psychology of selling, five basic motives for buying, spiritual preparation, intellectual and mental preparation, physical preparation, making a daily program, attitude of literature evangelism, four-point preparation of literature evangelism, different phases of sales, handling objections, territory of work, twelve rules of an ideal presentation, the value of time, filling a weekly report, the importance of speech communication in literature evangelism. The student will have a practicum of one month literature evangelism preferably during the month of August. Three lecture hours and one session of three-hour practicum per week.

#### DEST 100 History, Theories and Concepts 3 Credits of Development

This is an introductory course in development studies which provides a vigorous inter disciplinary, theoretical applied and an integrated view of development by focusing on historical processes of social, economic and political transformation that has shaped development in the contemporary world. Concepts, theories and models of development; Third World and theories of development; poverty-types, causes and alleviation measures; Agrarian question and food security; and challenges of development in third world countries will be covered.

#### DEST 101 Politics in and of Development 3 Credits

Topics to be covered include: definition of politics and identification of political systems of the world; the general theories of political economy: Marxism, dependency, and liberal etc. The role of politics in the development policy formulation and implementation. Examination of the role of governance on levels and quality of development: how Political factors explain local, regional and global socio-economic development disparities. International politics and institutions and regional development. The politics of globalization. Classical examples of successful national development stories and the underpinning political secrets. The Kenyan (and African) experience. Emphasis on participatory politics as the benchmark for desired development.

#### DEST 121 Culture and Development

**3 Credits** 

The gist of the course is comparative examination of the various people's ethnic backgrounds in relation to actual and propensity to develop: also dealt with is background history, the belief and value system, literacy status, social administrative structure, economy, interaction with the surrounding communities and worldviews. Environmental awareness, cultural and social demands on human growth and development: resourcefulness and creativity are also examined.

#### **DEST 170 Communication in Development 3 Credits**

In this course, issues of communication theories, strategies and networks will be basic; development information and evaluation of its impact in the community; the community and communication for development.

#### **DEST 215 Human Rights**

**3 Credits** 

The course will deal with: the concept; definitions; the history and assumptions of human rights, their operation and implementation. Human rights rules and laws. Courts, the police and mob justice in the context of human rights; 'truth', 'justice', and 'morality' and human rights. Minority rights, new social movements, women's rights, truth commissions, and amnesties. Development and human rights in perspective circumstances at the work and living environments and the corridors of justice; access to basic necessities. Focus on LDCs.

#### DEST 240 Community Leadership and 3 Credits Development

Topics covered under this course include: identity, perspectives, structure and history of a community, issues, concepts, processes, key players, lessons learned, best practices, problems and techniques of community development; community organization, mobilization and its empowerment through participatory development approaches and accountability; factors of community change and change agents: the role of the community, the government and agencies like CBOs in community development. Relevance of community development to LDCs; development policies and strategies; the art of feasibility studies and prioritization. Leadership; the theories, principles and styles of leadership.

#### DEST 250 Gender Issues in Development 3 Credits

The cores in this course are gender issues: identity, causes and effects, relations and ideology. Also to be tackled will be: Theoretical debates on and different conceptual approaches to gender: Women in Development, Women and Development, Gender and Development. Human rights and gender: a general view; violation of rights, how and why; Migration measures: education, socio-cultural, legal and administrative. Gender and Health; Women status and empowerment: meaning; necessity; what it involves; Easing socio-cultural constraints and practices on women (women burdens); household dynamics and gender relations. Gender roles and gender relations with regards to: agriculture; environment; industrialization; development policies, state and institutions; education; health; property inheritance, succession, marriage, employment opportunities vs. gender and development. The politics of being a woman, poverty and gender including class and ethnicity are other topics besides gender planning, gender consciousness and gender advocacy - struggle for change.

#### DEST 260 Co-operative and Other Social 3 Credits Movements in Development

The concept of a co-operative. The history, goals and structure of co-operatives. The legal aspects. The co-operative movement. Types/forms of co-operatives. The process of setting up a cooperative as a legal entity. Role of co-operatives in community development: how the development process is enhanced and/ or blocked and threatened. Challenges in co-operatives and the para co-operatives and the way forward. Definition, theories on, types, development and lifecycle of Social Movements. Field trip is undertaken as determined by instructor.

#### DEST 265 Environmental Impact 3 Credits Assessment

The course Environment Impact Assessment the natural environment and humankind and Development; specific topics include: Definitions; the need for; history; principles of environmental impact assessment; timing; process; tools; participants; EIA reporting format; EIA vis-à-vis environmental impact statement (EIS); environmental advocacy sustainable living.

#### DEST 280 NGOs: Management and 3 Credits Leadership

The course is geared to the study of the basic principles of management and the functions of a manager in planning, organizing, staffing, directing, controlling, communicating, problem identifying, and decision-making models. It also includes the study of and styles of leadership; different motivation techniques; evaluation of leadership and management organs and functions. Emphasis on NGOs, their history, the key conceptual concerns; the skills and tools for their Management. NGOs within the legal framework; NGOs and other actors in global and local socio-economic development contexts. The dynamics of the NGO sector in a broader development and global social change context: the position of NGOs in the development process. Field trip as determined by instructor.

#### DEST 307 Research Methods for Development

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**3 Credits** 

This course introduces the learners to the identification of and solutions to development problems through research. Covered in this course are topics on: How to identify a researchable problem; topic selection; objectives formulation; hypotheses; as well as theoretical and conceptual frameworks; review and citation of literature; research methodologies, designs, tools; methods of gathering, analyzing and interpreting data; discussing findings; presenting results, making conclusions and recommendation. Prerequisite: ENGL 105.

#### DEST 350 Conflict Management and 3 Credits Resolution

Topics include: Environment as a resource base; demand for vs. supply of resources; Concept of conflict; causes of and players

in conflict; vulnerable groups; conflict resolution and factors to consider; key players in resolution; role of international community

#### DEST 363 Urbanization and Development 3 Credits

The course will examine the urban center and region; Reasons for urbanization; the Urban physical and social structure and explanation theories; Urban analysis; urban population sources and dynamics; Urban ecology and its implications; Sustainable urban growth and management; other topics include the green cities; Over-urbanization; urban transformation; urban decay and urban centers as hubs of regional development.

#### DEST 370 Project Planning, 4 Credits Implementation, Monitoring and Evaluation

Topics covered include the concept of projects, the project cycle, problems and needs analysis, project identification, formulation and implementation; other topics are: parameters and techniques used in assessing project costs and benefits. Project monitoring and evaluation methodologies. Difference between monitoring and evaluation; M & E Frameworks; M & E plans and components; Define an indicator as used in M & E and the characteristics of a good indicator and, factors affecting M & E of projects.

#### DEST 373 Disaster Preparedness, 3 Credits Mitigation and Management

The course covers: definitions, types and causes of disaster; disaster in history; the disaster management cycle; disaster mapping; the Sphere Standards; role of local community, government, nongovernmental and multilateral organizations like the United Nations, and other actors in disaster management.

#### **DEST 375 Rural Development**

**3 Credits** 

The course explores the concept of ruralism: characteristics of a rural setting. Resources for rural advancement. Cultural aspects of rural wealth and poverty; the land tenure system; theories, approaches and programs of rural development; community sensitization and mobilization for development; the central and local governments in rural development and Catalysts of rural development.

#### DEST 380 Studies in Community Health 3 Credits

This course covers: The state of the world's health; The health status of Kenya; Community health indicators overview; Mutualism between health and human activity; Progress towards "Health For All in the 21st Century: ameliorative measures-formal and informal; Past, current and future plagues, including the global AIDS epidemic; Infectious and Chronic disease: prevention and control-community provision; Community Nutrition and empowerment; Health Survey methodology; Transcultural health practices; Change agent strategies. Organizations involved in international health work.

#### DEST 386 The Mass Media in Development 3 Credits

The course shall overview the art of communication and the Communication Media; Mass media; the role of mass media in the socio-economic Development process; Ethics and the mass media. Theories of mass media; agenda setting and the media; Media and the law; Mass media and Politics; Liberalization and the media; Challenges of the mass media.

#### DEST 390 Principles of Population and 3 Credits Demography

Topics covered in this course are: Demography as a field of study; Demography Components: Fertility, Mortality, Migration and Marriage; factors affecting population change, including fertility and mortality, changing sex ratios, the growth of megacities and international migration. Population Trends in time with special focus on Africa: area fertility levels and trends; Maximum fertility rate, Age limits, Post-partum fertility, Voluntary fertility; Fertility factors: psychology, customs and other practices, socioeconomics. Families and households; Population and natural resources - the relationships between population issues, and economic, social and environmental aspects of development. The implications of population growth for food supplies and the environment at local and global scales. Demographic consideration in planning; Population policies. Population theories; Population and savings; investments, employment and productivity. An overview should be given of: population theories in relation to natural resources, environment and development; population and food. Demographic consideration in planning: Population policies. Population theories: Population and savings: investments. employment and productivity.

#### DEST 392 Development Perspectives of 3 Credits Globalization

In this course shall be tackled: The concept, definition and history of globalization. The theories and the supplied rationale of globalization. Pertinent globalization processes with emphasis on their implication for local regional and global development: 'Globalization footprints'. Development inequity and inequality in a globalizing world: the winners and losers under globalization. The politics for and against globalization. The prospects of globalization in the contemporary or other form, as vehicle for global universal development.

#### DEST 394 Field Attachment for 3 Credits Development Studies

This course requires that a student be attached to a Development Studies concern where he/she shall be exposed to real life experiences of what has been covered theoretically in class. It is also meant to bring into contact the student and prospective employers after college work. The attachment ordinarily lasts one semester i.e. at least 600 clock hours. A written report should be written by the student outlining the nature of work involved in, its significance to development, lessons learned, challenges encountered and how dealt with, conclusions and recommendations. An, assessment report on a university prescribed form shall also be submitted by the immediate supervisor at the attachment point. The students will make arrangement for the course instructor to assess him/her while on attachment. After completing, a presentation is required of the students in a panel of his/her fellow students and friends, lecturers and chairperson as well as other examiners. The course is open for seniors.

#### **DEST 396 Aid and Development**

#### **3 Credits**

This course examines the concept of development aid, its history, nature and various forms. It also examines the factors

that influence giving or obtaining. A consideration of the rationale and effectiveness of aid in the modern world shall be done based on experiences from selected developed and developing countries; Globalization and development aid; the ethics of aid.

#### DEST 403 Human Resource Development 3 Credits and Management

Topics covered are summarized thus: Role of Human Resource Management and development in development process. Human Resource Development: Leadership and management challenges; motivation, performance and development. Theoretical frameworks of effective leadership. Managing People: differences, attitudes and behavior; Developing competencies. Stress management at work; appraisal, motivation discipline, conflict resolution; job design for effective performance: appropriate workforce; promoting organizational excellence for effective performance. Managing Activities: The role and tasks of managers: delegation, motivating, planning. Communication in organizations; Working environment: organizational functions, cultures, structures and differing organizational design principles. Improving the working environment; Managing in a competitive, globalizing environment. Managing information: in the decision and communication processes of organizations. Human Resourcing in Organizations: Identification of the need for: motivation and development people within the organization; employee withdrawal and redundancy. Managing Training Functions: Managing Development: Development mindsets, perspectives, skills/competencies.

#### DEST 405 Development in the Legal 3 Credits Framework

The course covers: The nature of law; general principles of law; law as applied to the various aspects of development to the implementers and beneficiaries. Conflicts in application of law in resource planning, exploitation and management. Resolution of the conflicts. The exploitation and conservation of a country's resources: riparian and common heritage resources; the concept of equity. Kenyan and international law in context.

#### DEST 410 Proposal and Grant Writing 3 Credits

Summary of the topics covered: Grant writing: the practice and rationale of Grant writing. Grant planning and writing as a phase in the whole program planning, development, implementation, and evaluation cycle. Guideposts in the process of grant proposal writing: Prepare: define project: identify the right funding sources: contact the funders: acquire proposal guidelines; know the submission deadline; determine personnel needs; update your timeline. Proposal writing: Narratives: Statement of need, approach, Method of evaluation, Project timeline, Credentials, Budget and factors funders use to assess budgets; Supporting materials; Authorized Signatures; Specifications; Submission checklist. Follow-up. Time-honored fundamentals elements of a grant write-up: Cover Letter; Proposal Summary; Introduction to the Organization; Statement of Problem or Need; Project Goals and Objectives; Methods and Schedule; Evaluation Criteria and Process and Budget. Conditions for successful grant writing: planning, searching for data and resources, writing and packaging a proposal, submitting a proposal and follow-up. Development partners vs Development donors.



#### DEST 427 Regional Development Planning 2 Credits

The course entails planning ideas that have been used to plan cities and regions. (Historical overview), concepts, principles, the process and techniques of environmental and resource planning; an overview of models of the planning process a review of techniques for regional planning analysis: economic impact assessment, benefit-cost, multiple accounts evaluation, land suitability analysis, implementation methods, and dispute resolution methods. Regional planning instruments: growth policies, capital works, transportation, etc. Application of planning to urban and regional problems with regard to issues like land use, housing, human services and environment. Also covered is: The legislative framework for planning. Ethical implications of planning; Leadership principles to planning; Participants in the planning process; Sustainable Development.

#### DEST 432 Entrepreneurship, Business 3 Credits Management and Financial Accountability

The course examines the role of entrepreneurship and Small and Medium Enterprises (SMEs) in development; and enable students to gain an in-depth understanding of entrepreneurship and business environment, analyzing multi-dimensional entrepreneurship approaches and the environment dynamics, understanding of financial statement and literacy, capability of understanding the nature of business transactions, identification of relevant economic events for reporting and determination of appropriate financial measures for those events. It also includes analysis of the effects of those events in the organizations' performance and financial conditions. Course content also covers: Introduction to entrepreneurship; theory and philosophy of entrepreneurship; pathways to entrepreneurial ventures, legal issues, access to finance; assessing entrepreneurial opportunities, marketing challenges for entrepreneurs; the environment, economy and entrepreneurship & Eco-preneurs; ethics, social responsibility, social entrepreneurship; global opportunities/international entrepreneurship; SME development, role of SMEs in development; policy issues affecting SMEs and case studies of SMEs and, Writing of the Business Plan.

#### **DEST 450 Ethics in Development**

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#### **3 Credits**

The course relates the objectives, means and outcome of development process to the environmental status with a view to minimizing any undesirable imbalance thereby ensuring sustainability of both development and environment. Other topics include: definition, the concept and the sources of ethics; ethical perspectives of the development paradigms; culture and value systems; development ethics vis-à-vis environmental ethics; ethical dimensions of specific development strategies; equal and equitable sharing of resources: marginalization and discrimination.

#### DEST 457 Studies on Displaced Persons 3 Credits

This course introduces the student to concepts, issues and problems of people forced to emigrate commonly called refugees. It also handles: types of refugees; the refugee problem in retrospect; Bases of displacement; the geographical extent of the refugee problem; the scale of the global refugee crisis; the complexity and implications of the problem; International response and capacity to cope with the problem. Examination of the Policy and other responses to the refugee problem will be done.

#### **DEST 470** Sustainable Development

**3 Credits** 

The course shall cover: the history and concepts of Sustainability and Sustainable Development; Fundamentals of Sustainability; Development overview; Sustainable Development and its anatomy. Population Growth & Sustainability; Use and Sustainability of natural resources: bio-resources, Water, pedolithospheric, Energy and other resources. The linkages among economic, social, technological, and environmental issues in achieving a sustainable, global society through the multi- disciplinary use of sound scientific, engineering, ethical, political and economic knowledge and interventions. Effect of lack of knowledge on connectedness of activities and natural phenomena on earth: implications of unsustainable utilization of resources: global warming, deforestation, loss of soil fertility, pollution, chemical contamination, loss of biodiversity, overpopulation, the hole in the ozone layer, economic failures, social programs that do not work; Local, regional, global dimensions of sustainability; deep/green ecology.

#### DEST 485 Independent Study in 3 Credits Development Studies

This is an instructor- directed individual research study of a researchable topic in the realm of development, chosen by a student who has demonstrated ability, desire and responsibility necessary to successfully complete such study. The topic should be chosen in consultation and the approval of the instructor and/or Chair of the Department. The course ordinarily spans one semester but may if need be, spill over to another semester - indicative of the amount of input and quality of work expected of a student. The course prepares the student for post-graduate research studies. It presupposes the student's exposure to and therefore demands practical application of theoretical knowledge of research techniques and methods. Prerequisite: DEST 307.

#### EDPC 119 Principles of Self Esteem

2 Credits

2 Credits

The course provides an understanding of self-esteem as a fundamental ingredient in spiritual, emotional and social health issues. Principles discussed include Development of selfesteem, Basics of human worth, Basics of unconditional love, and Basics of growing, accepting that you aren't perfect, taking stock of your character, and preparing for setbacks.

#### EDPC 122 Foundations of Counseling 3 Credits

The course is a survey of the counseling profession and provides knowledge, skills and attitudes for beginning counseling students. The functional dynamics of process model, principles of counseling process, counseling skills, worldviews and how they develop, Biblical and Psychological views of man, and building involvement are among the topics that are covered. A Christian philosophical base for counseling is established.

#### EDPC 126 HIV/AIDS Counseling

The course equips learners with skills that enable them to provide counseling, support and care for people living with HIV/ AIDS. The origin of HIV, The immune system, AIDS infection, HIV transmission, HIV Testing/Prevention and Psychological/Socioeconomic aspects of HIV/AIDS are discussed.

#### **EDPC 150 Techniques of Counseling**

#### 3 Credits

The course introduces learners to the techniques used in counseling practice. These include Attending Behavior, Client Observation, Questioning, Encouraging, Paraphrasing, Summarizing Reflection of feelings/meaning, Focusing, influencing and Confrontation. Some lecture sessions are devoted to role plays. Prerequisites: PSYC 110, PSYC 111 and EDPC 122.

#### EDPC 175 Career Choice

#### 2 Credits

The course deals with helping individuals make decisions related to building a career as well as the process of career development. Topics covered in this course include educational guidance, vocational guidance, personal and social guidance. Theories of occupational choice and instruments evaluating personality and occupational interests are also discussed.

#### EDPC 255 Counseling the Aging

The course deals with the analysis of typical psychological, physical and social problems in the lives for the aged, as well as the role played by counseling. Myths associated with old age, Loss, Loneliness, Health, Depression, Drug abuse, Social engagement, Dementia, Confusion, and Preparation for death are addressed. Prerequisites: PSYC 110, PSYC 111 AND EDPC 122.

#### EDPC 262 Abnormal Psychology

#### 2 Credits

2 Credits

**3 Credits** 

2 Credits

The course is a study of the types, nature and development of mental disorders, their effects on affected individuals/families/ communities, and methods of treatment. Early onset/Substance abuse/Anxiety/Mood/Sexual/Personality/Somatoform/Late onset disorders and schizophrenia are discussed. A field trip to facility dealing with mentally sick individuals is helpful. Prerequisites: PSYC 110, PSYC 111 and EDPC 122.

#### EDPC 270 Ethics in Counseling

The course addresses philosophical foundations of ethics in the counseling profession. These include Professional competence, Training, Supervision, informed consent, Clients' rights, Confidentiality, Duty to warn and protect, Malpractice issues and Ethical concerns in multi-cultural counseling,. Prerequisites: PSYC 110, PSYC 111 and EDPC 122.

#### EDPC 275 Christianity and Counseling

In this course, Biblical as well as Theological themes in counseling are examined and illustrated by theories and approaches of well-known theologians including Jay Adams, Howard Erych, Wayne Mack, David Powlison and Edward Welch. The church and counseling, the counselor, personal issues, developmental issues, interpersonal issues, identity issues and spiritual issues are also discussed. Prerequisites: PSYC 110, PSYC 111 and EDPC 122.

#### EDPC 280 Academic Counseling

#### 2 Credits

The course enables learners to identify and develop appropriate attitudes and study skills required for academic excellence. Topics covered in this course include significance of guidance and counseling in learning institutions, attributes of the school counselor, problem of the substance abuse, relationships, study skills, academic performance, general discipline, self-esteem, poverty, and other challenges facing students in schools and colleges are examined and appropriate intervention strategies are sought.

#### EDPC 295 Premarital Counseling

#### **3 Credits**

The course discusses the importance of premarital counseling for marital preparation and the role of the church and its ministers. What marriage is, biblical view of marriage, sex and sexual compatibility, communication, family spirituality, role of family members, extended family, parenting, family finances and divorce are some of the areas that are covered. An overview of different evaluation instruments emphasizing a Biblical model is carried out.

#### EDPC 317 Psychology of the Exceptional 2 Credits Child

The course focuses on characteristics of exceptional children and the problems faced by the concerned children, parents and school system. Methods of assisting such children in emotional, social, physical, and educational development are discussed. Prerequisites: PSYC 110, PSYC 111 and EDPC 238.

#### EDPC 331 Counseling Services 2 Credits Management

The course deals with basics of developing, organizing, administering and maintaining a counseling program in different settings such as schools, churches, hospitals, rehabilitation centers and prisons. Consideration of practical problems and existing national guidance are presented. A visit to an organization having such a program is helpful. Prerequisites: PSYC 110, PSYC 111, EDPC 122 and EDPC 150.

#### EDPC 333 Chemical Dependency in 2 Credits Diverse Populations

The course is a continuation of EDPC 393 and discusses chemical dependency (drug abuse) among specific population. Emphasis is given to etiology, treatment and prevention of behavior, and populations addressed include the Disabled, the Elderly, Adolescents, Athletes, the Military, and dual-diagnosis patients. Prerequisites: PSYC 110, PSYC 111 EDPC 122 and EDPC 393.

#### EDPC 374 Crisis Counseling

The course explores basic issues in crisis counseling and includes development of skills for a short term therapeutic approach. Specific case studies and examples will help students to develop a Biblical model of crisis counseling: The history and techniques of crisis counseling; Understanding the role of a crisis counselor; Dealing with pregnancy, birth and child bearing; Dealing with the crisis in pre-puberty and adolescence, young adult age, middle age and old age crises are some of those that are addressed.

#### EDPC 385 Child and Adolescent Counseling 3 Credits

The course addresses typical problems faced by children and adolescents and examines specific counseling theories and methods used in helping them, Play, Narratives Story-telling, Art, Group Counseling, Family therapy, and Solution-focused approaches are emphasized. Prerequisites: PSYC 110, PSYC 111 and EDPC 122.

#### EDPC 386 Group Counseling

#### 2 Credits

The course is a study of the dynamics experiences in groups. Group stages, How they are led, Purposes of groups, Skills for group leaders, Dyads, Rounds, Cutting off, Drawing out, and

#### 2 Credits

Exercises are addressed. Learners are organized into groups which occasionally meet for group experiences. Prerequisites: PSYC 110, PSYC 111 and EDPC 122.

#### EDPC 387 Marriage and Family Counseling 3 Credits

The course deals with what marriage is, Biblical and social view of the family, the different phases in the family, cycle after honeymoon, the parenting years and the challenges encountered, the middle age years and their challenges, causes of marital conflict, communication, quality time, conflict resolution, extramarital affairs, myths about affairs, guidelines for counseling couples involved in an affair, and how expectations and needs disrupt marriages are some of the topics that are to be covered in this course. While emphasizing a Biblical model overviews of marriage enrichment and informational resources for practical applications are presented.

#### EDPC 391 Theories of Personality

2 Credits

The course discusses and assesses current theories of personality development in the context of Biblical concept. Definitions of personality, type and trait theories, psychoanalytic theory, social learning theory, self-growth theory, humanistic theories, personality determinants and personality disorders are some of the areas that are covered. Current personality assessment instruments as well as other methods of assessment are evaluated for their suitability for us in African settings. Prerequisites: PSYC 110, PSYC 111, and EDPC 122.

#### EDPC 393 Concepts of Chemical Dependency

#### 2 Credits

The course is an introduction to the wide subject of chemical dependency (drug abuse). Drug Social use, Abuse, Tolerance, Addiction, Withdrawal symptoms, and Modes of administration are discussed. The main classes of drug abuse substances (CNS depressants, CNS stimulants, Hallucinogens and Narcotic Analgesics) are also reviewed. Prerequisites: PSYC 110, PSYC 111 EDPC 122.

#### EDPC 396 Depression and Stress Management

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#### 2 Credits

The course explores the different kinds of depressors (agents that cause depression), Stressors (agents that cause stress), their effects and methods of prevention/management. Biblical perspectives of depression; Psychiatrists, pastors and counselors working together; Symptoms of depression; Counseling for depression, General adaptation syndrome, and Coping are some of the areas addressed.

#### EDPC 397 Current Theories in Counseling 3 Credits and Psychotherapy

The course makes and overview of current theories in counseling and psychotherapy. These include Rational Emotive behavior Theory, Reality Theory, Person-entered Theory, Jungian Analytical Theory, Adlerian Theory, Existentialism, Behaviorism, Gestalt Theory, Psychoanalytic theory, Transactional Analysis theory, Behaviorist Theory, and Rogerian. Attention is given to historical development, counseling/therapy models, the therapeutic relationship, the function and role of the counselor and the skills within the various theories. Prerequisites: PSYC 110, PSYC 111, EDPC 122, and EDPC 150.

#### EDPC 398 Organizational Psychology

2 Credits

The course is concerned with analyzing system dynamics that maximize performance and excellence in an organization. The individual's work, the human factor of business, understanding of external and internal customer relations in light of changes that constantly occur in organizational structures, leadership styles and structure and organizational theories/techniques are some of the topics that are discussed.

#### EDPC 465 Topics in Counseling

2 Credits

The course explores areas in Counseling Psychology that have not been covered in any of the courses in the programs such as communication, the role of suffering , conflict management and other current counseling issues. Prerequisites: PSYC 110, PSYC 111 EDPC 122 and EDPC 150.

#### EDPC 480 Counseling Research Methods 3 Credits

The course addresses the issue of moving beyond common sense in seeking answers to puzzling questions about human behavior. It therefore discusses the different techniques used for conducting systematic research including Naturalistic observation, Case study designs, Self-report measures and surveys, Correlation designs, and Experimental designs. Prerequisites: PSYC 110, PSYC 111, ENGL 105, EDPC 122 and EDPC 150.

#### EDPC 479 Psychological Testing and 2 Credits Assessment

The course reviews the history of testing and discusses the objective instruments that are used to assess intellectual psychologies and personality functioning (psychometrics testing). Selection, administration and scoring or standardized tests for the purpose of assessment are discussed. Among the instruments (psychological tests) discussed are those of Intelligence, Aptitude, Education, and Personality. Prerequisites: PSYC 110, PSYC 111 EDPC 122 and EDPC 150.

#### EDPC 484 Cross Cultural Counseling 2 Credits

The course focuses on counseling between/among individuals of different cultures. The course therefore provides awareness, cultural sensitivity and a global perspective to the discipline of counseling and emphasizes the role of the counselor in such counseling settings. Topics include Politics of counseling, Barriers of cross cultural counseling, Cultural identity development, Mistrust in cross cultural counseling and Cross cultural communication/Family counseling. Prerequisites: PSYC 110, PSYC 111 EDPC 122 and EDPC 150.

#### EDPC 489 Counseling Practicum

2 Credits

**3 Credits** 

This course provides Counseling Psychology learners with supervised counseling experiences in preparation for professional counseling practice. Prerequisites: Completion of 40 credits of counseling courses which should include EDPC 150, EDPC 270, EDPC 386, and EDPC 397.

#### ENGL 105 Writing Skills

This course is designed to prepare all students, across faculties, for successful academic writing. The course examines specific strategies of composition as they pertain to expository and argumentative writing. A considerable amount of time will also be devoted to vocabulary growth, spelling, and mechanics. The course will also focus on writing a research paper – the steps involved in writing a research paper, library skills, finding, evaluating and organizing material, documentation, editing and proofreading.

#### ENGL 106 Speech Communication

#### 1 Credit

This course studies the human communication process, focusing on individual verbal interaction with other persons, in small groups and in public communication situations. The course provides students with practice in speech preparation and presentation, both as individuals and as a team. Some of the topics to be covered include planning and preparing speeches, types of speeches, group presentation, and job interview techniques. Students also have an opportunity to perform oral and written critical evaluations of fellow students' speeches.

#### ENGL 114 Introduction to the Description 3 Credits of English

This course is designed to introduce the learner to basic terminologies in the description of the English language. One is led to an understanding of the grouping of English words and their formation. Word clusters are also studied as well as their functions and patterns. The student is introduced too, to the sounds of the English language and their production. Principal elements of sentence structure e.g. subject complement and functionally corresponding phrases and clauses. Types of clauses: their syntactic and semantic features. Combining and condensing sentences: simple, compound and complex sentences. Substitution and Ellipsis.

#### ENGL 117 Advanced Description of English 3 Credits

This course offers a detailed description of the English language in as far as the structure and components of the language are concerned. Aspects covered include history of the language, sounds of English as well as its structure. These involve an overview study in phonetics, phonology morphology, morphology, semantics and pragmatics.

#### ENGL 130 Introduction to the Study of 3 Credits Language

This course examines the structure of language, theories on the origin of human language; language families and classification; language as a system of communication; spoken versus written language. The definition of Linguistics and various levels of Linguistic description e.g. phonetics, phonology and Morphology, Syntax, Semantics, Pragmatics and Discourse. Scope of linguistics in relation to other disciplines e.g. Sociology, Psychology, History, Geography and Mathematics and other related disciplines. It also covers sociolinguistics terms such as dialect and idiolect, accents, bilingualism and multilingualism.

#### ENGL 148 English Grammar and Usage I 3 Credits

This course takes a semantic approach to the study of grammar. It deals with semantic types associated with grammatical classes such as noun, Adjective and Verb. Vocabulary under each semantic type is explored, and common meaning components in each are studied. Also covered are the following: Finite and non-finite forms of the verb; use of verb to express tense, aspect, voice and mood; traditional versus modern grammar view of tenses; transitive and

intransitive verbs; the noun phrase; determiners and modifiers; prepositional and conjunction use of some functional words; adverbial and adjectival usage; concord case and role analysis.

#### ENGL 216 Origins and Development of 3 Credits English

This course entails a historical survey of the English language; Old, Middle and Modern English; the spread of English as a native language, e.g. American, British, Australian, Canadian, South African. The course also covers characteristics of major varieties, and standard and non-standard English. The course also tackles the spread of English as a second language especially in former British colonies in Africa; status and function of English in relation to indigenous languages; evolution of local varieties (e.g. West African, East African, Indian) and their linguistic features; English as a world pidgin and creole.

#### ENGL 217 Phonetics and Phonology 3 Credits

The course gives a broad definition of Phonetics and Phonology and the differences between the two disciplines: Then it focuses on articulatory phonetics and the technical terms required for the description and classification of speech sounds, speech production mechanisms and speech sound symbols. It also deals with the manner in which vowels and consonants are produced and the parameters used in their description. The main thrust of the course is on the application of phonetic science to the teaching of proper pronunciation. Practical exercises in phonetic transcription and articulation will be emphasized. Phonology: phone, phoneme and allophone; Phonological conditioning; complementary distribution and free variation. Phonological processes: elision, assimilation, liaison and hiatus; the syllable in English.

#### **ENGL 218 Morphology and Syntax**

**3 Credits** 

The course covers the structure of the word, classes of words, and word sets; the morpheme, morph, allomorph; morphophonemic alternations; types of morphemes; meaning and sequences of morphemes; inflection and derivation; compounds; acronyms, blends and back-formations. This course also covers approaches to syntactic analysis: Immediate Constituent Analysis (ICA), Phrase Structure Grammar (PSG), and Transformational Generative Grammar (TGG) with emphasis on Standard theory. It examines transformational operations and rules. The course also introduces Government and Binding theory with its subsystems.

#### **ENGL 219** English Grammar and Usage II 3 Credits

This course involves a review of word classes; the study of English inflections for plural formation, tense, possessive and comparatives; use of English modal verbs; participle phrases and the infinitives, formation of the passives, question tags and questions; direct speech and reported speech- formation and rules; use of intensifiers with adjectives, intensifiers and comparatives, participle phrases as modifiers and relative pronounce with modifiers.

#### ENGL 222 Theory, Practice of Translation 3 Credits and Interpretation

The course explores theory, aims, concepts and methods in text interpretation. Informational texts: instructions, reports, and official documents. Oral texts; literary texts of all genres.

Organizational features influencing design and interpretation of oral and written texts in practical usage context. Cohesion, coherence, comprehension.Develop student awareness of factors that contribute to information organization and interpretation. Models for translation practice and analysis. Translation and the human mind; translation and theories of language function and communication.

#### ENGL 244 Discourse Analysis

#### **3 Credits**

This course examines the general functions of language: transactional and interactional, the use of spoken and written texts, the role of contextual features in language use, the Speech Act Theory, the Cooperative Principle and its application, conversation and conversational structure, the notions: text, texture, and cohesion.

#### ENGL 302 Language Policy and Issues 3 Credits

The course covers concepts of language policy and planning, process of language planning, History of language planning in Kenya; the role of English, Kiswahili and mother tongues in the curriculum; development of sheng and its implications on language teaching; emerging issues on use, and teaching of various languages in Kenya.

#### ENGL 303 Research Methods in Linguistics 3 Credits

This course enables the student to discover the phonology, morphology and syntax, etc. of a language through techniques of elicitation, data collection, data analysis and presentation. The student produces a research proposal or a term paper dealing with a linguistic aspect(s) of a given language(s). Prerequisite: ENGL 218

#### ENGL 305 English Structure and Semantics 3 Credits

This course examines ambiguity and vagueness. It covers semantic theories, surface and deep structure, and the relation between syntax and semantics. Moreover, it explores connotation and denotation; semantic fields and idioms; and relationships among words (synonymy, antonymy, homonymy, polysemy and ambiguity).

#### **ENGL 342** Sociolinguistics

#### **3 Credits**

The course gives a general definition of sociolinguistics. It explores the relationship between language and society and examines social aspects of language such as idiolects, dialects, standard and non-standard dialects, pidgins and creoles, diglossia, official and national languages, code-switching and code-mixing, bilingualism and multilingualism, language shift, attrition and death, language and culture, language planning and language policies.

#### ENGL 346 English for Specific Purposes 3 Credits

This course examines language for special purposes. The course is subdivided into three parts. Part one introduces ESP by looking at the meaning of ESP, the origins of ESP, the stages of the development of ESP, characteristics of ESP, types of ESP etc. Part two deals with some specific areas of ESP such as language of science and technology, language of advertising, language of newspapers, language of the law, language of the church, language of politics, language of broadcasting etc. Part three of the course examines ESP course design, syllabus design, the role of the ESP teacher, language and pedagogy etc.

#### ENGL 347 Second Language Acquisition 3 Credits

The course explores factors in first language acquisition and their application to the teaching and learning of English in formal and non-formal situations. It covers theories in language learning; the behaviorist view; the cognitive view; errors in language learning; findings in SLA research and how these have influenced language learning and teaching; syllabus design and choice of materials; SLA in Kenya.

#### ENGL 358 Business English

This course focuses on preparing various business documents, building business vocabulary, essential grammar skills, and good interpersonal skills. It covers such topics as the meaning of business English, writing business letters, reports, project proposals, newsletters, business cards, brochures, flyers, business forms, calendars, catalogs, invitation cards, letter heads, programs, advertisements, news releases, memos, fax messages, style in business writing, and principles of writing effective messages.

#### **ENGL 420** Applied Linguistics

The primary concern of this course is the application of linguistic theories, methods and findings to the elucidation of language problems. The focus of the course will be on the teaching and learning of foreign or second languages. It will also examine the linguistic analysis of language disorders (clinical linguistics), the use of mother tongue, Education (educational linguistics), lexicography, translation and interpretation, English language testing, production of English language teaching materials etc.

#### ENGL 435 Editing Skills

This is a practical course focusing on editing and proofreading of various documents. Some of the topics to be covered include general principles of editing, editing process, editing strategies (e.g. reading backwards, using a word processor), editing symbols, editing and the law, book editing, magazine editing, newspaper editing, computer assisted editing, the importance of grammar in editing, editing for standard English usage, reference tools of an editor, editing for style, editing for punctuation and mechanics, editing for sentence structure, use of spell checker and other editing programs, use of grammar checker. Students will have an editing project as assigned by the instructor.

#### ENGL 442 Language and Gender

**3 Credits** 

**3 Credits** 

**3 Credits** 

**3 Credits** 

The course explores the history of language and gender in the west including the Deficit, Dominance and difference models of language use. The communication styles used by women and men in the performance of femininities and masculinities in a range of situational and cultural contexts will be examined. Language, power and dominance in relation to gender in the classroom will be explored. In addition, the course will consider issues concerning language structure and ideology, including sexism in language and the relative success of gender-based language reform efforts.

#### ENGL 443 Writing for the Media.

**3 Credits** 

The course examines the stylistics of journalistic writing; language use, creativity, and discourse in the press. The literariness of the essay form. The conception, nature and marketing of feature articles; ideological representations in the news, editorials and commentaries; media bias and dynamics of propaganda.

#### ENGL 445 Historical and Comparative 3 Credits Linguistics

This course is an examination of the process of language change and the principles governing the historical and comparative studies of language. Some of the topics to be covered will include the synchronic and diachronic approaches in language analysis; the comparative methods; internal reconstruction; lexicostatistics; the great vowel shift; Grimm's and Verner's Laws. Prerequisites: ENGL 216 and ENGL 217.

#### ENGL 447 Translation and Interpretation 3 Credits Skills

This course will offer students an opportunity to acquire basic translation and interpretation skills. It targets students who are interested in developing a career in translation and interpretation and are competent in at least two languages. Topics to be covered include: difference between translation and interpretation, tools of a translator, contemporary theories of translation, free translation, translation equivalence, literal translation, machine translation, the use of electronic resources in translation, consecutive and simultaneous interpretation, sight translation, and audio-visual translation. Students will have a field trip to places such as national assembly, United Nations, media houses to have a hands-on experience in translation and interpretation. The course will have a project of translation and interpretation. Prerequisite: Senior students with a competence in at least two languages.

#### ENGL 450 Lexicography

#### **3 Credits**

This course is an examination of the art and practice of writing dictionaries. It is subdivided into four parts: Part one is the pre-lexicography which deals with topics such as the meaning of lexicography, the history of lexicography, types of dictionaries, dictionary users, lexicographic evidence, tools for lexicographers, methods and resources, linguistic theory and lexicography, planning the dictionary, planning the entry etc.; Part two deals with analyzing the data and covers topics such as building the database(word senses and the lexical units); Part three deals with compiling the entry and covers topics such as building the monolingual entry, the translation stage, building the bilingual entry etc. The last part of the course examines some specific types of lexicography focusing on lexicography of African languages. Students will produce a mini-project of at least 1,000 entries either as a group or individually. Prerequisite: ENGL 447.

#### ENGL 456 Varieties of English

#### **3 Credits**

The course explores the notion of standard English. General Criteria for standardization. Contrast between British and any other native Englishes. English as a second, foreign and international language. Variation in English according to: education, topic, medium and attitude. The notion of localized forms of English, e.g. Chinese, Indian, Caribbean, Nigerian and Kenyan English Institutionalized English varieties and the development of creoles and pidgins from English.

#### **ENGL 463** Psycholinguistics

#### **3 Credits**

This course deals with the relationship between language and the mind. It focuses on biological foundations of language and the brain mechanisms underlying its acquisition and use. The course will focus on the following areas of study: language processing, language storage and access (lexical storage and retrieval); language and the brain; language in exceptional circumstances (language handicaps); first and second language acquisition; language comprehension theory (language, thought, and culture); Language disorder; aphasia, dyslexia and lisping.

#### ENGL 465 Principles of Creative Writing 3 Credits

The course examines the craft of fiction in a short story, novel, biography, drama, or poetry. It focuses on point of view; themes for creative writing; creation of aesthetic pleasure, among other aspects. A student submits supervised creative work for examination (It can be three short stories, a novella, a 20-page play, or 10 poems).

#### ENGL 469 Research Project/Seminar 3 Credits

This course requires each student to write a dissertation of not more than 10,000 words on an aspect of English or English language teaching. The student identifies a researchable linguistic topic: reviews literature related to a linguistic research problem. States a linguistic research problem; formulates appropriate research questions and states the relevant assumptions/ hypotheses: specifies the variables in linguistic research: language variables; social variables and other variables. Determination of sample size and characteristics; methods of collecting, processing, presenting and analyzing linguistic data. Writing a linguistic research report chapterization, documentation styles. A supervisor will quide the student to write on topics such as discourse analysis, pragmatic nominalization, English for Specific Purposes, sociolinguistics, second language acquisition, among others. The course will culminate into an oral presentation session to be attended by faculty in the department. Perquisites: ENGL 105.

#### ENGL 480 Internship in Languages and 3 Credits Literature

This is a ten to twelve weeks hands-on experience whereby students are attached to an organization where they can apply language skills, linguistics or literature. Some areas to consider include translation and interpretation, editing, film production, drama, writing, lexicography, public relations, advertising, publishing, journalism, etc. The student must clock in at least 300 hours during the internship period. The student will be evaluated by both the site supervisor in the organization and the course instructor. The student will produce a comprehensive report that contains exhibits of the work done in the organization during the internship period.

#### ENVI 110 Introduction to Environmental 3 Credits Science

The purpose of this course is to introduce the learners to the concept of Environmental Science, especially the concept of Biodiversity of the physical Environment, the impact of Waste, Pollution and Eutrophication of water bodies on the quality of Environment and Human Population's impacts on Natural Resources and Ecosystems.



**Environment** The Course outlines the basic fundamentals of Physical Environment. The targeted topics include: Introduction to Physical Environment, Components of Physical Environment such as Lithosphere, Atmosphere, Hydrosphere and Biosphere and Biogeochemical cycles and energy flows that bind the physical Environment.

#### ENVI 115 Fundamentals of Atmospheric 2 Credits Science

The atmosphere: Identity, structure and composition; atmospheric heating, treat transfer, and radiation balance. Atmospheric moisture and water balance. Atmospheric circulation. Atmospheric turbulences and their measurements. Atmospheric phenomena: surveillance, modeling and forecasting. Atmospheric photochemical reactions. Atmospheric pollution and degradable pathways.

### ENVI 210 Environment and Development 3 Credits

This course relates the concepts of Environment and Development. It provides the basic types of Environment and further outlines the values of Development and then states the differences between Economic and Ethics of Development. Further, it also outlines the Millennium Development Goals and shows the dynamic relationship between Development and the changing Human-Environment and finally looks at the Sustainable Development.

### ENVI 227 Environment and Society

#### 2 Credits

The course aims at demonstrating that the lithosphere and hydrosphere, form a coherent and interactive whole. The first part dealing with the atmosphere and hydrosphere includes discussion of world climates and water resources. The second part is concerned with the lithosphere and the use of its mineral and soils. The third part examines the major factors affecting the distribution of plants and animals, and relate them to environmental management/sustainable development. The fourth part discusses the role of man identifying the major environmental problems such as global warming, energy alternatives, loss of biological diversity, land degradation etc., finally introduce the concept of environmentalism, green ecology etc.

#### **ENVI 310 Environmental Ethics**

#### **3 Credits**

This course introduces the concept of "Ethics" as it relates to the Environment. The major focus of the discussion include: The meaning of Environmental Ethics; The basis of Environmental Ethics and the challenges involved in the development of Environment ethics; Focus on Environmental Ethics and different kinds of Environmental Ethics such as ecological extension; Environmental Worldviews such as Human centered, Life centered and Earth centered; and Environmental Ethics and political views on Environmental Ethics.

### ENVI 320 Elements of Environmental Law 2 Credits

Definition; evolution, development and implementation. Central and local government laws relating to environmental resource aspects: land, water, energy, forest, wildlife, fisheries, public health, motor vehicles, agriculture, waste disposal, factories, storage of toxic substances. World, regional and national treaties and laws, riparian resources and the law. UNEP, NEMA, of Kenya, etc.

### ENVI 336 Hydrology and Water Resources 3 Credits

The course introduces the student to the actual realms of water and its usefulness to man. The course will specifically address, Hydrological Principles: The Hydrologic cycle and its driving force, global distribution of water in time and space, hydrological processes: evaporation/evapotranspiration, condensation, precipitation, surface runoff, infiltration and percolation, sub- surface flow; Measurement and evaluation of the hydrological processes: Hydrologic phenomena analysis, Extreme events. Water uses, environmental, social, economic aspects of water resources. Field trip required. Prerequisites: GEOG 111, GEOG 112 and GEOG 330.

#### ENVI 350 Forum on Environment

This course provides an insight into the pressing environmental issues to the students through lectures, discussion, and field study of environmental problems; philosophical, political, social, religious and ethical implications. Offerings have focused on global issues; interactions of population, resources pollution, climatic change, energy demand, depletion of ozone layer, desertification, soil erosion, rain forest depletion and many others. Field studies are important component of this course.

#### ENVI 354 Resources, Development, and 3 Credits People

An analysis of human population growth and its impact on the earth's resources, including food, energy, physical materials, water, biota, and landscape; the geography of resources availability and the limits of the earth as a producer of resources; the impact of attitudes and values in resource use.

#### ENVI 356 Environment and Development 3 Credits Policy

This course focuses on Environmental, social, economic and political issues on human activities such as land degradation, soil erosion, deforestation and technology. It also outlines the meaning of and process of Development policy and then focuses on Development policies on the same human activities especially in Kenya. Further it indicates the resolutions on Earth's summit on Environment and Development Conference in De Janeiro in 1992, mainly in areas such as Climate change and Biological Diversity, Sustainable Development and Goals for Sustainable Human Development.

#### ENVI 380 Agroforestry

#### 2 Credits

2 Credits

Definition; emerging concepts; Environmental, economic and social relevance. Buffer zone; shamba system; Agriagroforestry; urban agroforestry. Contemporary policy issues in agroforestry. The challenges to agroforestry practice.

#### ENVI 442 Water Resources, Environment 3 Credits and Development

The course introduces the learner to the source of water through hydrology. Further it provides the advanced and applied perspectives of water resources, the utility and constraints to both the society and the Environment. The specific utility are outlined on domestic, industrial, agricultural, conservation and riparian water.

#### ENVI 460 Natural Resource Evaluation, 3 Credits Management and Development

The course is focused on the management and evaluation of Natural Resources in the Environment. The discussed topics include: Definition of Natural Resource and further the definition of management, evaluation and development of Natural Resources; Classification of Natural Resources: Theories of Natural Resource Management and their analysis; Problems in the formulation, implementation and evaluation of Natural Resource (such as Minerals) policies and Environmental policies that are based on Natural Resources in Kenya.

#### ENVI 470 Special Topics in Environment 2 Credits

The course outlines a topic on Environmental Studies that is stipulated, and is chosen by the student and researched on under the supervision of an appointed Lecturer of the Department. The outcome of the study should add new dimension to both the student and the course Environmental Studies. Prerequisite: ENGL 105.

#### ENVI 475 Climate Change and 2 Credits Environmental Management

This course studies the scientific principles of environmental issues and environmental management practices, focusing on the health of both humans and the ecosystem. Fundamental and emerging topics related to air and water pollution, water use and management, aquatic ecosystems, energy and climate change, biodiversity, toxic substances in the environment, solid waste management, and regulatory strategies for risk assessment and environmental management are discussed.

#### FREN 102 Beginning French I

#### 0 Credit

This course is specifically designed for students with no prior knowledge of or instruction of French. Emphasis is placed on the development of the four basic language skills: listening, speaking, reading and writing. Some of the topics to be covered include French alphabet, French pronunciation, greetings, numbers, noun gender, days of the week, months of the year, how to ask questions, ask and give dates, conjugate verbs in present, past and future tenses, write basic sentences, write basic composition, conduct basic conversation in French, read short passages, listen to basic French etc.

#### FREN 103 Beginning French II

#### **2 Credits**

This course is designed for students who have successfully completed FREN 102 or did two years of French at High School. Emphasis is placed on basic grammar, vocabulary and continuation of the four basic language skills. Prerequisite: FREN 102 or one year of French at High School.

#### FREN 104 Introduction to French Language 3 Credits

This course is a continuation of FREN 103, with emphasis on conversation, listening, reading and writing. The course is for students who have successfully completed FREN 102 and FREN 103 with a grade of C+ or better or those who have done two or more years of High school French with a grade of C+ or better. Prerequisite: FREN 103.

FREN 111French Language and Grammar3 Credits

This course is designed for students who have background knowledge of French. Emphasis is placed on the following:

fundamentals of grammar with elements of conversation, comprehension and conversational skills.

#### FREN 112 Structure of the French 3 Credits Language

The French language and its structure, sentence formation, clause and sentence structure are studied with the aim of seeing the interrelatedness of the constituents in language construction.

#### FREN 114 French Grammar and Usage 3 Credits

This course deals with the reinforcement of grammatical structures, vocabulary and speech acts covered at KCSE level. It involves the comprehension and exploitation of relevant passages for descriptive essay writing, as well as readings in French to consolidate 'Français fondamental' and to give intensive practice in comprehension and writing. It is a consolidation of various tenses, their inter-relations and usage. It includes the formation and usage of the passé simple, the plus-que-parfait, the futur, the conditionnel passé and use of double pronouns. The course ultimately leads to the improvement of written expression through essay writing, with particular emphasis on logical presentation of ideas, practice in note-taking and precise writing. Prerequisite: FREN 111.

#### FREN 130 Oral Expression and Aural 3 Credits Comprehension

This course is an introduction to the International Phonetic Alphabet and its use, exercises for pronunciation correction, dictations, reading aloud (narratives, descriptions, notices), listening with understanding, role-plays, dialogues and exposés. Emphasis is on vocabulary of spoken French and guided practice to increase comprehension and oral proficiency. Prerequisite: FREN 114.

#### FREN 131 Written Expression and French 3 Credits Grammar

Types of writing, letter writing both official and unofficial, argumentative writing, descriptive and narrative text writing, how to write announcements, aspects of spelling and punctuation. It involves the comprehension and exploitation of relevant passages for descriptive essay writing, as well as readings in French to consolidate 'Françaisfondamental' and to give intensive practice in comprehension and writing. The course also leads to the improvement of written expression through essay writing, with particular emphasis on logical presentation of ideas, practice in note-taking and precise writing. Prerequisite: FREN 112.

#### FREN 140 History and Modern Trends of 3 Credits the French Language

This course deals with the earliest manifestation of the French language: its basic phonological structure, orthography, grammar and vocabulary. Old French (12th -13th Centuries) and its dialects are also looked into. It covers evolution from Old French to Middle French to the spread of the Peoples' French as well as Classical and Post-classic French, the precursor to Modern French. Other issues that will be discussed in this course include: an overview of the French language in the world as a mother tongue and as a second or foreign language. This course also looks into interference between French and other languages: Creoles, influence of immigration, influence of English; Levels of language: geographical, social and professional variants; Changes and trends of innovation in modern French (orthographic, phonetic, lexical syntactic and semantic).

#### FREN 210 Introduction to General Linguistics in French

**3 Credits** 

This course involves a brief historical overview of linguistic studies of the French language, the areas and branches of contemporary French linguistics, their basic concepts and principles. It specifically covers the following areas: definition of linguistics, introduction to descriptive linguistics, its major subdivisions, levels of linguistic analysis, the speech community, language and dialect, bilingualism and multilingualism, standard French language, Pidgins and Creoles.

#### FREN 211 Introduction to Translation 3 Credits

The course covers basic principles and techniques of translation. It also looks into major grammatical and lexical problems encountered in the translation of sentences and texts from English to French and vice versa.

#### FREN 220 French Phonetics and Phonology 3 Credits

In this course, the student learns about the production and classification of French sounds, phonetic transcriptions, supra-segmental features and practical exercises in speech production. The student is thus exposed to French phonemes and their representation in orthography, phonology and word divisions, prosody and word divisions, prosody and syntax, prosody and punctuation, prosody and meaning. Prerequisite: FREN 210.

#### FREN 225 Introduction to French 3 Credits Literature and Literary Analysis

This course involves the study of plot, style, characters, forms and content analysis, figures of speech and other stylistic devices. Application of techniques studied is applied to literary texts in French. Literary essay writing is also covered. Other topical issues that are discussed in this course include: style and stylistics, schools of style, theories and approaches of various scholars to style, relationship between stylistics and other branches of linguistics such as sociolinguistics and literature.

#### FREN 230 Panorama of Francophone Literature

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**3 Credits** 

This course covers a general presentation of the literature of the French-speaking world, with special reference to the geographical and historical background of authors and how these affect their generic and thematic presentations of various trends in francophone literature. The course considers selected works of writers from Africa, the Caribbean, France and Malagasy. Prerequisite: FREN 225.

#### FREN 240 The French African Novel and 3 Credits Short Stories

This course involves the study of novels and short stories by French speaking authors or of other authors within this category, whose literary works have been translated into French. The course involves studying the manner in which particular novelists deal with predominant issues within a particular historical context. Study of works representing both pre and post independence periods, among them are Mongo Beti, CheikhHamidou Kane, SembeneOusmane, Ferdinand Oyono and Henri Lopes. Prerequisite: FREN 225.

#### FREN 241 Culture and Civilization of France 3 Credits

This course involves the study of the various aspects of the culture and civilization of France specifically, with glimpses into that of the Francophone community in general. The course gives insight into the societal structures and organizations, art forms, socio-linguistic setups, material culture, social administrative institutions, using written, audio and audio-visual.

#### FREN 310 French Oral Literature 3 Credits

This course involves the study of various oral literature genres such as myths, legends, tales, epics and proverbs. Special attention, in this course, is drawn to structural, psychological, social, religious and ethical approaches surrounding the various genres.

#### FREN 315 French for General, Academic 3 Credits and Professional Purposes

This course deals with the study of various uses of the French Language in different situations, all depending on the context in which the language is put into use. These include French daily informal use as well as the formal use of the language such as in research and administrative purposes.

#### FREN 320 French Semantics and 3 Credits Lexicology

This course will be taught in two parts. In part one, the following areas will be examined: Identification and study of the 'meaning carrying features' of the French language and the study of that meaning from various perspectives. The course involves applications of semantic and lexicological studies by considering areas of sense relations such as: synonymy, homonymy, polygymy, semantic fields, lexical analysis, connotation, denotation, collocations and neologisms. In part two, emphasis will be laid on the following topical issues: meaning of pragmatics; micropragmatics and macropragmatics, speech acts, implicature and context.

#### FREN 327 Written Expression and French 3 Credits Grammar II

In this course, students rely on the rules of grammar to do report writing, note-taking, learn how to write dissertations and also curriculum vitae. It equally learning how to organize and reconstruct written texts as well as how to write comples texts, based on both fiction and non-fiction.

#### FREN 330 Culture and Civilization of the 3 Credits French-Speaking Community

This course involves the study of the various aspects of the culture and civilization of French-speaking Africa, France and of the Caribbean francophone world. This course gives insight into the societal structures and organizations, art forms, socio-linguistic setups, material culture, social administrative institutions, using written, audio and audio-visual materials.

## SCHOOL OF EDUCATION, HUMANITIES & SOCIAL SCIENCES

#### FREN 334 Applied Linguistics

#### 3 Credits

The course deals with linguistics as a scientific study that is relevant not only to language but to other disciplines as well. It thus looks at the relationship between linguistics and other domains of everyday life. Applied linguistics is an interdisciplinary field of linguistics that identifies, investigates, and offers solutions to language-related real-life problems. Some of the academic fields related to applied linguistics, which will be viewed in the course are education, psychology, communication research, anthropology, and sociology.

#### FREN 335 Caribbean Literature

#### **3 Credits**

**3 Credits** 

**3 Credits** 

This course covers studies on The Novel as an expression of 'Conscience Antillaise'. These include the works of Rene Maran, Prince-Mars and Jacques Roumain. The course also includes a study of selected poets and dramatists such as Depestre, Cesaire, Damas and Niger.

#### FREN 336 Translation and Interpretation 3 Credits

The course covers the principles and techniques of translation using: the interpretative approach, understanding texts in the source language, context, detachment from the source language and the expression in the target language. To be considered are translation of communicative texts such as prose and poetry, excluding scientific, technical and literary texts. The student is also enlightened on the techniques of consecutive and simultaneous interpretation and the practice of note taking in consecutive interpretation.

#### FREN 337 Introduction to French Literature 3 Credits

This course involves the study of plot, style, characters, forms and content analysis, figures of speech and other stylistic devices. Application of techniques studied is applied to literary texts in French. Literary essay writing is also covered. Other topical issues that are discussed in this course include: style and stylistics, schools of style, theories and approaches of various scholars to style, relationship between stylistics and other branches of linguistics such as sociolinguistics and literature.

#### FREN 340 Textual Analysis in French

This course involves the analysis of various French texts with the aim of improving awareness of the manner in which the French language is put into use depending on the different types of writing, such as scientific writing, journalistic writing (editorials and news reports), advertising and contemporary novels.

#### FREN 414 Semantics and Lexicology

This course will be taught in two parts. In part one, the following areas will be examined: Identification and study of the 'meaning carrying features' of the French language and the study of that meaning from various perspectives. The course involves applications of semantic and lexicological studies by considering areas of sense relations such as: synonymy, homonymy, polygymy, semantic fields, lexical analysis, connotation, denotation, collocations and neologisms. In part two, emphasis will be laid on the following topical issues: meaning of pragmatics; micropragmatics and macropragmatics, speech acts, implicature and context.

#### FREN 415 Sociolinguistics in French

**3 Credits** 

**3 Credits** 

This course involves the study of language and language acquisition in relation to society. Aspects covered include language borrowing, language acquisition, multilingualism, bilingualism, language formation and language disappearance among others.

#### FREN 420 Introduction to Translation and 3 Credits Interpretation

The course covers the principles and techniques of translation using: the interpretative approach, understanding texts in the source language, context, detachment from the source language and the expression in the target language. To be considered are translation of communicative texts such as prose and poetry, excluding scientific, technical and literary texts. The student is also enlightened on the techniques of consecutive and simultaneous interpretation and the practice of note taking in consecutive interpretation.

#### FREN 421 Morphology and Syntax

This course covers the analysis of the structure of the French word. Central issues to be focused on include the root of the French word, affixation and word formation processes. Other issues that feature in this course include word-building techniques such as compounding and clefting. It also deals with various aspects of the French sentence by explaining its componential parts. Such theories pertaining to the formation and analysis of the French sentence are analyzed and applied. The theories include: transformational generative grammar, government and binding, phrase-structure grammar, and extended revised standard theory. Prerequisite: FREN 210.

#### FREN 430 French for the Hotel, Tourism 3 Credits and Travel Industries

In this course, the student will learn the specialized French technical language relating to the hotel: personnel services, facilities, making reservations by mail, telephone, fax, welcoming guests, personal/group receptions, giving/getting information on accommodation, travel, tourist sites, transportation, travel agents, hotel activities, excursions, sports, seminars, dishes, hotel equipment and paying for services, among other things.

#### FREN 435 The French Novel and 3 Credits Philosophical Works

This course deals with the study of texts illustrating characteristic aspects of three centuries. These include La Vie de Marianne (Marivaux), Manon Lescault (Abbe Prevost), Les Confessions (Rousseau), Jacques le Fataliste (Diderot), Zadig (Voltaire) as 18th century works. Nineteenth century authors include Balzac, Standhal, Flaubert, Zola, Hugo, Baudlaire, Verlaine and Rimbaud. Twentieth century texts include works on classic and symbolist tradition (Gide), poetic prose (Colette), Humanism (Malraux), Existentialism (Satre), Nouveau Roman de Behavior Feminism (Sarraute).

#### FREN 440 French for Management and 3 Credits Administration

This is a study of specialized French technical language for management and administration. Among other things, the student will learn about official letter/memo writing and dictating, report/minute writing and presentation, advertising a vacancy, responding to an advertised vacancy, preparing a curriculum vitae, conducting an interview, preparing/ presenting statements of accounts, budgets, arranging for and conducting board meetings, making travel arrangements, sending out invitations and booking rooms.

#### FREN 445 French Drama

#### **3 Credits**

The course involves a study of the genre in its different aspects. The course covers areas such as stage conventions, characters, the public, techniques involved and the evolution of drama. Forms of drama are covered as well. These include the realistic, romantic, symbolist, existentialist among others.

#### FREN 446 Introduction to Francophone 3 Credits African Literature

This course is an introduction to francophone African literature. It involves the study of novels and short stories by French speaking authors or of other authors within this category, whose literary works have been translated into French. The course involves studying the manner in which particular novelists deal with predominant issues within a particular historical context. Study of works representing both pre and post-independence periods, among them are Mongo Beti, Cheikh Hamidou Kane, Sembene Ousmane, Ferdinand Oyono and Henri Lopes. Prerequisite: FREN 225.

#### FREN 450 French Poetry

#### **3 Credits**

This course involves a study of the poem genre in view of its themes, its audience and its technique. It considers types of French verse (Rhythm and Sonority types of classical French poems). It also involves a study of poems showing the evolution of the genre: Romantisme, Parnasse, and Surrealism.

#### FREN 454 Academic Research: Basic 3 Credits Principles and Methods

This course deals with reasons leading to research, choice of area and research topic, justification, bibliography compilation, literature review, originality, plagiarism, objectives, hypothesis, theoretical framework, methodology, data collection, research paper/thesis writing and presentation, problems and limitations of research. Prerequisite: ENGL 105.

#### FREN 455 Project Paper

In this course, a student is expected to write a 4,500 to 5,000 words research paper of literary piece of work, short story, play or collection of poems related to one or more of the course units covered in the French program. The topic of research or creative writing is selected in consultation with the instructor within the first two weeks of the semester in which the course is taken. Thereafter, the student consults with the designated supervisor for at least ten hours spread over a period of 16 weeks. Prerequisite: FREN 454.

#### FREN 460 Attachment

## 5 Credits

**3 Credits** 

In this course the student is expected to go out in the field, with the aim of putting into real life the theoretical aspects of the French Language covered in class. To do this one is expected to work in a Francophone country or in a French-based company such as Alliance Française, Alcatel, and Total etc. within a three month period at the end of the attachment, the student writes a report on the experience gained and challenges experienced This is submitted to the Instructor at the end of the semester.

#### **GCAS 107** Music Appreciation

#### 2 Credits

This course is designed to meet general education requirements. It is an introduction to a wide range of music. Consideration is given to the various political, social, and religious factors that have caused changes in musical style from one art period to another. Representative compositions from various art periods are studied and attention is directed to the correlation of music with other arts. The course also covers elements of music, the effects of music on the human body, an introduction to African Music and the instruments of the orchestra. Note: Students who register for a major or minor in music are exempted from taking GCAS 107 as this is covered in greater detail in their music courses units covered in the music program.

#### GEOG 100 Introduction to Geography 3 Credits

A study of philosophical foundations of Geography taking into consideration the progress made in the subjection the last present centuries; current trends in Geography, general principals underlying the major branches of Geography and other academic disciples; the application of Geography into current problems and an understanding of how the subject illuminate the Bible.

#### GEOG 102 World Regional Geography

**3 Credits** 

This course is designated to introduce to students the systematic and scientific explanation of the major physical and climatic characteristics of the earth. Emphasis will be placed on the various geographical regions of the world (i.e. equatorial, tropical, desert, tropical highlands, mid-latitudinal, maritime, continental interior, sub-polar, mountain and oceanic.), resource assessment level of development and constraints.

#### GEOG 111 Fundamentals of Physical 3 Credits Geography I

Introduction to the nature and scope of physical geography, the components of physical geography and interactions among themselves and society, the origin of the earth and entire solar system/universe, internal structure of the earth, plate tectonics and continental drift, introduction to major Earth's geologic and topographic features as caused by endogenic and exogenic processes, the atmosphere, its composition, structure, processes and circulations, weather, climate and factors influencing climate, the biosphere; its nature and components, biotic and abiotic factors, the ecosystem and its structure, energy flow and nutrient cycling. Field trip arranged as required.

#### GEOG 121 Fundamentals of Human Geography I

#### **3 Credits**

Scientific revolutions and evolution of academic disciplines. Scientific nature of human geography. Content and methodology of human geography. Philosophical underpinnings of human geography. Basic economic concepts. Classical location theory (von Thunen's agricultural location theory; Weber's industrial location theory and Christaller's Central place theory). Spatial patterns of rural and urban land use. Bases for spatial interaction: gravity models and diffusion models. Lectures, class discussions, practical exercises, drawing of maps, class presentations, small buzz groups, book reviews and use of guest speakers. May require field trip as determined by the instructor.

#### GEOG 130 Introductions to Cartography, 3 Credits Mapwork and Land Surveying

This course aims at introducing the students to the basics of cartography, map reading and map interpretation with special emphasis on the tools and techniques; history of cartography; use and care of drawing instruments; free hand lettering; map scales; convectional signs used in maps; map orientation; map legend; map revision; thematic maps; chorochromatic and dot maps, measurements of distance and area. Analysis of site and situation, properties and construction of map projections, map design, preparations and map interpretation will be covered. The course further, gives the students an introduction to basics of land surveying instruments, and field practice through plane tabling, prismatic compass and chain survey, slope profiling, etc. Two lectures and two-three hour laboratory per week are recommended.

#### GEOG 207 Geospatial Programming 3 Credits Fundamentals

This course provides fundamental skills for geospatial programming. It provides an understanding of how to customize GIS software applications by way of modified service interface elements. Topics include calling geographic processing tools, batch processing, performing file in an external computing language and building, graphical user interfaces and displays. To support these tasks, students learn basic programming concepts, such as pseudocode, flow-control, code re-use, and debugging. Students will also learn how to automate GIS tasks using the Python scripting language. Automation can make your work easier, faster, and more accurate, and knowledge of a scripting language is a highly desired skill in GIS analysts.

#### **GEOG 210** Economic Geography

#### 3 Credits

Analysis and modeling of the spatial structure of primary, secondary, and tertiary economic activities; location theory and regionalization in economic systems; case studies of different regions, their problems and consequences. Prerequisite: GEOG 121.

#### GEOG 211 Fundamentals of Physical 3 Credits Geography II

World hydrological cycle, global water distribution, the water balance and its components, precipitation, evaporation and evapotranspiration, moisture in the atmosphere, clouds, stream flows, origin and evolution of rivers, drainage networks, groundwater capacity, aquifers, recharge and discharge of aquifers, potential and limitations of groundwater and vegetation water needs. Introduction to geomorphologic processes- Fluvial and Aelian processes and resulting landforms, theories of landform development. Introduction to soils, the cycle of erosion, slopes and associated processes, weathering and its impact on landscape and land use, the work of waves in coastal areas in terms of erosion, deposition and impact on land use. Prerequisite: GEOG 111.

#### GEOG 221 Fundamentals of Human 3 Credits Geography II

Concept of the region, spatial processes, diffusion and interaction. Measurement and analytical techniques. Land use theory (rural and urban land use theories), land use and decision making, spatial interaction models, macro and micro pattern of spatial interaction, structure and properties of networks, evolution of transport networks, industries and urban centers as nodes, location of service centers. Regularity of nodes. Processes of decision making. Migration and the gravity models. May require field trip as determined by the instructor. Prerequisite: GEOG 121.

#### GEOG 224 Urbanization, Planning and Land 2 Credits Survey

The purpose of this course is for students to acquire knowledge and skills to describe the history of urbanization in Kenya. Describe the dynamics of rural and urban development. Acquire knowledge and skills of urban planning. Describe the methods and techniques of land use and zoning and participate in initiatives to improve rural and urban conditions. Describe the components of quantity surveying, contract management and procedures and demonstrate skills in land surveying. Three lecture hours per week and planned field trips (this course is intended for Public Health Students only). Prerequisite: PHEH 110, BIOL 286, and PHHC 140.

#### GEOG 226 Geography of Tourism and 3 Credits Leisure

Definition of tourism, recreation, travel and touristic activities; Tourism and recreational activities and resources, factors influencing tourism, Origins and destinations; Growth and development of tourism and recreation. Role of tourism in economies; Environmental, cultural and socio-economic impacts of tourism; tourism planning and development; travel and tourism law and regulations; the application of Functional Business Disciplines in the context of Travel and Tourism, Information Technology; Marketing; Tour and travel related services; Sustainable tourism (ecotourism) development; Tourism and recreational sites in East Africa and Switzerland, conflicts and conflict resolution in the tourism and recreational sector.

#### GEOG 227 Environmental Geography

**3 Credits** 

Concepts of environment and society. The course aims at demonstrating that the lithosphere and hydrosphere, form a coherent and interactive whole. The first part dealing with the atmosphere and hydrosphere includes discussion of world climates and water resources. The second part is concerned with the lithosphere and the use of its minerals and soils. The third part examines the major factors affecting the distribution of plants and animals, and relate them to environmental management/sustainable development. The fourth part discusses the role of man identifying the major environmental problems such as global warming, energy alternatives, loss of biological diversity, land degradation etc., finally introduce the concept of environmentalism, green ecology etc. Environmental issues in Kenya. Kenya's constitutional and legislative frameworks on the environment. Global environmental issues. Environmental pollution and externalities. Conservation and management of environmental resources. Emerging environmental issues. National and international policy issues on the environment.

#### GEOG 255 Principles of Geographic 2 Credits Information Systems

This course introduces students to the theory and practice of Geographical Information Systems (GIS). It is open to all students irrespective of their discipline as long as they have taken the required prerequisites. It forms the foundation for students interested in applying GIS methods in their respective disciplines. Emphasis will be placed on geographic information data and joining of data, an introduction to cartography, data transformation, geo-coding, and buffering point locations. One lecture and two three-hour laboratories each week will be required. Prerequisites: OFTE 120, INSY 107, and MATH 100, or MATH 115 or MATH 102.

#### **GEOG 276** Database Design

**3 Credits** 

The goal of this course is to provide students with knowledge and skills necessary to produce a well- designed database that enables the timely delivery of accurate information in a useful form. Topics include: file handling, data models, access methods, data dictionary, administration, planning and designing and implementing databases, database programming tools and the selection of a DBMS for implementing an information system. The course will also cover principles of user-oriented database design, requirements analysis, data modeling, data integrity and security, multi-user databases, database normalization, concurrent updates, will also be discussed and practiced. Emphasis will be on using at least two popular database management systems to build and maintain relational databases. The student will create databases, queries, custom forms and reports. Additionally, SQL programming will be used extensively.

#### **GEOG 311 Geography of Kenya**

#### **3 Credits**

2 Credits

A systematic study of Kenyan environment with special emphasis directed upon the physical, climatic, pedagogical, vegetational and human environments; resources potential and development constraints. Field trip essential and graded.

GEOG 312 Geography of Development

Geographic aspects of Third World development with special references to sub-Saharan Africa, including topics such as population growth, migration, industrialization, urbanization, trade, foreign aid and regional development. The spatial characteristics of economic development are studied and implications for policy discussed. Illustrative examples drawn from DCs. Prerequisite: GEOG 210.

#### GEOG 313 Geography of East Africa

#### **3 Credits**

A study of East African natural and human environment covering Kenya, Uganda and Tanzania as a socio-political economic region. The physical environment of East Africa; Relief, geology, drainage and climate. The East African Rift System. Vegetation, soils, animal and insect life in East Africa. Problems of environmental degradation in East Africa. Special trust will be directed to the actual and potential human and natural resources. East Africa human environment. Language groups of the peoples of East Africa, population distribution and dynamics, agricultural, pastoral, traditional and modern land use systems, manufacturing mining, energy, tourism and recreation, transport and urbanization in East Africa.

#### **GEOG 314 Geography of Africa**

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#### **3 Credits**

The geography of Africa prior to and after colonial contact. The African environment as a resource: physical and human bases of regional contrasts. Environmental hazards and ecological problems: the climatic, conflict and globalization challenges; urbanization; Agricultural development, industrial development and spatial aspects of economic activity; internal and external trade; The population characteristics and problems; persistent underdevelopment in Africa; interstate and intra-state conflicts; The need for African integration; Attempts made, successes, failures and future outlooks; The future of Africa. May require field trip as determined by the instructor.

#### GEOG 315 Population Geography

The aims of this course are twofold: first, the assessment of demographic data sources and surveys, basic demographic components, mortality, fertility, migration and population distribution in time and space; secondly, the models of population structure and change of developing countries visa-a-vis that of DCs; examination of demographic transition theory.

#### GEOG 321 Cultural and Behavioral 3 Credits Geography

Analysis of a spatial behavior of man, underlying concepts and ideas: patterns, spatial cognition, and spatial diffusions; cultural regions, perceptions, attitudes and behavior; socioorganizations; role of perception and attitudes in environmental research and decision-making; introduction of behavioral geography research and methods; trends in behavioral geography.

#### **GEOG 323** Remote Sensing

#### **3 Credits**

**3 Credits** 

Introduction to remote sensing and its history, remote sensing concepts and terminology. Introduction to aerial photography, role of aerial photographs, types of aerial photographs, history of aerial photography. Acquiring aerial photographs, scales of photographs, types of films, aerial cameras, interpretation of aerial photographs - marginal information, stereoscopes and stereoscopic viewing, methods of air-photo interpretation - general examination, methods of identifying features and objects on photographs Technical aspects of remote sensing - electromagnetic energy, electromagnetic spectrum, types of satellites, sensors and platforms. Physical basis of remote sensing, sensor systems - passive and active, processes of acquiring remote sensed image. Pattern recognition and image interpretation, composite color images, multi-spectral color images, numerical analysis of remote sensed data - supervised and unsupervised classification; application of remote sensing in agricultural, forest, geological, meteorology, rangeland, urban land use, hydrological surveys among others. Limitations of remote sensing technology in developing countries such as Kenya. Three lectures and one three hour laboratory per week. Field trip mandatory.

#### **GEOG 326** Agricultural Geography

#### **3 Credits**

Nature and scope of agricultural geography, fundamental principles and concepts in agricultural geography, regionalization and classification in agricultural geography, agriculture and decision making, natural ecosystems and agricultural systems, energy in agricultural, biological bases of farming, problems and potentials of tropical vis-à-vis sub-tropical agriculture, political factor in agriculture, world's agricultural systems, technological innovations in agriculture, food and agricultural crisis in Africa, the green revolution and the Asian models of agricultural development, perceptions in agricultural geography, von Thunen's model of agricultural location, research in agricultural geography, sustainable agriculture, agricultural marketing, agricultural policies.

#### GEOG 328 Geomorphology

#### **3 Credits**

Principles, concepts and history of geomorphology, theories of land forms development, modern approaches to the study of geomorphological phenomena, land form processes, evolution and land form development under different climatic and geological environments, geomorphic processes, theories of place tectonics and continental drift, Great Rift systems, drainage basin system as a unit of study, Davis concept of the cycle of erosion, concepts of grade, dynamics equilibrium and the application of systems theory, climatic geomorphology, desert, humid and glacial/periglacial environments, climatic controls on weathering, importance of climatic change. The geomorphology of coastal environments. Field trip as required. Prerequisites: GEOG 111 and GEOG 211.

#### **GEOG 332** Biogeography

#### **3 Credits**

**3 Credits** 

Scope of Biogeography: historical developments: current theoretical approaches; evolution trends of organisms and biogeography; biomass, comparative analysis of selected biomies, natural populations and communities; geographical variations: distributions: density and disturbances: primary and secondary ecological successions; eco-climatic zones of Kenya; field techniques, role of archaeology in biogeography. Field visits arranged as required.

#### **GEOG 334** The Arid and Semi-Arid Land

A systematic study of the physical and human background of the arid/semi-arid lands: climate, land forms, hydrology, soil and vegetation; A study of the past, present and future of settlement and resource utilization; spatial interrelationships of environmental, demographic, socio-economic and political systems; Application of technology to development of semiarid environments; Prevention and reversal of desertification, management practices, control, desert research case studies on Africa.

#### **GEOG 348** Urban and Rural Settlement **3 Credits** Geography

This course provides concepts and theories of cities; their origins, functions and physical structure; evolution of urban institutions and ideas in different cultural and historical settings; regional planning, strategies and policy analysis; rural land use, planning and development, case studies of developing countries with focus on Africa and Kenya. May require field trip as determined by the instructor. Prerequisite: GEOG 121 or permission by the Department.

#### **GEOG 355** Geographical Information **3 Credits Systems**

Introduction of GIS and its role, use of modern technology in spatial data analysis, introduction to basic computer concepts, general operating system, GIS hardware, GIS software and lifeware, GIS application areas, institutions using GIS in Kenya. Limitations of GIS technology. The course introduces students to a set of tools for collecting storing, retrieving at will, transforming and displaying spatial data from the real world for a particular set of purposes such as planning, estimating, and locational decision making for efficiency and effective use of resources and services. It forms one of the basic if not necessary options for all geography students and management planners.

#### GEOG 357 Web-Mapping

#### **3 Credits**

The course focuses on both the theoretical and practical issues related to the dissemination of mapping/geographic content on the web and the development of map mashups and geospatial web services. This course focuses on the emerging technology in geographic information systems (GIS): Internet GIS. Internet GIS is a network-centric GIS technology that uses the Internet and the World Wide Web as a primary means of providing access to the functionality (i.e., analysis tools, mapping capability) of GIS and to the spatial data and other data needed for various GIS applications. It provides users capability to work interactively with maps and conduct spatial analysis on the Web. Students will learn how to design and implement advanced web mapping applications and geospatial web services using free software tools.

#### GEOG 358 Medical Geography

**3 Credits** 

This course introduces the student to geographic study of health and diseases, problems with special emphasis directed to the African situation. The nature and scope of Medical geography; cultural and ecological factors involved in the spread and distribution of diseases: disease mapping, diffusion: Development and health: nutrition and health: health care delivery system. Ethno medicine/medical pluralism; medical plants, their conservation & preservation, elements of Geomedicine.

#### **GEOG 400** Geographical Perspectives **3 Credits** on Modern Society

introduces course students to contemporary The environmental concerns examined in human geography. The areas of interest are human geography and its application to societal management problems, economic inequalities, urban growth and decline, problems of housing, cities and society, urban planning, etc. Field visits are required. Recommended for students with emphasis in urban geography and urbanization or consent of the Department.

#### **GEOG 401** Statistics and Computer-Aided **3 Credits Data Analysis in Social Science**

Statistics and frequency distribution, measures of central tendency, measures of dispersion or variability and statistical maps. Basic techniques in geographic research and their limitations. Use of analytical and inferential methods including hypothesis testing, the normal distribution, data transformation, probability, sampling, parametric and nonparametric methods, and correlation will also be introduced. Aspects such as network analysis (river system), network pattern, network description using beta and gamma indices and communications networks, point patterns, area patterns, etc. Prerequisite: GEOG 130, or permission of department chair.

#### **GEOG 410** Research Methods in Social **3 Credits** Sciences

This course introduces students to definition of research, proposal and thesis writing; research variables; types of research, components of a good research project; research design and methodology, literature review; skills for conducting geographic research, and explores the uses, limitations, and methods associated with guantitative and gualitative analysis in human and physical geography. Definition of a geographical research problem and the procedures used to carry out the

research. Formulation and solution of geographic problems, methods of gathering, analyzing and interpreting the data, presenting the results. Field trip as determined by instructor. Prerequisite: GEOG 401, or permission of department chair, ENGL 105.

#### GEOG 411 Geography of Natural Hazards 3 Credits

Definition, categorization and location of natural hazards in time and space. Processes and phenomena that pose threat to human life and interests. Circumstances that actualize disasters from hazards. Expected losses due to natural disasters. Minimizing the losses and Social technological and policy problems associated with such efforts.

#### GEOG 412 Urbanization in Developing 3 Credits Countries

Urbanization: the concept and consequences. Urban population: problems of definition. Components of urban and rural population change; tempo of urbanization and urban concentration; projection of urban population; projection for individual cities and towns; urbanization trends in developing and developed countries compared; planning for urban growth. Case studies from Africa. Prerequisite: GEOG 348 or permission of instructor.

#### GEOG 414 Locational Theory and Land Use 3 Credits Analysis

The course aims at introducing to the student the classical and neoclassical, static and dynamic models of industrial location and spatial organization. Land rent theory, central place theory, multi- locational organization, growth transmission. Prerequisites: GEOG 121 and GEOG 221 or permission from the department chairperson.

#### GEOG 415 Soil Geography

#### **3 Credits**

The course includes a comprehensive study of soils, and will include laboratory and field work in the study of soils, soil formation, organisms, soil associations and the use of soil. Special techniques used in the field and in the laboratory for soil study and soil mapping will be covered in the course. Soil management, application of soil surveys to resource planning, and the role of the Kenya Soil Survey. Three lectures, one three hour laboratory/field work per week.

#### **GEOG 416** Transport Geography

#### **3 Credits**

Nature and classification of transport systems; bases of spatial interaction; Movements of people, goods, finances and ideas: Network growth; Analyses of physical networks; Structure of transport networks. The possibility matrix and the Taafe-Morril-Gould models; Approaches to transport flow analysis; Transport infrastructural expansion and socio-economic development in Africa; Modes and means of transportation; Costs, choice and modes of transport systems; transportation in the land-locked countries, transport planning in rural and urban economies; Transport planning and policy; linear programming in transportation routing. Models of network expansion in developed and developing countries.

#### GEOG 417 Oceanography

#### 3 Credits

Introduction to the physical, chemical and biological nature of oceans; Principles and processes of sediment transport; Origin

and evolution of ocean basins; Geological processes operating on the continental shelf and near shore environments; Methods of deep sea investigations, bottom sampling and profiling; Application of geophysics and acoustics; Mineral exploration on the sea-bed; Detailed study of Indian Ocean and the continental margin of the East African coast.

#### GEOG 421 Applied Land Use and Potential 3 Credits

This course introduces students to field techniques and surveys of land use with special emphasis directed to the study of techniques of land use survey; land evaluation, economic, and ecological basis for land use planning and environmental conservation: Models in contemporary agricultural land use in Africa: Land use policies, farming systems and rural development; case studies is a necessary component, field studies and observations. Prerequisite: GEOG 326 or permission of instructor.

#### GEOG 422 Computer Science for 3 Credits Geographers

Data capture: Digitizing, correction of digitized data, use of softwares; Data analysis: methodological approach to analysis and solving problems, portraying the logic in flow charts; Use of a modern structure high level language (e.g. BASIC, FORTRAN and PASCAL); program execution and testing; Database creation and management: data analysis, presentation of formation products. Areas of application: geology, land-use/land cover, transportation and mapping.

#### **GEOG 423** Geospatial Modeling and Analysis 3 Credits

This course aims to provide students with the knowledge and skills necessary to investigate the spatial patterns which result from social and physical processes operating on or near the Earth's surface. There are a large number of problems involving spatial data. It explains digital representation and analysis of geospatial phenomena and provides foundations in methods and algorithms used in GIS analysis and modeling. It focuses on the advanced spatial analysis capabilities of GIS including density mapping, spatial modeling, point pattern analysis, interpolation, surface analysis, overlay analysis, spatial autocorrelation, proximity analysis, 3D spatial data visualization, network analyses and principles of geostatistics. Special focus is on terrain modeling, geomorphometry, watershed analysis and introductory GIS-based modeling of landscape process (water, sediment), land use land cover change modeling, suitability modeling, etc. The main goal of the class is for students to become familiar with the essential methodological and practical issues that are involved in sophisticated spatial analyses using GIS. Lab material will focus on the applications of ArcGIS's Spatial Analyst, 3D Analyst, and Network Analyst extensions. Prerequisite: GEOG 130 & 355, or permission of department chair.

#### GEOG 425 Data Processing

**3 Credits** 

Data control and transmission: data control, data safety and security, method and media, transmission of data, data structures, arrays queues stacks, linear linked lists, selected sort and file types; strings, file processing, batch-processing, time-sharing, real time processing, work processing, networks, distributed data processing, multi-programming; Management task: management of data processing activities, information management systems analysis and design: Organization and methods.

#### GEOG 430 Meteorology and Climatology 3 Credits

Definitions, concepts and scope of meteorology and climatology. Recap of weather and climatic elements and their metrics. The importance of atmospheric condition and dynamics to physical and human geography. The relationship between pressure and winds and planetary circulation; climatic classification; climate variability and climate change; global scale climate change: planned and inadvertent weather modification; analysis of climatic data and weather forecasting; and the influence of climate on man's activities. Special attention is given to the climate of Kenya and the Eastern African region. Field trip arranged as required. Three lectures and one three hour laboratory per week. Prerequisite: GEOG 211.

#### GEOG 422 Application of GIS in 3 Credits Telecommunication

Telecommunications is a thriving technology and business, accounting for a significant percentage of technical advances and revenue around the globe. GIS has emerged as a crucial tool in the telecommunications field for maintaining existing entities, planning for additional ones, and for gaining an advantage in this very competitive marketplace. This course exposes students to the various applications and uses for GIS in the telecom arena by breaking down the miscellaneous telecom requirements into GIS components and technological solutions. This course emphasizes specific telecom technology application requirements and allows students, through hands-on-lab work, to discover the power of GIS in delivering superior telecom solutions. This course also focuses on OSP/ISP applications and solutions, network connectivity issues as well as the exploding future of wireless technology.

#### **GEOG 435** Applied Geomorphology

**3 Credits** 

The student is introduced to the historical development and scope of applied geomorphology; application of geomorphological principles to land morphology, land systems, land capability classifications, resource assessments and management; Geomorphological resource mapping and mapping tools. Geomorphology and the environment: structural geomorphology, geobotany. Geomorphology in site investigation and site planning, geormorphology in civil engineering. Field studies are an important component of this course. Prerequisite: GEOG 328.

#### GEOG 436 Application of GIS in Urban and 3 Credits Rural Land Use Planning

This course will enable students acquire skills to build and maintain spatial (geographic) databases and analyze land resource data, plan and design land development projects within a community context, and prepare presentation graphics including 3D visualization of urban and rural spaces. It is designed as an introduction to this subject for students in the fields of urban and rural planning, including transportation planning, housing and neighborhood planning, environmental, hazard and emergency management, public health, crime, and more. Learners will understand the sensory and cognitive relationships between people and their physical environment. They need to know how people's needs, values and aspirations can best be accommodated in the designed environment. Three major computer software technologies including GIS (Geographical Information Systems), CAD (Computer Aided Design) and Presentation Graphics will be learned using case studies and actual land development projects.

#### GEOG 440 Advanced Air-Photo Interpretation 3 Credits and Remote Sensing

This course emphasizes on the application of aerial photography and Remote Sensing in the study of natural resource mapping and evaluation; principles and methodology of aerial photographic surveys in geomorphology, ecological studies and human settlement. Remote sensing as a technique for earth's resource assessment: The principles, EMS, interaction, image processing, RS systems and RS of earth's features. The GIS connection. Three lecturers and one three hour laboratory per week. Field trip is Mandatory. Prerequisite: GEOG 323.

#### GEOG 448 Application of GIS in Landscape 3 Credits Architecture

In this course students will obtain theoretical knowledge of specialized CAD/GIS systems within the Landscape Architecture, will master the process of digital terrain/landscape modeling, and will be able to analyze the DTM and to create a conceptual landscape model. They will achieve a basic knowledge and skills for practical usage of terrestrial laser scanning and close-range photogrammetry to landscape model acquisition. The course is based on application of a specialized software. The teaching process includes: Input data collection (vector and raster data) for digital landscape modeling of specified case study; CAD-modeling and GIS site-analysis of the area of interest; Computer-aided Conceptual Landscape Modeling; and Statical and dynamical representation of digital landscape model.

#### GEOG 449 Application of GIS in Disaster 3 Credits Management

Individuals and organizations responsible for emergency management use many tools to save lives, reduce human suffering and preserve economic assets before, during and after a catastrophic event. Correct and timely information is a critical part of any successful emergency management program. A geographic information system (GIS) can provide that sort of information. GIS can be part of the solution to many emergency management problems. This course will help the students to identify emergency management problems with spatial aspects appropriate for GIS , outline an effective GIS process for collecting and analyzing spatial data for emergency management problem- solving , and evaluate the costs of institutionalizing GIS as an emergency management tool in terms of staffing, training, data collection, hardware and software.

#### **GEOG 450** Selected Topics in Geography 2 Credits

A special topic or course of study is chosen, under the supervision of the lecturer concerned and/or chairman of the department of Geography. The course is open only to geography majors and minors.

#### GEOG 451 Application of GIS in 3 Credits Environmental Management

This course is intended to introduce students who have already studied the principles of geographical information systems (GIS) how to utilize GIS tools in environmental management.

Environmental applications require specific skills on the part of the GIS professional. Such skills include familiarity with the sources of spatial environmental data and their relative strengths and weaknesses. Specific analytical skills are also required, such as the ability to analyze river network data and to handle digital elevation models. The course also explores how GIS can be integrated with EIA and may be used to support decision-making.

#### **GEOG 455 People, Land and Food**

#### **3 Credits**

Capacity of the world, and the various parts, to feed itself; representative studies of agricultural; systems in different regions of the world in relation to differing natural and cultural milieu; impact of different agricultural systems on environment; problem of drought; food shortages; famines in East Africa and selected regions of Africa. Recommended for students with emphasis in Agricultural geography and applied land use and potential.

#### GEOG 458 Intelligent Transportation 3 Credits Systems

This course presents the fundamental concepts of Intelligent Transportation Systems (ITS) to students with interest in engineering, transportation systems, communication systems, vehicle technologies, transportation planning, transportation policy, and urban planning. ITS refers to information and communication technologies, as applied to transportation infrastructure and vehicles, that improve transportation safety, productivity, environment, and travel reliability. With accessibility of mobile devices, ITS applications, such as trip planners, help travelers make informed travel choices. ITS is an international program intended to improve the effectiveness and efficiency of surface transportation systems through advanced technologies in information systems, communications, and sensors. In addition to technology discussions, this course will include topics related to policy, economics, security, as well as, urban and rural planning.

#### GEOG 464 Application of GIS in Public 3 Credits Health

This course covers applications of Geographic Information Systems (GIS) and remote sensing in public health and describes how these tools can be used to explore connections between people, their dynamic physical and social environments, and their health. The materials covered will provide an introduction to geographic methods, GIS tools and a unique framework from which to understand health outcomes and develop public health strategies to reduce disease and improve the public's health. More specifically it will provide an introduction to basic GIS concepts and an overview of the most common geographic methods utilized in public health and epidemiology for mapping and analyzing geographic variation in health events, health disparities, risk factors, and health services. Selected case studies will be presented in order to highlight principles, methods, and techniques. Hands-on experience will be gained through laboratory exercises and real-world applications. Laboratory exercises will be completed using ArcGIS.

#### GEOG 467 Application of GIS in Archeology 3 Credits

This course will serve as an introduction to archaeological applications of GIS technology and data management and

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analysis. Students will learn how to compile, transform, analyze and present sources of archaeological and historical data, and will utilize this information in GIS for cultural resources interpretation and management.

#### **GEOG 469** Application of GIS in Climatology 3 Credits

This new course introduces the underlying principles and methods of Geographical Information Systems (GIS). It examines the processes involved in the capture, storage, manipulation, analysis, presentation and output of digital geographical data in a GIS and provides opportunities for the development of practical skills in processing climatological data using a leading Open Source GIS software package, Quantum GIS.

#### **GEOG 470** Demography

**3 Credits** 

The aims of this course are firstly, to introduce to the student the source of demographic data and their evaluation and adjustment. Secondly, to introduce to the student the measurement techniques for the analysis of demographic data relating to population composition, fertility, mortality, migration and population projections. Prerequisite: GEOG 315 or permission of instructor.

#### GEOG 472 Application of GIS in Agriculture 3 Credits

Principles and application of Geographic Information Systems (GIS) technologies with emphasis on the use of GIS for collecting, storing and analyzing spatial data associated with agricultural. GIS software techniques are developed using an interactive/inductive learning process. Students will collect and analyze data to complete a research project using GIS to answer questions related to an agricultural topic.

#### GEOG 480 Independent Research Study 3 Credits in Geography

This is directed individual study and research by students who have demonstrated ability, desire and responsibility necessary to pursue an independent research project on a topic of his or her interest. It exposes students to independent field research in preparation for post graduate studies. A topic for investigation is selected with the approval of the instructor in consultation with the chairperson of the Department. The course ordinarily spans one semester but may if need be, spill over to another semester – indicative of the amount of input and quality of work expected of each student. Prerequisite: GEOG 410.

#### **GEOG 482** Geographical Practicum

**3 Credits** 

Practical experience in geography and/or environmental resource management themes at an approved organization. A written report on the personal experiences and evaluation program or project in which the student is attached to will be required, besides the immediate supervisor's assessment of the student's abilities and aptitude. Students register for at least 560 clock hours. Open to senior students only. Prerequisite: Consent of instructor responsible for supervision.

#### GEOG 485 Application of GIS in Tourism 3 Credits

This course concentrates on spatial information systems and their use in tourism management. The GIS-technology is a fundamental part of the course. During the course GIS is used as a tool for exercises on tourism development, planning and marketing.

#### GEOG 486 Application of GIS in Criminal 3 Credits Justice

This course covers the fundamentals of Geographic Information System (GIS) technology and how it is being applied in the field of Criminal Justice. Students will learn the processes to collect, organize, analyze and display geographic data obtained from sources such as address and coordinate geocoding, GPS, CD-ROM and World Wide Web sites, however, the emphasis of the course will be on data preparation, analysis and presentation. Each student will complete a series of lab exercises that illustrate the typical steps in a GIS project and demonstrate competence in selected aspects of crime analysis. The course will culminate with students carrying out their own GIS Crime Analysis Project and presenting their results. ESRI's ArcGIS software will be used for the laboratory portion of the course.

#### GEOG 493 Application of GIS in 3 Credits Conservation Biology

Students in this course will gain both field and lab experience in the uses of GPS (Geographical Positioning Systems) units and GIS (Geographic Information System) software. Habitat loss, global climate change, and human disruptions, such as pollution and deforestation, are threats to wildlife biodiversity and can cause fragmentation and extinction. GIS technology is an effective tool for managing, analyzing, and visualizing wildlife data in order to target areas where conservation practices are needed. Habitat geospatial analysis is an important key to understanding the health of a species in the wild. Monitoring change in wildlife habitats is feasible with ESRI's suite of ArcGIS software, a tool for managing, analyzing, and depicting statistical and geographic data. The relationship of these new technologies to the fields of conservation biology. will be discussed through readings in the primary literature and experienced through class projects.

#### **GEOG 499 GIS in Public Administration**

#### **3 Credits**

The course is a basic introduction to information technology with an emphasis on public administration. The course is divided into three parts: a) Computer, software and network basics; b) information infrastructures - their structures characteristics, applications, policy issues, and their implications on the way we work and interact with the public; and, c) demonstrations of and discussions about new public sector applications.

#### HIST 106 Sources of African History

#### **3 Credits**

The course discusses Africa as an historical entity; Archaeological evidence and dating methods; linguistic evidence; oral tradition; Anthropology, written sources in European and Arab languages; Biases and abuses of historical evidence; reconstruction of African history and theories of African history.

#### HIST 111 Concepts of World Civilizations 2 Credits

This is a survey course which examines the origins and development of the world civilizations from the earliest beginnings to 1800. Particular attention is paid to: Egypt, China, India, Greece, Rome, and Mesopotamia, Inca, Aztec and Mayan civilizations. Early medieval European political, social, economic and cultural institutions, as seen through literary and historical records will also be examined and studied from a historical perspective. This course is not open to seniors.

#### HIST 119 Issues in Development Studies 2 Credits

The course is intended to examine major historical issues in development, philosophy, theory and practice in developing and developed countries. Emphasis is placed on economic growth and development, planning, policies, technology, and resource management.

#### HIST 120 History of Kenya I to 1900

**3 Credits** 

This course surveys pre-colonial history of Kenya from the earliest times to the introduction of colonial rule in the region. Thus, it covers the peopling of Kenya and how this process was affected by geographical and ecological factors, as well as evolution of the present-day Kenya societies. Emphasis will be placed on the development of political, economic, social, and religious institutions. Inter-ethnic relations and interactions, and wider contacts with the outside world are studied as a prelude to the advent of European imperialism and colonialism.

#### HIST 121 History of Kenya II since 1900 3 Credits

This course covers the history of Kenya as a colony from 1900 to the present. After establishing the necessary background and tracing the advent of European colonial rule, the course looks at the response of African societies of Kenya to the planting of the colonial state, including its economic policies, political and educational systems as well as colonial administration. The colonial rule itself is studied and analyzed in terms of its social, economic and political impacts. Prerequisite: HIST 120 or permission of instructor.

#### HIST 130 History of Africa I to 1885

**3 Credits** 

The aim of this course is to provide the students with survey of general but broad themes in African History from the earliest times to 1885. Topics to be covered include: Sources of Africa History; the late Stone Age; the spread of iron working; migration and settlement of early African societies; man's discoveries and adoption of metallurgy, i.e. use of iron weapons, fire and tools and their revolutionary consequences; the development of agriculture and its impact on African Societies; rise and development of early African civilizations: the spread of Christianity and Islam and their impact on African societies: the role of European mercantilism and the impact of mercantilism on commerce and trade in Africa: the role of Arabs in Africa: slave trade and slave traders and external invasions as well as African contributions to the wider world. The course will also examine the factors which contributed to the decline of African civilizations. This course is not open to seniors.

#### HIST 131 History of Africa II from 1885-1945 3 Credits

This course examines major themes in African History from 1800 to World War II. Focus is on the impact of the slave trade on African societies; European imperialism; the scramble for partition of Africa; colonial policies; European settlement and colonial economies, colonial education system; African reaction to the imposition of colonial rule as well as general problems in the History of colonial Africa to 1945. Prerequisite: HIST 130.

# HIST 200 History of the United States I 3 Credits to 1877

This course familiarizes students with the history of the United States of American from the earliest settlement to 1877. It will be a broad and comprehensive survey of the development of the U.S.A. as a nation and its various institutions from discovery and exploration of North America to the Civil War and Reconstruction. The course develops in some detail various historical issues of interest - North America conquest, colonial rule and American War of Independence, the founding of a new nation; slavery; frontiers; immigration; the role of machines and industries in economic development; regional, cultural and ethnic diversity and national integration; emergence and development of the two-party system in the United States since the American War of Independence, Manifest Destiny and its impact on the native Americans.

#### HIST 201 History of the United States II 3 Credits since 1877

This course acquaints students with the history of the United States from 1877 to the present as a field of study and research. The course examines United States contemporary issues in historical perspective with particular emphasis on the development of modern political, economic, social and educational institutions as well as technological and cultural forces which have made the United States distinctive. The development of the United States ethnicity, modern imperialism, and her relationship with other countries in the Western hemisphere are considered within the context of specific historical periods. Historical issues and ideas about the U.S.A. in relation to the past, present and future are also studied. Prerequisite: HIST 200 or permission of instructor.

#### HIST 203 Introduction to African History 3 Credits to 1884

This course is a survey of African history during the pre-colonial period. Topics covered include: overview of the geography of Africa; human evolution and the peopling of Africa; Hunting and gathering; origins of early agriculture and metallurgy production; distribution and exchange system: short and long distance trade; state formation, examples of African states and ancient civilizations in Africa: Egypt, Axum, Meroe, Ethiopia, Mwanamutapa, etc.; Islam and Christianity in Africa; Africa's relations with external world up to the end of 19th century; the coming of Europeans to Africa.

#### HIST 204 Introduction to African History 3 Credits Since 1884

The course seeks to examine the history of Africa since the advent of European imperialism in the 19th century. This includes: European old and new imperialism; Scramble for and partition of Africa; Reactions of Africans: resistance and collaboration; Colonial systems of administration; various features of colonial economy; peasant and settler production, mining, trade and manufacturing, infrastructure; Nationalism and the decolonization process; Challenges experienced in post-independence Africa; Africa and globalization; the church in African development; the role of the church in dealing with challenges/emerging issues facing Africa.

#### HIST 213 Themes in World History to 1500 3 Credits

The course defines history and civilization and seeks to describe antiquity, the ancient life, Egyptian civilization, Mesopotamian civilization, the ancient Greek and Roman civilizations, the middle Ages, the emergence of Christianity, the Byzantine Empire; the origin and spread of Islam, Hinduism and other major world religions and their impact on world civilization.

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#### HIST 217 History of Latin America

**3 Credits** 

A survey of the components of Latin American History from the early period to the present will be attempted. Considered are geopolitical backgrounds of Latin America, the people, and the development of Latin America civilizations, the Mayan, Inca, and Aztec, for example. The backgrounds of Spanish and Portuguese old imperialism, conquest, slavery and the wars of independence will be explored. Major themes in modern Latin American history in the 19th and 20th centuries will also be explored, examined and discussed, with emphasis on economic, political and social status of African-Americans and the native Americans, as well as on the struggle for equality in economic spheres. Critical consideration of the United States foreign policy and imperialism in the Caribbean, Central America, and South America will be made.

#### HIST 225 History of Europe from 3 Credits 1789 to 1919

This course is a study of the historical development of Europe, including economic, social, political and technological changes, the French Revolution, the Napoleonic Era, the Congress of Vienna, the Concert of Europe, rise of nationalism, unification of Germany and Italy, and the First World War, as well as its causes and aftermath.

#### HIST 227 History of Europe from 3 Credits 1919 to 1990

Development of science and technology, spread of Fascism and Communism, World War II and its causes, the Cold War, Western European integration, the establishment of the Soviet Bloc in Eastern and Central Europe, and the impact of Gorbachev's Revolution in the region will be covered. Prerequisite: HIST 225, or permission of instructor.

#### HIST 230 History of the USSR 3 Credits from 1917 to 1991

Development of the Soviet Union since 1917 will be examined. Special attention is given to the following topics: Growth of the Russian Revolutionary Movements; the revolution of 1917; the development of the communist state under Lenin, Stalin, Khrushchev and their successors; Soviet economic and foreign policies and the role of the USSR in the contemporary world. The impact of Gorbachev's revolution, including "perestroika" and "glasnost" will also be explored, studied, analyzed, and discussed in historical perspective.

#### HIST 305 Fundamentals of Historiography 3 Credits

This course focuses on the meaning, role, and functions of historiography; the challenges of writing history; the significance in the development of meaningful philosophy of history and historical methods. Historiography is a general framework for understanding theory of history. Identification of the great historians and their contributions to the development of ancient and modern histories will be considered. A glimpse into regional historiographies will be attempted.

#### HIST 313 Themes in East African History 3 Credits since 1890

This course is a systematic study of the history of East African since 1890, emphasizing major topics within chronological framework. Topics for discussion include: African societies

and their institutions, Arab and European imperialism, colonial rule and policies; land issues; peasantry and settler economies; transformation in the 20th century; rise of nationalism, struggle for independence; post-independence and contemporary East Africa. Prerequisites: HIST 130 and HIST 131 or permission of instructor.

#### HIST 314 History of North Africa since 1800 2 Credits

This course considers the historical development of North Africa (Egypt, Maghreb, Sudan and their environs), with emphasis on major political, social, and economic changes, as well as North Africa's experience with modernization from the beginning of the 1890s to the present. Religious controversies, colonialism, rise of nationalism, struggles for independence and revolutionary movements in Northern Africa will also be considered. Prerequisites: HIST 130 and HIST 131 or permission of instructor.

#### HIST 315 History of West Africa since 1800 2 Credits

This course examines major historical developments in the history of West Africa from 1800 to the present; emphasis on political, cultural, economic and social changes; indigenous trade and commercial relations with foreigners; effect of slave trade, contact economies, European colonization and the impact of Islam on West African societies, rise of nationalism and struggles for independence; post-independence and contemporary West Africa. Prerequisites: HIST 130 and HIST 131 or permission of instructor.

#### HIST 316 History of Central and Southern 2 Credits Africa

This course surveys the history of Central and Southern Africa. It traces the evolution and development of African societies from the pre-colonial period to the present. Particular attention is paid to the forces which have contributed to the political, social and economic changes in these two regions from the 15th century onwards. These forces include European incursions, particularly the Portuguese, the Dutch or the Boers, and later the British. The ancient empire of Central and Southern Africa: the Kingdom of Kongo, the Kasanie Kingdom, the Lunda Empire, the empire of Luba, and Zimbabwe will be examined in historical perspective. Issues and problems arising from European imperialism and colonialism, the Dutch ideology, social and economic racism as well as African reaction to the European colonial rule will also be examined. Finally, the course will critically examine contemporary political and economic issues, and the factors which led to the rise and development of modern African nationalism which culminated in revolutionary liberation movements in Central and Southern Africa. Prerequisites: HIST 130 and HIST 131 or permission of instructor.

#### HIST 333 Economic History of Africa

#### 3 Credits

This course examines major trends in the evolution of subsistence economies, agriculture, industries, commerce and trade; the role of natural and human resources, and how the early man utilized these resources in economic spheres. Emphasis will be placed on the factors of production, land tenure and land use, spread of foods, short and long- distance trade and trade routes as well as Trans-Atlantic and Trans-Saharan trade. The emergence of herders, peasants, farmers and pastoralist communities; pre- colonial commerce and

exchange systems will also be studied and analyzed in an attempt to determine their impact on the development of political, social and economic institutions as well as their values.

#### HIST 345 Methods of Historical Research 3 Credits

The course examines history as a discipline; historical methods; history and social sciences; the nature of historical research; identification of historical problem; sources of history; collection of evidence; analysis and interpretation of data; objectivity in data interpretation; report writing and research ethics.

#### HIST 380 Philosophy of History

**3 Credits** 

The course examines the relationship between history and philosophy; the nature of historical knowledge; the speculative and analytical philosophy of history; the positivists and relativist debates on history; historical explanation; objectivity and subjectivity in history; the nature and function of narrative in historiography; problems of relevancy and importance in historical judgment; causation in history; scope of historical inquiry; history as re-enactment of past experience and history as progress; emergence of philosophy of history from the Ancient Greeks is also discussed.

#### HIST 410 Introduction to Environmental 2 Credits History

The beginnings of the cosmos and its components: theories and facts; the galaxies, the solar system, the earth and its life support systems; human occupancy, interaction with and mutual modification with the environment over millennia; the major technology dispensations; change in societal worldview of the environment and therefore its welfare will be examined.

#### HIST 411 Selected Topics in Modern 3 Credits African History

This course examines historical development in modern African history since the end of the First World War to the present. Emphasis is placed on the impact of the First and Second World Wars on Africa generally; the emergence of proto-nationalist groups and elite political groups, modern political parties, masses and modern African nationalism. The impact of Pan-Africanism and African Negritude on African nationalism will also be examined in this course. Differing discussions and evaluations of the problems bequeathed by colonialism will be examined in historical perspective. Contemporary issues in post-independent Africa such as military coups and military rules, regionalism, tribal clashes, civil wars, ethnicity and underdevelopment, diplomacy and armed conflict, foreign aid and foreign debts; Southern Africa, and neo-colonialism will also be considered. Prerequisites: HIST 130 and HIST 131 or permission of instructor.

#### HIST 415 History of Science and Technology 3 Credits

A study of historical and philosophical development of sciences and technology traced from the ancient times to the present. Examples will be drawn from ancient Africa, Asia, the Americas and Europe and in particular from Egypt, Mesopotamia, China and Greece. The importance of science and the impact of technology on society from the industrial revolution to the present will also be considered.

#### HIST 421 Imperialism, Colonialism and 3 Credits Nationalism

This course is intended to give students an in-depth comparative study of the theory and practice of imperialism, Colonialism and nationalism in Africa and other selected areas of the Americas, the Middle East, Asia and Europe. The theory, stratagems and goals of imperialism are studied, analyzed and interpreted to provide an understanding of the impact of imperialism and colonialism on the rise and growth of modern nationalism in the studied areas with emphasis on the continent of Africa.

#### HIST 425 History of Conflict and 3 Credits Diplomacy in Africa from 1960s

This course offers an examination of diplomatic relations between and among states of Africa with special emphasis on causes and effects of political and armed conflicts on these regions since 1960s. An examination on how the conflicts have been and are being solved shall be done. Examples of these conflicts will be drawn from Angola, Liberia, Zaire (D.R. Congo), Nigeria, Sudan, Somalia, Ivory Coast, Ethiopia etc.

#### HIST 440 History of Political Ideas

**3 Credits** 

The course examines: the Political theories and thinkers in Africa; Asia, Greco-Roman world; medieval political thinkers – e.g. St Augustine, St Aquinas; political thinkers in early modern Europe; political thought in the enlightenment era; 19th Century political thinkers e.g. Marx and Lenin; contemporary political thought. Democracy-origins and development, principles importance and types of democracy, Challenges to democracy, Elections, electoral processes and their challenges; Historical development of human rights; classification and characteristics of human rights.

#### HIST 445 Historical Research Methods 3 Credits

This course is designed to provide the students with a variety of skills and approaches to historical research methodologies. Experiences will be gained in oral history researches, archaeological methods, collection of data from written sources, and historical interpretations. Every student in this course will be required to take part in a research project that seeks to establish primary evidence for historical facts. Open only to upper juniors and seniors Prerequisite: ENGL 105.

#### HIST 447 History of International Relations 3 Credits

The course discusses the historical origins of international organizations; structures, functions, objectives of IOs; types of international organizations; case studies of League of Nations, UN, OAU and AU, Non Aligned Movement, ECOWAS, European Union, East African Community and Arab League; their ability to solve Issues facing the modern world etc. The Christian factor in IOs.

#### HIST 450 Topics in History of Post- 2 Credits Independent Kenya

This course touches on issues and events that have shaped Kenya after being freed from the colonial master: the prelude to independence; the young nation- the first black government structure and operations and expectations. Kenya between the late 60's and the 70's: a period of a youthful active nation. The course will also focus on the transition from the first presidency; the second liberation struggle; Kenya in the late 80's through the 90's; Contemporary issues such as voices of dissent; spirit of political tolerance/intolerance; the evils of tribalism and tribal clashes; environmental problems and national development philosophies; target and inequities; Kenya and the world community. Prerequisites: HIST 120 and HIST 121 or permission of instructor.

#### HIST 451 Topics in History (outside Africa) 2 Credits

Special topics are chosen by the instructor, with or without consultation with the students, on issues of contemporary historical concerns. The issues are those either scarcely or not at all tackled in the array of courses offered in the history curriculum. The course is open to senior history students who have demonstrated the ability carry out intense study under minimum supervision of the instructor. A minimum of five (5) topics may be studied and in cases where they are less, then great depths of coverage and insights by the student are expected.

#### HIST 455 African Diaspora and 3 Credits Pan-Africanism in the Americas

The course considers the origin and development of African-American populations in the Americas from the 16th century to the present. The main purpose of this course is to promote a better understanding of the Americas' past by developing an increased interest and awareness of the history of African-Americans, their problems and accomplishments. Special emphasis will be placed on African-Americans of the United States of America. Since the history of African-Americans is an integral part of the American past, it must be examined within the context of that past. The course will cover the Caribbean, Central America, South America and Canada in general and the United States in particular. The course is designed to give students a broader and more insightful knowledge about African-Americans in the Western hemisphere, to re-introduce them to those aspects of African-American history which have been obscured during a long period of deliberate neglect by many Western Writers, and to arouse the interest of the students in serious and systematic study of African-American history and literature, as well as increasing their sensitivity to the achievements and contributions of the African people in the development of the Americas. Prerequisites: HIST 200 and 201 or permission of instructor.

#### HIST 475 Intellectual History of Africa 3 Credits

An intensive examination of the development of social, economic and political ideas instrumental in shaping the thought of African thinkers as well as their contributions to the changing African attitudes and opinions. Emphasis will be placed on the effect of these ideas on the minds, practices and traditions of Africans, particularly as they relate to Africans, their institutions, cultures, work, and economic relationships.

#### HIST 490 Independent Study in History 3 Credits

This is directed individual study and research in by students who have demonstrated ability, desire and responsibility necessary to pursue an independent research project on a topic of his or her interest. A topic for investigation is selected with the approval of the instructor in consultation with the chairperson of the Department. The course ordinarily spans one semester but may if need be, spill over to another semester – indicative of the amount of input and quality of work expected of each student. Prerequisite: HIST 445 or permission of instructor.

#### KISW 103 Introduction to Kiswahili

**0** Credits

This course introduces students to Kiswahili language. vocabulary and grammar. Topics: composition writing, punctuations, and comprehension. There are 2 lectures each week. Prerequisite: Direct placement as per the Kiswahili Placement Test results.

#### KISW 105 Language Skills in Kiswahili I **3 Credits**

This course emphasizes on fundamentals of grammar with elements of conversation, organs of speech, sound production, comprehension and conversational skills. Other writing skills include: research papers, official letters, and minutes of a meeting, book reviews and critiques, editing skills, composition, summary and essay.

#### KISW 110 Introduction to the Study **3 Credits** of Language

This course is designed for Kiswahili students; it examines theories of the origin of human language and typology. Students are introduced to linguistic concepts, both prescriptive and descriptive, as well as the different levels of language: phonology, morphology, syntax and semantics, sociolinguistic, psycholinguistics, applied linguistics and stylistics. Other topics include: role of linguistics in neighboring disciplines, applications to practical fields such as lexicography, orthography, translation, and language planning. Language varieties: dialects, pidgins, and creoles; standard language. Bilingualism and multilingualism etc.

#### KISW 111 Historical Development **3 Credits** of Kiswahili

This course traces the History of Kiswahili Language from pre- colonial, colonial, present and future development of Kiswahili as a Bantu Language. Topic: Language standardization and policies in. Africa, factors affecting the development of Kiswahili, changes in Kiswahili phonology, syntax, semantics and the lexicon. Students will be required to participate in an Educational trip to Mombasa, Kilifi and Malindi.

#### KISW 114 Language Use in Kiswahili

This course emphasizes on: fundamentals of grammar with elements of conversation, organs of speech, sound production, comprehension and conversational skills. Other writing skills include: research papers, official letters, and minutes of a meeting, book reviews and critiques, editing skills, composition, summary and essay.

#### **KISW 120** Phonetics and Kiswahili **3 Credits** Phonology

2 Credits

This course focuses on the application of phonetic science to the process of acquiring and the teaching of proper pronunciation. Topics: comparison between phonetic and phonology, articulator, acoustic and auditory phonetics, IPA and its relevance to Kiswahili language, Kiswahili phonemes, Kiswahili syllables, phonology, stress, intonation, pitch and rhythm. Other topics: phonological processes and rules as well as practical exercises in phonetic transcription. Prerequisite: KISW 110.

#### **KISW 205 Introduction to the Study 3 Credits** of Literature

This course introduces the learner to meaning, scope and genres of Kiswahili literature. Topics include genres, plot, conflict, narration, characterization, and stylistic devices. This course equips the learner with knowledge on periodic theories in the development of Kiswahili literature, contextual genres, textual analysis, practical analysis of all genres and emerging issues in Kiswahili Literature like globalization, ICT etc.

#### **KISW 210** Theory and Practice of **3 Credits** Translation and Interpretation I

This course introduces the students to the concept, objective, skills and theory of translation. Topics: structural characteristic that affect translation of spoken and written texts, cohesion and coherence of texts and comprehension. Students will be expected to translate passages, instructions, reports and formal documents from English to Kiswahili.

#### KISW 225 Kiswahili Morphology and Syntax 3 Credits

This course has two sections: Morphology and Syntax. Under Morphology the course examines Kiswahili morphemes, word structure, word forms as well as the processes involved in their realization. Topics include Morpheme and allomorph; affixation and its role in Kiswahili word formation techniques: Clipping, compounding, borrowing and derivation; parts of speech and classification of nouns. Under syntax the course examines syntactic structure of the Kiswahili sentences, markers of paratactic and hypotactic structures and representing the Kiswahili sentence using tree diagrams.

#### **KISW 240** Theory and Practice of **3 Credits Translation and Interpretation II**

This course will explore the theory and practice of translation from Kiswahili to English and English to Kiswahili. Theoretical investigation will consider translation as an activity of comparative stylistics and an art of communication. Topics: Ambiguity in translation, aims, levels types, process of translation, relationship between language and culture. translation procedures and types of contexts i.e. structural. cognitive and pragmatic. Prerequisite: KISW 210.

#### KISW 265 Language Skills in Kiswahili II **3 Credits**

This course exposes students to Kiswahili language as an instrument of expression and a tool of communication. Topics: types of communication, language contact i.e. code-switching, sound and semantic shifting, language variation, figures of speech, punctuation, documents, messages, submissions, minutes, press releases, newspaper articles, public information, pamphlets/leaflets, speeches, vote of thanks, memoranda, letters and book reviews, speech making, and interviews. General techniques of factual and fictional writing, existing communication theories and problems, language and culture in relation to communication.

#### KISW 270 Kiswahili Short Stories

This course introduces the concept of short story, its history and analyzes its structure and rules. It also deals with traditional short stories i.e. tales, fables, myths, aetiological stories, tricksters and legends and their influences on the modern short story- including the following topics: thrillers,

detectives, romantic and didactic stories. Short stories by selected authors will be identified and analyzed structurally, thematically and stylistically. Prerequisite: KISW 205.

#### KISW 285 Second Language Learning 3 Credits

This course is designed to expose the student to the approaches in the study of second language learning and their application in Kiswahili. Topics include: Major approaches to the study of Second Language learning and their application to the learning of Kiswahili as a second language. Contrastive analysis, error analysis, inter-language and universal grammar. Research techniques in the investigation of Second Language Learning such as data elicitation, data quantification and analysis etc.

#### KISW 310 Stylistics in Kiswahili

**3 Credits** 

The course introduces the concept of language as a tool of communication and examines the different schools of thought on style and stylistics. Topics: theories and approaches, ethnography, semantics, art, concept and levels of style and stylistics in relation to sociolinguistics, sociology and literature. The concept of style is analyzed linguistically and literary. Other topics: literary-genres, themes, situations and contexts of communication; Language use in registers and fundamental skills in communication. Prerequisites: KISW 265.

#### KISW 315 Theories of Literary Criticism 3 Credits

This course introduces the theories of literature and focuses on literary devices in different genres. The topics explored in this course include literary theories such as structuralism, formalism, realism, pragmatism, Marxism, feminism, psychoanalysis, new historicism, post colonialism, African-Americanism, queer theory, eco-criticism etc.; laws of plot, conflicts, setting, narration, theme, figurative language, prosody, symbolism, and movements and style in oral and written literature.

#### KISW 320 Sociolinguistics in Kiswahili

The course defines the concepts and scope of sociolinguistics, macro linguistics and micro linguistics. Topics: language variations, monolinguals, bilingualism, multilingualism, diglossia, gender and gender stereotypes, code-switching and code-mixing, interference, borrowing, Sheng, language maintenance and shift, language planning, standard language and the impact of standardization, language and education, and current language planning policy in Kenya. Prerequisite: KISW 220.

#### KISW 350 Oral Literature in Kiswahili

3 Credits

**3 Credits** 

This course introduces students to oral literature by examining its genres: tales, fables, parables myths, legends, epics, proverbs, riddles, songs and poems. Topics: performance, audience, improvisation, elements of poetry, songs and musical accompaniment, occasions, ceremonies and initiations. The theoretical and methodology problems of oral literature as well as the research methods employed in its study are emphasized. Prerequisite: KISW 205.

#### KISW 365 Contemporary Kiswahili Novel 3 Credits and Play

The course is an in-depth study of the theory, origin and development of Kiswahili novel and Play as literary genres.

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Topics: the transition from oral literature to Novel and Play; the influence of oral literature on written novels and plays, types of novels and plays, analysis of Kiswahili novels and plays and literary movements in the two genres. Emphasis is placed on such authors as S. A. Mohamed, Mohamed S. Mohamed, Shafi Adam Shafi, Katama Mkangi, Rocha Chimerah, John Habwe, Kithaka wa Mberia, E. Hussein, among others. Prerequisite: KISW 205.

#### KISW 370 Comparative Literature in 3 Credits Kiswahili

This course undertakes a comparative analysis of different literary works in each genre. Topics: regional comparison of authors from East Africa, historical comparison of authors from Kenya, Uganda and Tanzania before and after independence. The following authors, among others, are compared: Chacha, Chimerah, Kitsao, Kezilahabi, Mazrui, and S. A. Mohamed. Prerequisites: KISW 205 and KISW 310.

#### KISW 380 Theatre Arts in Kiswahili 3 Credits

This course focuses on the concept, art and history of development of theatre arts. Topics: dramatic elements in rituals, dance; choreography, stage management and adjudication techniques, thematic and stylistic analysis of different types of plays; identification and critical appraisal of the agents of disseminating theatre arts in Kenya. Students will be required to take an educational field trip to any print and electronic media houses. Prerequisite: KISW 365.

#### KISW 395 Research Methods in 3 Credits Language and Literature

The course introduces students to research methods in Kiswahili. Topics: Basic research methods, research questions, literature review, methodology, problems and issues in Kiswahili research; critical analysis of methodology and data collection devices. Other topics: choosing a topic, writing a research proposal, data collection procedures, tabulation, interpretation, analysis and presentation of research findings. Prerequisite: All courses below KISW 395 and ENGL 105.

#### KISW 415 Editing Skills in Kiswahili 3 Credits

This course equips the student with editing and proofreading skills. It covers the following topics: Principles of editing, editing process, editing strategies, editing symbols, editing and the law, editing for various purposes and editing of specific documents etc. Prerequisite: All courses below level 395.

#### KISW 420 Semantics and Pragmatics 3 Credits in Kiswahili

This course explores the following topics: the scope of semantics, learning and language change, Kiswahili technical terms, lexicography and the principles of compiling dictionaries; truth conditional model-theoretic semantics; scope of pragmatics, divisions of pragmatics, functions of pragmatics, theory and practice of pragmatics, the functional approaches to pragmatics, and pragmatics and discourse analysis. Prerequisite: KISW 395.

#### KISW 422 Textual and Discourse Analysis 3 Credits in Kiswahili

This course exposes the students to the linguistic and discourse analysis of naturally occurring connected speech

or written texts. Topics: organization of language above the sentence, general functions of language; transactional and interactional; the use of written and spoken texts. Other topics: Discourse theories such as Speech Act Theory, Ethnography of communication, the Cooperative Principle, Conversation Analysis and the Politeness Principle and their application in analyzing texts; conversational exchanges, exchange structure as well as language use in social contexts. Prerequisite: All courses below KISW 395.

#### KISW 425 Kiswahili Poetry

#### **3 Credits**

This course covers poetry as a genre in general and investigates the differences and similarities among contemporary Kiswahili poetry by different poets. Topics: free verse and prosody and the continuing debate on the nature of Kiswahili poetry. Different works by poets such as Shabaan Roberts, Mnyampala, Nassir, Abdilatif A., S. A. Mohamed, M. M. Mulokozi, K. K. Kahigi, E. Kezilahabi, Kithaka-wa-Mberiaetc, are analyzed.

#### KISW 430 Creative Writing in Kiswahili 3 Credits

This course introduces students to concepts, scope, history and development of creative writing in Kiswahili. Topics: literary aspects in creative works, writing imaginative works for the stage; electronic and print media; analysis of published works, creative skills in writing composition and summaries; stylistic features in literary works and language use in different registers. Prerequisite: KISW 205.

#### KISW 440 Psycholinguistics in Kiswahili 3 Credits

The course focuses on the mental process and skills underlying the production and comprehension of language. Topics include: language, thought, and signal; speech signals and writing systems, biological foundations of language, neuro-linguistics, the brain, the abstract language system-competence and performance, language production; context, variation functions, and errorse.g. slips of the tongue, ear, etc. Inter-language and universal grammar, Research techniques in the investigation of Second Language Learning etc. Prerequisite: KISW 320.

#### KISW 45 Historical and Comparative 3 Credits Linguistics in Kiswahili

This course focuses on the comparative methods of historical linguistics in Kiswahili especially the concepts and scope of comparative and historical linguistics. Topics: history and development of comparative historical linguistics, predecessors and early discoveries, the comparative method (glottochronology), lexicostatistics, language classification, reconstruction and etymology, diachronic and synchrony, origin and spread of Kiswahili dialects.

#### KISW 460 Language Policy and Planning 3 Credits

This course is designed to make learners aware of and appreciate the position of each language in Kenya as well as its use in the Curriculum. The students are expected to analyze Kenya's language policy and role of teaching Kiswahili, English and other African languages, analyze problems facing languages under language policies, discuss emerging issue language and their impacts on national, official and mother tongue languages. Topics: Concept of language policy and planning, process of language planning, history of language planning in Kenya, the role of English, Kiswahili, and Mothertongue. The study of emerging languages such as Sheng and Engsh and the impact of emerging issues on the use of languages.

#### LITE 151 Introduction to Literary 2 Credits Appreciation

This course introduces the learner to the art of critically responding and appreciating literature as the creative and imaginative use of language. This will deepen the learner's insights into the nature of literature and its relevance to humankind. The learner is introduced to the general concepts and terminologies in literature and literary analysis. The learner understands the diverse genres of literature through a rigorous analysis of selected literary texts.

#### LITE 154 Introduction to Oral Literature 3 Credits

This course concentrates on unwritten literature that is realized through performance. It surveys the various aspects of the major genres of oral literature namely, narratives, songs (oral poetry) proverbs, riddles and epics. The influence of oral literature on written literature is also examined. By the end of the unit the student should be able to describe orature material from Eastern Africa, explaining its development to date; and forecast the nature of the future of oral literature study in Eastern Africa in terms of directions, opportunities and challenges in the 21st century.

#### LITE 159 Themes in East African Literature 3 Credits

The course is a survey of the main themes handled by major East African writers in their literary works including prose fiction, poetry and drama. Areas to be covered include themes in colonialism, cultural conflict, social transformations neocolonialism, political upheaval, democratization, gender, among others.

#### LITE 165 Stylistics

This course is concerned with the linguistic analysis of literary texts. It involves examining the language of literary texts with a view to helping students arrive at a fuller understanding and appreciation of these texts. The course aims to help students describe such things as the literary achievement of a particular literary text and the communicative strategies employed in it. Through textual analysis, the course introduces a number of important principles such as foregrounding as demonstrated in the various forms of deviation and of parallelism that occur typically in literary texts.

#### LITE 168 The Short Story

This course is designed to introduce the student to the characteristics of the short story and to acquaint them with some of its most talented writers. During the semester we study short stories from various cultures and countries, ranging from stories written in the early nineteenth-century to those written within the last few years and to help the student appreciate short story as a genre.

#### LITE 210 East African Prose Fiction

The course covers East African fiction from the colonial to the postcolonial periods. It compares and contrasts the social ideas and the aesthetic standards of the two periods. The novels and short stories of various writers in east Africa are analyzed in detail.

**3 Credits** 

**3 Credits** 

#### LITE 212 East African Poetry

**3 Credits** 

This course encompasses varied aspects of poetry in East Africa. It attempts to expose the learner to an extensive range of poetry by East Africans, and how these poets have given poetic expression to the East African experience. The learner will also explore distinctive features of East African poetry and recognize developments and changes that have fashioned the genre. Stylistic and thematic concerns will be surveyed in the study.

#### LITE 214 East African Drama

**3 Credits** 

This course examines the development of East African drama. It studies major East African playwrights such as Ruganda, Imbuga, Hussein, Serumaga, among others. The social ideas and the aesthetic standards of the colonial and postcolonial periods are compared and contrasted. Learners use current theories to analyze selected texts.

#### LITE 260 Children's Literature

**3 Credits** 

**3 Credits** 

**3 Credits** 

The course is designed to provide students with a foundation in children's literature and develop and deepen their appreciation of children's literature as a literary form. It examines preschool, pre-adolescent, and adolescent written children's literature from different cultures, with emphasis on Kenyan examples. Selected texts are read and analyzed in terms of form, content, layout, and language use. Students examine folktales and fiction. Learners are introduced to relevant theoretical material and encouraged to develop independent critical responses to the texts.

#### LITE 346 Introduction to Literary Theory 3 Credits and Criticism

This course introduces a student to the field of literary theory, a central component of contemporary studies in world literature. The student will gain knowledge of the various premises, methods, utility, and limitations available to him/her as a critical reader of literature. The course explores classical Greek origins of issues concerning the nature of literature and criticism, and examines major twentieth-century theories and applications. It is intended to equip students with the relevant tools of critical analysis of literary phenomenon.

#### LITE 347 South African Literature

The course introduces the characteristic features of South African fiction written in English. The learner compares the ideological views of white, colored, and black authors in the colonial, apartheid and post-apartheid periods. The course considers major thematic and literary trends in South African fiction.

#### LITE 350 African American Literature

The course studies oral and written literature of African American writers from the 18th century through the Harlem Renaissance, the Depression to the contemporary times, including authors such as Zora Neal Hurston, Langston Hughes, Claude Mackay, Martin Luther King Jr., Ralph Ellison, Alice Walker, Tony Morrison, among others. Students analyze major themes and study a range of genres, including prose fiction, poetry, drama, and autobiography.

#### LITE 348 European Literature

#### **3 Credits**

Taking into consideration George Lukac's theory that the novels reflect the structure of historical and social reality and the Marxist view of history as a dialectical class struggle, the course examines novels and short stories, poems and plays written in periods of important social and cultural upheaval. Of particular interest will be the rise of capitalism, the ascendancy of the middle classes, industrialization and the relevance of European literature to society as we know it. The course also examines Modernism – a subversive attitude to life and art, which is usually seen as a reaction against Realism. Representative European texts are examined in terms of style and vision.

#### LITE 363 The African Novel

**3 Credits** 

The course investigates the characteristic features, thematic concerns and the evolution of the African Novel. It explores the development of the novel from authentic and indigenous African forms to contemporary forms; it also examines the blending of African themes and Western language to create the contemporary African novel. In addition, the course interrogates the role of the African novelist as social critic.

#### LITE 364 Women Writers

This course undertakes a critical study of literature by women writers. The emphasis is on the various ways in which women's perceptions are reflected in the fiction, drama, and poetry that they have produced. The course shall concentrate on the major women writers including Efua, Sutherland, Micere Mugo, Ama Ata Aidoo, Jane Austin, Emily Dickinson, Alice Walker, Anita etc.

#### LITE 449 Modern Poetry

This course explores the use of English language in modern poetry; Poetry as social comment, expression of emotion and personal experience. It also covers major thematic and literary trends in modern poetry since the 1900s. The works of Wole Soyinka, Sedar Senghor, Dylan Thomas, T. S. Eliot, Robert Frost, Wallace Stevens, etc. are covered.

#### LITE 450 Theatre Arts

This course provides a study of the art, craft, and business of the theatre. Special emphasis is placed on a variety of practical productions during the semester, aimed at equipping the individual students with meaningful skills in acting, directing, play analysis and scripting. Upon completion, students should be able to demonstrate an understanding of theatre vocabulary and recognize the contributions of various theatre artists. Learners are exposed to the actual experience of play production through various roles on and off stage. They are expected to master the simple principle of stage movement. The process of adjudication is also introduced. At the end of the course each learner must have taken part in a theater project which involves a live production.

#### LITE 451 Major Author

The course offers a comprehensive study of any one selected outstanding writer who has written extensively. Besides analyzing the author's biography, the course examines the cardinal concerns, styles, and the literary and ideological contributions of his/her works. The impact of this writer to the social and literary environment is also examined.

#### **3 Credits**

**3 Credits** 

#### LITE 453 Literary Studies of the English 3 Credits Bible

The course studies the artistic qualities of selected portions of the English Bible. It is a realization that although God inspires the Biblical writers, they write within accepted artistic structures and conventions similar to those used in secular works of literature. The study of these structures and conventions is expected to lead to a deeper understanding of the truth inspired by God and embedded in art. Prerequisite: LITE 151

#### LITE 455 Theory, Fieldwork and Research 3 Credits Skills in Oral Literature

The course deals with the role of theory in the study of oral literature. The theories will then be applied in the analysis of oral literature material. The ideological, folkloristic and structural approaches to the study of oral literature will be explored. For first-hand experience in field work and research skills, learners are required to spend time in the field collecting oral literature material. Students will demonstrate competence in practical research techniques and analysis through reports. Perquisite: ENGL 105.

#### LITE 456 Caribbean Literature

#### **3 Credits**

The course examines the importance of history in Caribbean writing; slavery and indentured servitude; Christopher Columbus and European discovery, Caribbean wars. Themes in Caribbean literature: Home and exile, colonialism and decolonization, tradition, culture, identity, sexuality etc. images of Africa, Europe and East India in Caribbean literature. Literary, political and socio-economic contexts of Caribbean literature. Major authors include Naipul, Selvon, Lamming, Pollard, Walcott, Brathwaite, etc.

#### LITE 466 Research/Creative Writing 3 Credits Project

This course has two options: a research project or creative writing project. A student selects a literary topic which is approved by the department. Supervision is provided by the department to guide the student to write a proposal, then thereafter submit a written library or field research project. Alternatively, a student may write an original creative composition of an anthology of poems, short stories, or a play. This course spans two semesters. Prerequisite: ENGL 465, ENGL 105

#### MUCH 225 Introduction to Hymnology

This is an introduction to the study of hymnody. It covers the literary attributes of hymns that include but not limited to rhyming patterns, types of poetic feet, meter, poetic devices and literary patterns. Sources of hymn tunes and types of hymns is also an integral part of this course.

#### MUCH 244 Church Music

#### 2 Credits

A deeper study on the role of music in the Christian's personal life, home, school, evangelism, church services and church music administration and a study on principles of music for worship espoused in the Bible and Spirit of Prophecy and the Seventh-day Adventist Philosophy of Music. In-reach and out-reach programs are required to give experience to the students through skill trainings, seminar and demonstrations in local churches.

#### MUCO 217 Choral Conducting I

2 Credits

This course deals with the philosophy and basic principles of conducting technique. The awareness of the relationship between ear, gestures and sound will be established in this course. A study of beating technique, rehearsal technique and procedures, choral warm-up methods and score preparation is also included.

#### MUCO 218 Choral Conducting II

2 Credits

Continued development of conducting studies with emphasis on more complex beating techniques, vocal techniques, choral sound and communication. A study of conducting techniques, interpretation of choral/ instrumental scores, rehearsal procedures, tonal concepts and choral administration is also included.

#### MUED 103 Introduction to Music Education 2 Credits

A study of the philosophical and historical foundation of music education with emphasis on Adventist Philosophy of education. Also includes an overview of the different music programs for elementary and secondary school.

#### MUED 203 Music Education Methodology 2 Credits

A survey of various teaching philosophies, objectives, methodology and materials in classroom teaching. Collection of materials and practicum in the classroom is required. Prerequisite: MUED 103.

#### MUED 316 Piano Pedagogy

2 Credits

2 Credits

**3 Credits** 

Discusses and evaluates various teaching philosophies, objectives, methodology and materials of piano teaching. Practical experience of teaching piano at the elementary and early intermediate levels is compulsory under faculty supervision. Prerequisite: MUPF 311.

#### MUED 326 Vocal Pedagogy

Discusses and evaluates various teaching philosophies, objectives, methodology and materials of voice teaching. Practical experience of teaching voice at the elementary and early intermediate levels is compulsory under faculty supervision. Prerequisite: MUPF 321

#### MUED 405 Teaching Practice

Student is exposed to practical experience in teaching secondary school for one full term of twelve weeks. While on teaching practice the cooperating teacher (class teacher) works closely with the student teacher and keeps a detailed description of the progress of the student. Prerequisite: MUED 305

#### MUHL 170 Introduction to Music History 3 Credits

The course is a general studies on historical development of Western music from Antiquity through Contemporary Period. Emphasis is on the trends, styles, social influences, and aesthetics of the period.

#### MUHL 270 Survey of Music History I 2 Credits

The course is a survey of the historical development of Western music from Antiquity through Medieval and Renaissance Period with score and aural analysis of representative compositions.

Emphasis is on the trends, styles, social influences, and aesthetics of the period. Prerequisite: MATH 101.

#### MUHL 271 Survey of Music History II

The course is a survey of the historical development of Western music from Baroque through Classical Period with score and aural analysis of representative compositions. Emphasis is on the trends, styles, social influences, and aesthetics of the period. Prerequisite: MUHL 270.

#### MUHL 272 Introduction to Ethnomusicology 2 Credits

A study of the cultural and artistic forces which shape the music of non-Western World and the various types of folk and art music resulting from these forces.

#### MUHL 315 Piano Literature

1 Credit

2 Credits

A general overview of selected composers and keyboard compositions of Baroque through Contemporary periods. Elements of musical style, genres, and performance practice will be included in the discussions. Reading and listening assignments will supplement the in-class presentations by faculty and students. Prerequisite: MUPF 211.

#### MUHL 325 Vocal Literature

1 Credit

A general overview at selected composers and vocal compositions of Baroque through Contemporary period. Elements of musical style, genres, and performance practice will be included in the discussions. Reading and listening assignments will supplement the in-class presentations by faculty and students. Prerequisite: MUPF 221.

#### MUHL 370 Survey of Music History III 2 Credits

The course is a survey of the historical development of Western music from Romantic through 20th and 21st century Period with score and aural analysis of representative compositions. Emphasis is on the trends, styles, social influences, and aesthetics of the period. Prerequisite: MUHL 271.

#### MUPF 110 Piano Concentration I

#### 2 Credits

2 Credits

1 Credit

A study in mastering piano skills which includes exercises of major – minor (harmonic) keys up to 4 sharps and flats in form of scales, triads, arpeggios and cadences. A minimum of 5 pieces at late elementary level is compulsory. This course also emphasizes on sight reading skill, harmonization and transposition of simple hymns and choruses. A public recital of one memorized song is required prior to final examination. Prerequisite: MUPF 011 or pass an assessment exam of midelementary level test.

#### MUPF 111 Piano Concentration II

A study in mastering piano skills which includes exercises of all major – minor (harmonic) keys in form of scales, triads, arpeggios and cadences. A minimum of 4 pieces at early intermediate level is compulsory. This course also emphasizes on sight reading skill, harmonization and transposition of simple hymns and choruses. A public recital of one memorized song is required prior to final examination. Prerequisite: MUPF 110

#### MUPF 114 Applied Music – Brass

A study and learning of the basic skills of brass instruments.

MUPF 115Applied Music – Woodwind1 CreditA study and learning of the basic skills of woodwind instruments.

#### 1 Credit

1 Credit

A study and learning of the basic skills of guitar.

#### MUPF 117 Applied Music – Strings

MUPF 116 Applied Music - Guitar

A study and learning of the basic skills of string instruments.

#### MUPF 120 Voice Concentration I 2 Credits

A study in mastering vocal skills which includes late elementary level of vocal technique, exercises and repertoire of songs from categories of sacred, English and Italian literature as well as African art songs. A minimum of 3 public performances are required, one of them is a musical offering in the church service. A public recital of one memorized song is required prior to final examination.

#### MUPF 121 Voice Concentration II 2 Credits

A study in mastering vocal skills which includes early intermediate level of vocal technique, exercises and repertoire of songs from categories of sacred, English and Italian literature as well as African art songs. A minimum of 3 public performances are required, one of them is a musical offering in the church service. A public recital of one memorized song is required prior to final examination. Prerequisite: MUPF 120.

#### MUPF 125 Ear Training and Sight Singing I 2 Credits

This course entails ear training and sight singing and the mastery of Diatonic major and minor scales, simple but basic rhythmic patterns and the transcription of music to both staff and the solmization system too. Navigation through melodic permutations with ease is an integral part of this course. Prerequisite: MUTH 100.

#### MUPF 126 Ear Training and Sight Singing II 2 Credits

This course entails ear training and sight singing and the mastery of the chromatic scale and a relative complex rhythmic structure that involves the quaver and semiquaver notes and simple syncopations and grouplets. Transcription of music in both staff and the solmization system and ease navigation through melodic permutations is an integral part of this course. A student taking this course should be able to teach in a choral group in a duration of not less than a semester. Prerequisite: MUPF 125.

#### MUPF 210 Piano Concentration III

2 Credits

A study in mastering piano skills which includes exercises of all major – minor (harmonic) keys in form of scales, triads, arpeggios and cadences. A minimum of 4 pieces from the four periods at intermediate level is compulsory. This course also emphasizes on sight reading skill, harmonization and transposition of simple hymns and choruses. A public recital of one memorized song is required prior to final examination. Prerequisite: MUPF 111.

#### MUPF 211 Piano Concentration IV 2 Credits

A study in mastering piano skills which includes exercises of all major – minor (harmonic & melodic) keys in form of scales, triads, arpeggios and cadences. A minimum of 4 pieces from the four periods at late intermediate level is compulsory. This course also emphasizes on sight reading skill, harmonization and transposition of simple hymns and choruses. A public recital of one a sonatina is required prior to final examination. Prerequisite: MUPF 210.

#### MUPF 226 Singer's Diction

#### 1 Credit

A general study of English, Italian, Spanish, German and French languages with clear and correct pronunciation, enunciation and articulation for use in solo and chorus singing. Prerequisite: MUPF 210/ 222.

#### MUPF 220 Voice Concentration III

2 Credits

2 Credits

A study in mastering vocal skills which includes intermediate level of vocal technique, exercises and repertoire of songs repertoire of songs from categories of sacred, English, Italian and Spanish literature as well as African art songs. A minimum of 3 public performances are required, one of them is a musical offering in the church service. A public recital of one memorized song is required prior to final examination. Prerequisite: MUPF 121.

#### MUPF 221 Voice Concentration IV

A study in mastering vocal skills which includes late intermediate level of vocal technique, exercises and repertoire of songs repertoire of songs from categories of sacred, English, Italian, Spanish, and German literature as well as African art songs. A minimum of 3 public performances are required, one of them is a musical offering in the church service. A public recital of one memorized song is required prior to final examination. Prerequisite: MUPF 220.

#### MUPF 225 Advanced Sight Singing

#### 2 Credits

This course entails ear training and sight singing and the mastery of varied modulatory techniques and complex and irregular rhythmic structures that involve asymmetrical metric patterns and complex syncopations. Transcription of likemusic in both staff and the solmization system is an integral part of this course. A student taking this course should be able to teach and prepare a choral presentation of not less than an hour in duration and whose repertoire includes the materials covered in class for the duration of not less than a semester. Prerequisite: MUPF 126.

#### MUPF 335 University Chorale

#### 2 Credits

2 Credits

The course includes regular membership in the University Chorale. Participation in public performances is required. The student is involved in leadership roles such as keeping the attendance records, planning for concerts and being a role model in both general conduct and expressive musicianship. Registration is after a student has been a member of the choir for not less than a year and has done Aural Training and Sight Singing I, II and Advanced Sight Singing and Choral Conducting I and II. Membership is also open for non-music majors by audition.

#### MUPF 310 Piano Concentration V

A study in mastering piano skills which includes exercises of all major – minor (harmonic & melodic) keys in form of scales, triads octave, dominant 7th, arpeggios and cadences. A minimum of 4 pieces from the four periods at advanced level is compulsory. This course also emphasizes on sight reading skill, harmonization and transposition of hymns and choruses. A public recital of a sonatina is required prior to final examination. Prerequisite: MUPF 319.

#### MUPF 311 Piano Concentration VI

2 Credits

2 Credits

2 Credits

A study in mastering piano skills which includes exercises of all major – minor (harmonic & melodic) keys in form of scales, triads, octave, dominant 7th, arpeggios and cadences. A minimum of 4 pieces from the four periods at advanced level is compulsory. This course also emphasizes on sight reading skill, harmonization and transposition of hymns and choruses. A public recital of a sonata is required prior to final examination. Prerequisite: MUPF 310.

#### MUPF 314 Art of Accompaniment 2 Credits

A practical study to accompany various genres of vocal and instrumental pieces from Baroque to Contemporary period. Improvisation is an integral aspect of this course. Students are required to accompany choirs and services in church. Prerequisite: MUPF 211.

#### MUPF 320 Voice Concentration V

A study in mastering vocal skills at advance level, which includes exercises from instructor, and repertoire of songs from categories of oratorios, operatic arias, English, Spanish, German and French literature as well as African art songs. A minimum of 3 public performances are required, one of them is a musical offering in the church service. A public recital of one memorized song is required prior to final examination. Prerequisite: MUPF 221.

#### MUPF 321 Voice Concentration VI

A study in mastering vocal skills at advance level, which includes exercises from instructor, and repertoire of songs from categories of oratorios, operatic arias, English, Spanish, German and French literature as well as African art songs. A minimum of 3 public performances are required, one of them is a musical offering in the church service. A public recital of one memorized song is required prior to final examination. Prerequisite: MUPF 320.

#### MUPF 346 Instrumental Ensemble

1 Credit

Expansion of repertoire from Instrumental Ensemble I ranging from Baroque to Contemporary period. Students learn how to coordinate with each other as they perform together. Enrollment of this course must be under recommendation of the instructor.

#### MUPF 410 Piano Concentration VII

2 Credits

1 Credit

A study in mastering piano skills at advance level and a preparation of final recital with a set of repertoire from Baroque to Contemporary period. An ensemble work may be part of the program, preferably a concerto. An audition for final recital will serve as the final exam. Prerequisite: MUPF 311.

#### MUPF 411 Piano Recital

This course serves as a senior recital of B.A Music Performance concentration in Piano. Students that will take this course must be in an advance level. A minimum of 60 minutes performance is required. Prerequisite: MUPF 410.

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#### MUPF 420 Voice Concentration VII

2 Credits

A study in mastering vocal skills at advance level and a preparation of final recital with a set of repertoire consisting variety of different periods and categories from oratorios, operatic arias, English, Spanish, German, French and African literature as well as song - cycle. An ensemble work may be part of the program. An audition for final recital will serve as the final exam. Prerequisite: MUPF 420.

#### MUPF 421 Voice Recital

1 Credit

This course serves as a final recital of B.A Music Performance concentration in Voice. Students that will take this course must be in advance level. A minimum of 60 minutes performance is required. Prerequisite: MUPF 420.

#### MUHL 491 Research Methods in Music 2 Credits

This is a course that introduces a methodology for Research in Music. The course includes definition of research, survey of types of research, problem identification; writing a research proposal; methods of gathering data and interpretation of data. Prerequisite: ENGL 105.

#### MUHL 493 Music Research Project

2 Credits

This is a research project planned with a sponsoring faculty member, with permission of the instructor. Student chooses a topic from the field of music education, history, theory or musicology and writes an original paper showing methods and strategies of the chosen topic. Public presentation of the research project is the culmination of this course. Prerequisite: MUHL 491.

#### **MUTC 237** Introduction to Music Technology

**3 Credits** 

This is an introduction to assorted music writing software that include but not limited to the Noteworthy composer, Finale, and Sibelius. It also includes an introduction to studio recording software for sound production.

#### MUTC 240 Introduction to Video Production 3 Credits

This is an introduction to the basics of capturing motion picture and editing. It also involves the introduction of Video editing hardware and software and other special effects used in editing. A simple project involving video capturing and editing is a requirement of this course.

#### MUTC 241 Introduction to Sound Production3 Credits

This is an introduction to the basics of capturing sound and editing. It also involves the introduction of sound/voice-editing hardware and software and other special effects used in editing. A simple project involving sound recording and editing is a requirement of this course.

#### MUTH 100 Fundamentals of Music

#### **3 Credits**

This course introduces the students to elements of music, scales and tonality, rhythm, intervals and introduction to triads and seventh chords and diatonic chords in major and minor keys. Ear training and sight reading are integral parts of this course.

#### MUTH 101 Music Theory I

**3 Credits** This course entails the study of the principles of voice leading, part writing in root position and its inversions, Seventh chords and their inversions, melody writing, cadences, figured bass, and lead sheet symbols. Ear training and sight reading are integral parts of this course. Prerequisite: MUTH 100 or pass a challenge exam of MUTH 100.

#### MUTH 102 Music Theory II

This course is the continuation of MUTH 101 which entails the study of the Six Chords, Six-Four, Chords, Cadential Six-Four, Arpeggio Six-Four, Auxiliary/Neighbouring/Pedal Six-Four, and Passing Six-Four. It also entails Secondary Chords: Leading Tone and Sub-tonic Triad, Supertonic Triad, Submediant Triad, and the Mediant Triad. It also covers Non-Chord Tones: Classification of NCT's Passing Tones, Neighbouring Tones, Suspensions and Retardations, appoggiaturas, Escapee, Neighbour Group or Cambiata, Anticipations, Pedal Point, Ear training and sight reading are integral parts of this course. Prerequisite: MUTH 101.

#### MUTH 200 Music Theory III

**3 Credits** 

**3 Credits** 

This course entails the review and mastery of material covered in MUTH 102 and the study of Harmonic Progression: Sequences and the Circle of Fifths. Chromaticism and Altered Chords, Secondary Functions and Tonicization, Secondary Dominants, Secondary Leading Tone Chords, Modulation Using Diatonic Common Chords, Altered Chords as Common Chords, Sequential Modulation, Modulation by Common Tone, Monophonic Modulation, and Direct Modulation. Ear training and sight reading are integral parts of this course. Prerequisite: MUTH 102.

#### MUTH 201 Music Theory IV

**3 Credits** 

This course entails the review and mastery of material covered in MUTH 201 and the study of Mode Mixture, Borrowed Chords in Major and Minor, the Neapolitan Chord, the Augmented Six Chords, the Italian Augmented Six Chord, the French Augmented Six Chord and the German Augmented Six Chord. Ear training and sight reading are integral parts of this course. Prerequisite: MUTH 200.

#### MUTH 206 African Music Theory and **3 Credits Practice**

This course is an introduction to African music theory and practice. It includes melodic and rhythmic characteristics of indigenous African melodies, harmonic devices, and the influence of speech tones on melodies, harmonic scale patterns, music and related arts, the influence of Western Music in African Music practice. The course includes also melody and polyphony in instrumental music, rhythmic basis of instrumental music and conventions of music practice.

#### MUTH 306 Transcription of African Music 2 Credits

This is a continuation of African Music Theory and Practice I with a detailed study of the theories and structures. The course includes the study of the polyphony aspects in the instrumental music, rhythmic basis of instrumental music and conventions of music practice at an advance level.

#### MUTH 400 Form and Analysis

2 Credits

A study of the various forms and structures used in music composition during the Baroque, Classical, Romantic and Contemporary periods. Prerequisite: MUTH 201.

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#### MUTH 401 Introduction to Counterpoint 2 Credits

A study of melody against melody style of writing music in which two or more melodic lines, or parts, of equal importance and independence are combined in contrapuntal texture. Prerequisite: MUTH 201.

#### MUTH 402 Composition and Vocal Arranging

2 Credits

# A study of the fundamentals of music composition and vocal arranging in various forms and structures. Prerequisite: MUTH

#### MUTH 403 Orchestration

400.

#### 2 Credits

A study of the technique of writing and arranging music for orchestra. It includes the study of instruments, their ranges, characteristic timbres, technical capabilities, and the many ways in which instrumental sounds may be combined together-blended or contrasted - to create various kinds of musical texture. It also includes the scoring of family groups of instruments (strings, woodwinds, brass, percussion, etc.) leading to the scoring of full orchestra. Prerequisite: MUTH 400.

#### POLS 100 Introduction to Government 3 Credits

This course focuses on the concept, role and functions of political Science as a social science. Background to the development of political Science as a discipline of study will be considered: nature and scope of political Science and its relationship with other social Sciences; human activities that constitute the foci of political study. An examination of theories in political science will be attempted. The course will also pay attention to an outline analysis of nature, processes and ends of the modern state as well as the various types of political systems; an examination of the role of such key political institution as parties, pressure groups, executives, legislatures and other arms of major issues in political science will also be tackled.

#### POLS 200 Modern Governments in Africa 3 Credits

The course will examine the evolution in the themes like Mercantilism; the classical political economic thought, utilitarianism, capitalism and socialism to the development of Africa; political and economic systems; the political economy theory and contemporary third world development challenges: the role of the African state in its economic development; the international economic system and the place of African states, international financing and the third world; governance, globalization, poverty, environmental change and the way forward tackling third world political and economic dilemma.

#### POLS 207 Political systems of Developing 3 Credits Nations

This course reviews and critically discusses outstanding contributions that are aimed at grasping the specific features of politics in developing countries, and the challenges and opportunities for political solutions to the pressing problems. The contributions include theoretical and comparative analyses of the special role of politics in post-colonial governance, statebuilding and initial democratization, state society relations, state capacity, and social- and political organizing, the new wave of democracy and its crises, and international support for peace and democracy.

#### POLS 210 Introduction to International 3 Credits Relations

This course is a survey of the concept of international relations. The following are among the items to cover: Classical of international relations; contemporary theories of international relations; Theory and practice of international relations of state; power; propaganda and diplomacy in the practice of international relations; major approaches to the study of international relations; relation of national and international politics, security and sovereignty.

#### POLS 220 Africa in International Relations 3 Credits

An analysis of the relations between Africa and the developed world and how African aspirations fit the wider field of the global system including the United Nations, the former colonial masters, the non-aligned movement and the foreign aid agencies. To be covered also will be Africa's struggle to get space in the community of nations through African Union: the politics of aid; conflicts and refugee problems and Africa's role and objective in the ACP.

#### POLS 221 Introduction to Political Science 3 Credits

This course focuses on the concept, role and functions of political Science as a social science. Background to the development of political Science as a discipline of study will be considered: nature and scope of political Science and its relationship with other social Sciences; human activities that constitute the foci of political study. An examination of theories in political science will be attempted. The course will also pay attention to an outline analysis of nature, processes and ends of the modern state as well as the various types of political systems; an examination of the role of such key political institution as parties, pressure groups, executives, legislatures and other arms of major issues in political science will also be tackled.

#### POLS 230 Comparative Government in 3 Credits Developed Countries

Comparative analysis of different systems of government among selected countries in Western Europe and Asia, including: Britain, USA, Germany, France, and Japan. The emergence of constitutional systems of government in the USA, Japan and Western European countries. Functions of the executive, legislature and executive in the selected countries. Electoral process in the developed countries. Religion and governments in different countries.

#### POLS 300 Political Economy of Developing 3 Credits Countries

The mutual bearing of economics and politics will be attempted: that is the thought of scholars like Adam Smith; David Hume; John Stuart Mill; Francois Quesnay; David Ricardo; Karl Marx; Thomas Malthus. The course will also examine the evolution in the themes like Mercantilism; the classical political economic thought, utilitarianism, capitalism and socialism to the development of third world political and economic systems; the political economy theory and contemporary third world development challenges: the role of the third world state in its economic development; the international economic system and the place of third world states, international financing and the third world; governance, globalization, poverty, environmental change and the way forward tackling third world political and economic dilemma.

#### POLS 310 Politics and Government in Kenya 3 Credits

An analysis of the Pre-colonial state systems as a base of politics and government in Kenya will be done; change of system at independence to establish a modern state with characteristic political and administrative structures will also be examined. The course will further focus on the trade union movements; the political movements and pressure groups culminating in nationalist movement and the process of independence; postindependence transformations; and the politics of resource allocation equity and social justice in Kenya.

#### POLS 320 Local Government Politics 3 Credits in Kenya

This course focuses on governance at local authorities and service delivery to the citizens. The functions of local authorities; financing; tendering and procurement procedures; policy implementation; planning; drainage and sewerage system; roads; social amenities; garbage collection and challenges facing local authorities will be studied. The relationship between the local government and Central Government will be considered.

#### POLS 430 Politics and Environmental 3 Credits Welfare

The course introduces the learner to the source of water through hydrology. Further it provides the advanced and applied perspectives of water resources, the utility and constraints to both the society and the Environment. The specific utility are outlined on domestic, industrial, agricultural, conservation and riparian water.

#### POLS 435 Developed and Developing 3 Credits Nations Comparative Politics

This is a course which explores the political, economic, and social challenges of Third World development. It covers a wide range of contemporary issues affecting developing countries, and focuses especially on aid and development policies aimed at reducing poverty and underdevelopment. This course also surveys major theoretical and conceptual tools available for the analysis of development and underdevelopment. Comparative assessment of problems of the developed nations and the developing nations will be attempted.

#### POLS 440 History of Political Thought

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ought 3 Credits

This course traces historical development of political ideas from Plato and Aristotle to the present. The conceptual network of ideas of selected thinkers will be delineated and connections shown between the thinkers and the political beliefs of his or her period. The contributions of the thinkers at issue here, to the concept and nature of law, justice, liberty, equality of status and justice and the limit of law will also be explored. The course is designed to give the students opportunity to explore and study selected thinkers from Europe, the Americas, Africa and Asia and their political thought with an eye to introducing them to inquiry into critical thinking and political theories, their implications and ramifications, as well as their interpretations, assessments and applications.

#### POLS 443 African Political Thought

#### **3 Credits**

2 Credits

2 Credits

2 Credits

The content of this course zeroes in on the evolution and development of endemic political ideas in Africa and examines the influence of extraneous factors in shaping that development to date. Notable political theorists will be studied, the setting of their thought and similarities and/or differences in their schools of thought and the explanations of such. The role of African political thinkers on the political beliefs of their time, and the present governance systems will be assessed. Assessment of the relevance of the political theories in a highly globalized world shall also be done.

#### PSYC 101 Introduction to Psychology 2 Credits

The course presents an overview of the discipline of psychology. It addresses concepts such as Perception, Consciousness, Motivation, Emotion, Human development, Personality, Abnormal behavior, Social psychology, Psychotherapy, Research methods, Stress, Memory, Intelligence, and learning.

#### PSYC 110 General Psychology I

The course is an in-depth study of general psychology. It covers the History and methods of physiology of the nervous system, Genetics and environment, Aspects of human development, Consciousness, Sensation, Perception, Learning, and Memory.

#### PSYC 111 General Psychology II 2 Credits

This course is a continuation PSYC 110. It addresses language and thought, Intelligence, Motivation, Emotion, Stress, Personality, Organizational/Industrial psychology, Psychological disorders, therapy, and Social behavior. Prerequisite: PSYC 101 or PSYC 110.

#### PSYC 340 Motivation and Behavior Change 2 Credits

The course discusses motivation (our wants and needs that propel us in specific directions) in relation to health practices in detail. Theories of motivation and social influence as well as social marketing for behavior change are presented. Prerequisite: PSYC 101 or PSYC 110/PSYC 111.

#### PSYC 393 Cognition

The course basically deals with various aspects of our mental higher processes. It therefore addresses issues such as Thinking, Reasoning, Problem solving, Intelligence, Testing, Creativity, Deciding, Communicating, and carefully weighing the advantages and disadvantages of potential alternatives. Prerequisite: PSYC 101 or PSYC 110/PSYC 111.

#### PSYC 450 Social Psychology

The course addresses the study of human behavior in group settings. Issues such as Stereotypes, Prejudice, Evil, Helping behavior, Friendship, Liking and Ioving, Social facilitation, and Obedience are discussed. Prerequisite: PSYC 101 or PSYC 110/ PSYC 111.

#### PSYC 488 Topics in Health Psychology 2 Credits

The course focuses on current issues and latest research findings Solutions to health problems are sought. Learners research the literature and present papers on topics not fully covered in other classes. Special guests may be invited to make presentations. Prerequisite: PSYC 101 or PSYC 110, ENGL 105.

#### PSYC 496 Senior Project in Health 2 Credits Psychology

The course deals with projects which learners choose in consultation with/under the guidance of appropriate lectures in the department. Usually, the said projects involve presentation of health promotion programs in the community, complete with evaluation of results. Prerequisites: completion of at least 20 credits of courses in the Health Psychology minor, ENGL 105.

#### SOWK 111 Introduction to Social Work

This course is intended to intellectually ground the learners adequately with the other social science discipline, knowledge and their relationship to Social work. Basic concepts in Social work, the historical background of social work as a profession, background to Social work in Kenya (and other selected sub-Sahara African Countries), main components of Social profession (a defined clientele, code of ethics, principles, methods, grounded on theory), the relationship between Social Work and the Social Sciences such as Sociology, Economics, Political Science, Anthropology, Philosophy and Psychology; the relevance and contributions of the social sciences to Social Work concepts, research and practice.

#### SOWK 112 Principles and Methods of Social 3 Credits Work

The course is intended to introduce learners to the field of Social Work, its philosophy, ways of practice and trace the same since its inception to date. The profession of Social Work: Basic philosophy and generic principles; the relationship between Social Work and the social and behavioral sciences; the main components of the Social Work profession; the history of Social Work; the evolution of social welfare policies from Western countries and their introduction in Africa; development of social work in Kenya (and case studies of selected countries in Africa).

#### SOWK 230 Social Work Theory and Practice 3 Credits

To introduce the learner to a set of major theories and their role in explaining, describing and predicting human behavior in social work practice. The course introduces a theory as a concept, its dynamics and role in social work practice, personality development theories, and socialization theory, theories of social work values, case management theories, socio-psychological and analytic theory, role theory, and Communication theory in social work. Discriminatory and oppressive perspectives, racist and feminist perspectives, Humanist and Existential perspectives in social work and group work; and radical Marxist models and non-Marxist views will be discussed.

#### SOWK 240 Family and Child Welfare

**3 Credits** 

**3 Credits** 

To develop the students' understanding of the family as the basic unit of social organization, its forms, dynamics, processes and how these relate to child rearing, and family welfare. The course discusses the types of marriage and its functions, dissolution of marriage, kinship and descent, family as a social unit, forms of household, family functions, life cycle of the family; family as a powerful environment, family dynamics and processes, family conflicts and their management, changes in family patterns, family processes, family policies, management of family resources, family and the law, family role relations and dissolution of family role systems and implications involved. Theories on the family, Population issues and the family, basic needs and rights of the child, parenthood, child abuse and neglect, social welfare approach to family needs, family crises and modes of management.

#### SOWK 300 Social Policy and Administration 3 Credits

The course is intended to explore in broad terms the history, politics, sociology and economics of social services in both developed and developing countries. The substantive nature of social policy as it relates to services provision as well as its administration will form a core theme of the course. The subject matter of social policy and administration; basic issues in policy and administration, models of policy processes, aspects of policy making; the nature of social welfare administration; impact of bilateral donors and their policies on social services, public and private organization in social welfare, challenges in administering social policy in developing countries.

# SOWK 320 Social Deviation and 3 Credits Rehabilitation

The course discusses forms of deviation, physical, mental, behavioral and personality. Theories relating to deviation; the concept of rehabilitation; principles and practice of medical and psychological rehabilitation; processes of rehabilitation, psycho-social, vocational, institutional, community-based placements, employment and rehabilitating disability. Principles, methods and techniques of rehabilitating various disabilities with special reference to the Kenyan experience will be covered; Operation of rehabilitation services.

#### SOWK 400 Social Law

The course is intended to sensitize the learner to the relationship between social groups and written state regulations. The course content covers: Law and individual behavior; Collective

**3 Credits** 

behavior and actions of government; Forms of social legislation, substantive and procedural law in social development and administration; The legislative machinery and process in Kenya; The social foundations of law; Marital and family law, law and women. Land laws in Kenya; Law of succession.

# DEPARTMENT OF THEOLOGY AND RELIGIOUS STUDIES

#### FACULTY

Odek, R., PhD., (Head of Department) Kesis, R., PhD. Miyayo, L., PhD. Mutua, J., PhD. Nyarangi, J, MA. Nyaundi, N., ThD. Ouma, J., MA. Rotich J., MA. Wahonya P., PhD. Wamalika, C., MA.

Email: hod\_theology@ueab.ac.ke

#### **PHILOSOPHY**

Theology, as a discipline of study, is primarily concerned with the actions of God in history. Among these actions is God's role as Creator and Sustainer of the universe. Theology thus reminds humanity of the entrance of sin into the world and God's redemptive act of saving humanity from the alienation and degradation of sin. This salvific act of God therefore becomes the basis and cornerstone of theological education. This education leads the students to realize their full potential as effective communicators of the gospel, Christian leaders, researchers in theology and religion and excel in effective service to God and humanity.

#### MISSION

To provide quality education for pastors, teachers, evangelists, administrators and other related professional careers for service in the Seventh-day Adventist Church and the society at large. The department strives to instill a life-long personal quest for research and study in Biblical, theological and religious fields for individual growth and continual excellence in service to God and mankind.

#### VISION

The department seeks to be a center of excellence, equipping men and women for faithful and effective service to God, church and society through application of the principles of sound Bible-based Christian education.

#### **OBJECTIVES**

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The department strives to achieve the following:

- To provide theological knowledge that is both culturally and contextually grounded in the African reality and the world at large.
- 2. To equip students with practical skills through ministerial practicum, evangelistic and outreach activities.
- To expose students to the study of Scripture through commonly accepted exegetical methods, with emphasis on interpreting the text within the context of history, archaeology, and Biblical languages.
- 4. To prepare students to be able to teach Christian religious education in secondary schools and teachers' colleges.
- 5. To prepare students for graduate studies and advanced research.
- 6. To help the students uphold integrity and accountability in service to humanity

EGREES OFFEREN RY THE DEPARTMENT

- 1. Bachelor of Arts in Theology
- 2. Bachelor of Arts in Religion
- 3 Minor in Religion

#### **EXPECTED LEARNING OUTCOMES**

By the end of the studies in the Theology and Religious Studies program, the student should be able to;

- Understand key theological terms such as religion, theology, doctrine, sin, evil, grace, justification, sanctification, righteousness, faith;
- Distinguish traditional religious phenomena from Christian religious phenomena thereby being able to explain how God is the ultimate reality;
- Explain the Christian doctrines such as; God, trinity, angels, creation, Satan, death, salvation, judgment, conversion, baptism, eschatology, second coming of Jesus Christ, resurrection;
- Appreciate the role of the believer in the context of the work of God in respect to salvation and redemption as evidenced in the Bible, nature, and human experience;
- 5. Identify the milestones in the life of the Christian religion outlining the historical background of its growth and development through the eventual rise of Protestantism.
- Compare Christian Religious beliefs and practices with those of major religions of the world including Judaism, Islam, Hinduism, Buddhism, Confucianism, Jainism, Taoism, Sikhism, Zoroastrianism, and African traditional religion;
- Comprehend basics in the Hebrew Bible and the Koine Greek Testaments such as in reading, parsing, translating, interpreting;
- Expound contemporary ethical issues and alternatives in decision making in the context of the Christian teaching;
- Conduct biblical exegesis in light employing the tools of sound hermeneutical methods using history, archaeology and Biblical languages;
- Help the students appreciate the historical and biblical backgrounds of Seventh-day Adventism and its unique role in Bible prophecy
- Prepare and deliver sermons based on varying occasions such as Bible study, congregational, personal and public evangelism.
- 12. Develop a lifelong discipline in spiritual formation and expression

#### **CAREER OPPORTUNITIES**

The department educates and trains pastors to serve in the Seventh-day Adventist Church and develops scholars in religious studies regardless of denominational affiliation. The department also prepares students for careers in public service, NGOs, Law, Counseling Teaching etc.

#### ENTRANCE REQUIREMENTS DIRECT ENTRY

Students wishing to pursue theology or religion as a major area must have a minimum grade of C+ in Christian religious education in the KCSE or its equivalent. In addition, the candidate must satisfy the minimum entrance requirements for the University of Eastern Africa, Baraton.

## SCHOOL OF EDUCATION, HUMANITIES & SOCIAL SCIENCES

#### INTERDEPARTMENTAL TRANSFER

Inter-departmental transfer students should have a grade of C+ in RELT 207 Christian Beliefs.

### **GRADUATION REQUIREMENTS**

#### **Bachelor of Arts in Theology**

Non - Academic Requirements;

- 1. Students wishing to take a major in Theology are required to maintain the following standards: Students are expected to be persons of high moral integrity since they are training for Christian ministry and in particular the Seventh-day Adventist ministry.
- The Department will regard new students as provisionally admitted into the program for the first year of full-time study and will be formally admitted into the program at the beginning of the second year.
- 3. Students will be advanced to candidacy for graduation at the end of their junior standing.
- 4. The students who have gone through ministerial induction will be eligible for graduation.

#### **Academic Requirements**

- 1. A minimum of 134 credits with a cumulative GPA of 2.00.
- 2. A minimum cumulative GPA of 2.25 in the core courses.

#### **Bachelor of Arts in Religion**

The BA in Religion is a program designed for those interested mainly in an academic pursuit of Religion.

- A minimum of 132 credits comprising general education requirements, major area courses, and a minor in another area of study. Religion majors who do not desire a minor in another area of study must take additional upper division courses in the department to add up to 128 credits. Under such circumstances, the substitute courses will need to be approved by the department before the student can enroll for them.
- 2. A minimum cumulative GPA of 2.25 in the Religion core courses.
- 3. An overall cumulative GPA of 2.00

# **Course Listing**

# **BACHELOR OF ARTS IN THEOLOGY**

#### SUMMARY

General Education	32
Courses Core Courses	90
Cognate Courses	8
Elective Courses	4
Total	134 Credits

Note: Theology students take RELB 320 in place of RELB 220, RELT 423 and RELT 424 in place of RELT 207, RELH 180 in place of RELH 155, and LITE 453 in place of LITE 151

GENERAL	EDUCATION REQUIREMENTS 32 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
<b>KISW 114</b>	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
PHYS 100	Concepts of Physical Sciences	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELT 255	Introduction to Christian Ethics	2

#### Four credits from the following:

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

#### Any one of the following

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1

ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE COL	JRSES 90 Credi	ts
BIBL 201	Elementary Greek I	3
BIBL 202	Elementary Greek II	3
BIBL 301	Intermediate Greek I	2
BIBL 302	Intermediate Greek II	2
BIBL 421	Hebrew I	2
BIBL 422	Hebrew II	2
RELB 110	Biblical Backgrounds	2
RELB 202	Law and Writings of the Old Testament	3
RELB 274	Prophets of Israel I	2
RELB 275	Prophets of Israel II	2
RELB 304	Studies in Daniel	2
RELB 305	Studies in Revelation	2
<b>RELB 320</b>	Life & Teaching of Jesus Adv	3
RELB 350	Biblical Hermeneutics	2
RELB 434	Acts and Epistles I	2
RELB 435	Acts and Epistles II	2
<b>RELH 180</b>	History of the Adventist Church	2
<b>RELH 280</b>	History of Christian Church in Africa	2
<b>RELH 314</b>	History of the Christian. Church I	2
<b>RELH 315</b>	History of the Christian Church II	2
RELP 114	Biblical Spirituality	1
RELP 116	Church Music and Worship	2
RELP 141	Mission and Church Growth	2
RELP 215	Literature Evangelism	1
RELP 221	Homiletics I	2
RELP 222	Homiletics II	2
RELP 235	Foundation of Youth Ministry	1
RELP 275	Marriage, Family and Gender Issues	2
RELP 284	Stewardship and Self Reliance	2
<b>RELP 307</b>	Personal and Public Evangelism	2
<b>RELP 310</b>	Field School of Evangelism	1
RELP 335	Church Leadership and Administration	2
<b>RELP 385</b>	Pastoral Counseling and Psychology	2
<b>RELP 402</b>	Introduction to Chaplaincy	1
RELP 440	Introduction to Pastoral Ministry	3
RELP 450	Strategic Planning	2
RELP 461	Ministerial Practicum I	1
<b>RELP 462</b>	Ministerial Practicum II	1
RELT 130	African Traditional Religion	2
RELT 218	Comparative Religions	2
RELT 329	Islamic Studies	2

RELT 389	Issues in Religion and Science	2
RELT 416	Research Methods in Religious Studies	2
RELT 423	Christian Doctrines I	2
RELT 424	Christian Doctrines II	2
RELT 426	Writings and Philosophy of Ellen G. White	2

COGNATES 8 Credit		ts
ACCT 110	Bookkeeping and Accounting	2
LITE 453	Literature Studies of the English Bible	3
HIST 411	Selected Topics in Modern African History	3

ELECTIVE	S 4 Credi	ts
ELCT 102	Technology for Pastors	1
<b>RELB 311</b>	Introduction to Biblical Archaeology	2
<b>RELT 318</b>	New Religious Movement in Africa	2
<b>RELT 331</b>	Phenomenology of Religion	2
RELT 333	Sociology of Religion	2
RELT 334	African Theological Thought	2
RELT 335	Issues in Ecumenism	2
<b>RELT 360</b>	Contemporary Themes in Christian Theology	2
RELT 380	Philosophy of Religion	2

## **BACHELOR OF ARTS IN RELIGION**

SUMMARY	
General Education	32
Core Course	58
Cognates	8
Electives	4
Minor	30
Total	132 Credits

Religion majors take RELB 320 in place of RELB 220, RELT 423 and RELT 424 in place of RELT 207, RELH 180 in place of RELH 155, and LITE 453 in place of LITE 151

GENERAL	EDUCATION REQUIREMENTS 32 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2



#### Four credits from the following:

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

#### Any one of the following

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
WOOD 100	Woodwork	1

CORE CO	JRSES 58 Credi	ts
RELB 110	Biblical Backgrounds	2
RELB 202	Law and Writings of the Old Testament	3
RELB 274	Prophets in Israel I	2
RELB 275	Prophets in Israel II	2
RELB 304	Studies in Daniel	2
RELB 305	Studies in Revelation	2
<b>RELB 320</b>	Life and Teachings of Jesus Advanced	3
RELB 350	Biblical Hermeneutics	2
RELB 434	Acts and Epistles I	2
RELB 435	Acts and Epistles II	2
<b>RELH 180</b>	History of the Adventist Church	2
RELH 280	History of the Christian Church in Africa	2
RELH 314	History of the Christian Church I	2
<b>RELH 315</b>	History of the Christian Church II	2
<b>RELT 130</b>	African Traditional Religions	2
RELT 218	Comparative Religions	2
RELT 318	New Religious Movements in Africa	2
<b>RELT 329</b>	Islamic Studies	2
RELT 333	Sociology of Religion	2

RELT 334	African Theological Thought	2
RELT 335	Issues in Ecumenism	2
RELT 360	Contemporary Themes in Christian Theology	2
<b>RELT 380</b>	Philosophy of Religion	2
RELT 389	Issues in Religion and Science	2
RELT 416	Research Methods in Religious Studies	2
RELT 423	Christian Doctrines I	2
RELT 424	Christian Doctrines II	2
RELT 426	Writings and Philosophy of Ellen G White	2

COGNATE COURSES 8 Credit		ts
ACCT 110	Bookkeeping and Accounting	2
HIST 411	Selected Topics of Modern African History	3
LITE 453	Literary Studies of the English Bible	3

ELECTIVES		4 Credits	
<b>RELB 311</b>	Introduction to Biblical Archeology	2	
<b>RELT 331</b>	Phenomenology of Religion	2	
RELT 338	Religion and State in Africa	2	

#### **MINOR IN RELIGION**

#### SUMMARY

Core Courses	23
Electives	6
Total	29 Credits

Note: Religion minors take RELB 320 in place of RELB 220, RELT 423 and RELT 424 in place of RELT 207, and RELH 180 in place of RELH 155.

CORE CO	URSES 23 Credit	ts
RELB 304	Studies in Daniel	2
RELB 305	Studies in Revelation	2
<b>RELB 320</b>	Life and Teachings of Jesus Advanced	3
<b>RELH 180</b>	History of the Adventist Church	2
<b>RELT 130</b>	African Traditional Religions	2
RELT 218	Comparative Religions	2
RELT 334	African Theological Thought	2
<b>RELT 380</b>	Philosophy of Religion	2
RELT 423	Christian Doctrines I	2
RELT 424	Christian Doctrines II	2
RELT 426	Writings and Philosophy of Ellen G. White	2
ELECTIVE	S 6 Credi	ts
RELB 202	Law and Writings of the Old Testament	3
RELB 274	Prophets in Israel I	2
RELB 275	Prophets in Israel II	2
<b>RELB 311</b>	Introduction to Biblical Archeology	2
RELB 350	Biblical Hermeneutics	2
RELB 434	Acts and Epistles I	2
RELB 435	Acts and Epistles II	2

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# BACHELOR OF ARTS IN THEOLOGY Four-Year Course Plan

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	INSY 107	Information Technology Today	2
1st	MATH 100/	Foundations of Math/	3	HLED 110	Health Principles	1
	MATH 101	Pre-Calculus			-	
	PSYC 101/	Introduction to Psychology/	2	RELP 116	Church Music and Worship	2
	SOCI 121/ SWFI 207	Sociology/ Family Issues				
	RELB 110	Biblical Backgrounds	2	ENGL 106	Speech Communication	1
	0FTE 120	Keyboarding	0	PHYS 100	Concepts of Physical Science	2
	RELP 114	Biblical Spirituality	1	ACCT 110	Bookkeeping and Accounting	2
	RELT 130	African Traditional Religions	2	RELH 180	History of Adventist Church	2
	RELP 141	Mission and Church Growth	2	RELT 218	Comparative Religions	2
	PEAC 107	Physical & Recreational Activities	1	RELP 275	Marriage Family & Gender Issues	2
	T ERO 107	Total	16	RELB 202	Law and Writings of the Old Testament	3
		local	10	KEED 202	A Vocational Skill	1
					Total	20
		Γ				
	RELP 221	Homiletics I	2	RELP 222	Homiletics II	2
2nd	BIBL 201	Elementary Greek I	3	BIBL 202	Elementary Greek II	3
	RELB 274	Prophets of Israel I	2	RELB 275	Prophets of Israel II	2
	RELH 280	History of Christian Church in Africa	2	RELP 215	Literature Evangelism	1
	ENVI 227/	Environment and Society/	2	BIOL 105	Human Biology	2
	CHEM 200/ TCED 231	Environmental Science/ Safety Education				
	HIST 111	Concepts of World Civilization	2	EDUC 215	Introduction to Phil. of Chrs. Edu	2
	AGRI 105	Principles of Agricultural Technology	2	RELT 255	Introduction to Christian Ethics	2
	KISW 114/	Language Use in Kiswahili/	2	MGMT 103	Basic Management & Entr. Skills	2
	FREN 103	Beginning French II		1101111100	basic Hanagement & Entr. Skiis	2
		Total	17		Total	16
	RELB 304	Studies in Daniel	2	RELB 305	Studies In Revelation	2
3rd	BIBL 301	Intermediate Greek I	2	BIBL 302	Intermediate Greek II	2
	RELH 314	History of the Christian Church I	2	RELH 315	History of the Christian Church II	2
	RELP 307	Personal and Public Evangelism	2	BIBL 422	Hebrew II	2
	RELB 350	Biblical Hermeneutics	2	RELB 320	Life & Teachings of Jesus	3
	RELT 329	Islamic Studies	2	RELP 310	Field School of Evangelism	1
	RELP 335	Chruch Leadership and Admnistration	2	RELP 402	Introduction to Chaplaincy	1
	BIBL 421	Hebrew I	2		An Elective	2
	RELP 284	Stewardship and Self-Reliance	2		An Elective	2
		Total	18		Total	17
	RELP 440	Introduction to Pastoral Ministry	3	RELB 435	Acts and Epistles II	2
4th	RELB 434	Acts and Epistles I	2	RELT 416	Research Methods in Religion Studies	2
Tui	RELT 423	Christian Doctrines I	2	RELT 426	Writings and Philosophy of E. G. White	2
	LITE 453	Literature Studies of the English Bible	3	RELP 462	Ministerial Practicum II	1
	RELP 461	Ministerial Practicum I	1	HIST 411	Selected Topics of Modern Africa History	3
	RELP 385	Pastoral Counseling and Psychology	2	RELT 424	Christian Doctrines II	2
	RELP 235	Foundation of Youth Ministry	1	RELT 389	Issues in Religion & Science	2
	RELP 450	Strategic Planning	2		Total	14
		5	16			



# **BACHELOR OF ARTS IN RELIGION**

## Four-Year Course Plan

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	INSY 107	Information Technology Today	2
1st	MATH 100/ MATH 101	Foundations of Math/ Pre-Calculus	3	HLED 110	Health Principles	1
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2	ENGL 106	Speech Communication	1
	RELB 110	Biblical Backgrounds	2	PHYS 100	Concepts of Physical Science	2
	0FTE 120	Keyboarding	0	<b>RELH 180</b>	History of Adventist Church	2
	RELT 130	African Traditional Religions	2	RELT 218	Comparative Religions	2
	RELH 280	History of Christian Church in Africa	2	RELB 202	Law and Writings of the Old Testament	3
	ACCT 110	Accounting and Bookkeeping	2		A Vocational Skill	1
	PEAC 107	Physical & Recreational Activities	1		Minor	2
		Total	17		Minor	2
					Total	18
	RELB 274	Prophets of Israel I	2	RELB 275	Prophets of Israel II	2
2nd	ENVI 227/ CHEM 200/ TCED 231	Environmental and Society/ Environmental Science/ Safety Education	2	BIOL 105	Human Biology	2
	HIST 111	Concepts of World Civilization	2	EDUC 215	Intro. to Philosopy of Christian Education	2
	AGRI 105	Principles of Agricultural Technlogy	2	RELT 255	Intro. to Christian Ethics	2
	KISW 114/	Language Use in Kiswahili/	2	MGMT 103	Basic Management & Entrepreneurial	2
	FREN 103	Beginning French II	-		Skills	-
		Minor	2		Minor	2
		Minor	3		Minor	2
		Elective	2		Elective	2
		Total	17		Total	16
	RELB 304	Studies in Daniel	2	RELB 305	Studies in Revelation	2
3rd	RELB 434	Acts and Epistles I	2	RELT 334	African Theological Thought	2
ora	RELB 350	Biblical Hermeneutics	2	RELB 435	Acts and Epistles II	2
	RELT 329	Islamic Studies	2	RELB 320	Life & Teaching of Jesus Advanced	3
	RELT 423	Christian Doctrines I	2	RELT 335	Issues in Ecumenism	2
	RELT 360	Contemporary Themes in Christian Theology	2	RELT 424	Christian Doctrines II	2
	RELT 333	Sociology of Religion	2	<b>RELT 380</b>	Philosophy of Religion	2
		Minor	4	<b>RELT 318</b>	New Religious Movements in Africa	2
		Total	18		Total	17
	RELT 416	Rese. Method in Rel. Studies	2		Minor	2
4th	RELT 426	Writings and Philosopy of E. G. White	2		Minor	3
	HIST 411	Selected Topics of Modern Africa History	3		Minor	3
	LITE 453	Literature Studies of the English Bible	3		Total	8
	RELT 389	Issues in Science and Religion	2			
		Minor	3			
		Minor	2			
		Total	17			

# **Course Descriptions**

#### BIBL 201 Elementary Greek I

This course, which is the first of a two semester sequence, begins the emphasis on the mastery of the basic and elementary forms of New Testament Greek grammar, syntax, and vocabulary. It also introduces the student to the reading of some simple Greek texts.

#### BIBL 202 Elementary Greek II

3 Credits

**3 Credits** 

The second of the two semester module continues the exploration and mastery of the basic forms of New Testament Greek grammar, syntax, and vocabulary. There is reading and translation of selected portions of the Greek New Testament. Prerequisite: BIBL 201.

#### BIBL 301 Intermediate Greek I

2 Credits

2 Credits

This course, the first of a two semester sequence is a study of New Testament Greek syntax at the intermediate level with an emphasis on the application of the primary text. The student is introduced to the reading and interpretation of passages from the New Testament Greek. Prerequisite: BIBL 201.

#### BIBL 302 Intermediate Greek II

This course, the second of a two semester sequence is a continuation of the exploration and mastery of the analysis of grammar forms, reading and exegesis of various passages in the New Testament. The student is required to submit an exegesis paper on a selected passage from the New Testament. Prerequisite: BIBL 301.

#### **BIBL 421 Hebrew I**

This course is a comprehensive introduction to the rudiments and theory of Biblical Hebrew phonology and morphology. In this section, the phonology of the Hebrew is to be mastered, and the students are introduced to the basic morphology of Hebrew substantives. Students begin to learn Hebrew vocabulary.

#### BIBL 422 Hebrew II

The course is a continuation of the study of Hebrew grammar and reinforces and expands on Biblical Hebrew phonology, morphology, syntax, use of lexicons, reading and translating of selected passages of the Hebrew Bible. Students are required to write an exegesis paper on selected prose portions of the Hebrew Bible. Prerequisite: BIBL 421.

#### **RELB 110 Biblical Backgrounds**

This course involves a consideration of the archaeological, cultural, geographical, and historical backgrounds of the Old and New Testaments. It traces the major elements of biblical history including the patriarchal period, the conquest and settlement of Palestine, the kingdoms of Israel and Judah, the Babylonian exile, the post-exilic period, and the New Testament era.

#### RELB 204 Old Testament Studies

This course involves a selected survey of the Old Testament themes such as creation, Abrahamic covenant, Exodus and the covenant at Sinai, the Israelite monarchy, prophecy in Israel and the restoration of Judah.

#### 2 Credits

2 Credits

2 Credits

**3 Credits** 

#### RELB 202 Law and Writings of the Old 3 Credits Testament

This course introduces the student to the Pentateuch and the "Writings" (historical books, Psalms, and Wisdom Literature) of the Old Testament. It further leads the student to gain a deeper knowledge of events, key persons, themes, dates, locations, and related information about the Pentateuch and the Writings.

#### **RELB 206** Studies in Daniel

This course is designed to provide students with theological content, construction and interpretation of the imagery and symbols of the books of Daniel. Special attention is given to the books' apocalyptic nature. Research paper is required.

#### **RELB 220** Life and Teachings of Jesus 2 Credits

This course is designed to help the student grasp the import of the ministry of Jesus Christ through a study of His life and teachings as recorded in the Gospels. RELB 220 is for general students, but RELB 320 is for Theology and Religion majors.

#### **RELB 274** Prophets of Israel I

The course introduces the student to the phenomena of biblical prophets. It includes the role of the prophetic office in the Bible. The study includes the books of the writing prophets of the 8th and early 7th century B.C. Research paper may be required.

#### **RELB 275** Prophets of Israel II

The course is a second module on the study of the prophets and includes the books of the writing prophets of the late 7th century B.C. to the end of the prophetic canon. Research paper may be required. Prerequisite: RELB 274.

#### **RELB 304** Studies in Daniel

This course is designed to provide students with theological content, construction and interpretation of the imagery and symbols of the books of Daniel. Special attention is given to the books' apocalyptic nature. Research paper is required.

#### **RELB 305** Studies in Revelation

This course is designed to provide students with theological content, construction and interpretation of the imagery and symbols of the books of Revelation. Special attention is given to the books' apocalyptic nature. Research paper is required.

#### RELB 311 Introduction to Biblical 2 Credits Archaeology

The course introduces the student to archaeological and ancient Near Eastern materials that have been discovered. It entails the study of history, geography, worship rituals, customs, cultural heritage, and the language of the people that shed light on Bible passages and lead to the proper and accurate interpretation of the Bible.

#### RELB 320 Life and Teachings of Jesus – 3 Credits Advanced

This course covers the life and teachings of Jesus and involves a survey of the socio-political and religious antecedents to the period of Jesus. It covers topics such as incarnation, baptism, temptation, call of the disciples, transfiguration, crucifixion, resurrection, ascension, miracles and parables. Research paper may be required.

## 202 SCHOOL OF EDUCATION, HUMANITIES & SOCIAL SCIENCES

2.0

2 Credits

2 Credits

2 Credits

2 Credits

#### **RELB 331 New Testament Studies**

#### **3 Credits**

This course is a selected survey of the New Testament. It covers the Gospels of Luke and John specifically the incarnation, early life and the ministry of Jesus, His death and resurrection. It also involves a study of the books of Acts of the Apostles, Paul's First letter to the Corinthians, and First Timothy and the Epistle of James.

#### **RELB 350 Biblical Hermeneutics**

2 Credits

The course involves a study of hermeneutical principles appropriate for the interpretation of Biblical texts. Issues arising out of an Afrocentric reading of Scripture are also discussed. Research paper may be required.

#### **RELB 434** Acts and Epistles I

2 Credits

This module is a survey of the books of Acts and the early Pauline Epistles; Galatians, I and II Thessalonians, I and II Corinthians and Romans. The course exposes the student to the beginnings of the Christian church. Research paper may be required.

#### **RELB 435** Acts and Epistles II

2 Credits

This module provides for studies in the later Pauline Epistles, from the Prison and Pastoral Epistles followed by an introduction to Hebrews and the General Epistles. Research paper may be required. Prerequisite: RELB 434.

#### RELH 114 Introduction History of Christian 3 Credits Church History

The course is a survey of the history of the Christian church from its beginning, around A.D.1 to the rise of modern denominations. The study includes the apostolic origins, the era of the church father, medieval ages to the dawn of the Protestant Reformation. An attempt is made to emphasize the contribution made by the Protestant Reformation, and moves to the rise of modern denominations, the world-wide mission expansion.

#### **RELH 155 Adventist Heritage**

#### 2 Credits

This course acquaints the student with the history of the Seventh-day Adventist Church from the Millerite Movement, in which it had its birth, to the present. This is a general requirement course designed for all students except for the Theology and Religion majors who take RELH 180 History of the Adventist Church instead.

#### **RELH 180** History of the Adventist Church 2 Credits

This introductory course is a brief history of the Adventist Church. The missiological burden that propelled Adventism into every corner of the earth is discussed. This course is for Theology and Religion majors in place of RELH 155.

#### RELH 280 History of the Christian Church 2 Credits in Africa

This is a course on the survey of the development of Christianity on the African continent with emphasis on modern missions in Eastern Africa from the mid-19th century to the present.

**RELH 314 History of the Christian Church I 2 Credits** 

The course surveys the history of the Christian Church from its beginning, around A.D.1. The thrust of the course takes off from

its apostolic origins to the dawn of the Protestant Reformation. An attempt is made to emphasize the contribution made by the early African church fathers.

#### **RELH 315** History of the Christian Church II 2 Credits

The course is a continuation of History of the Christian Church I. It begins from the period of the Protestant Reformation, and moves to the rise of modern denominations, the world-wide mission expansion and the development of the ecumenical movement. Prerequisite: RELH 314.

#### **RELP 114 Biblical Spirituality**

A course is designed to develop understanding of and experience in the spiritual life. Biblical references to spiritual growth are examined with special reference to the responsibilities of ministry. Emphasis is on the development and maintenance of faith, habits of spiritual discipline, selfrenewal, and personal devotion in the face of the pressures and problems of contemporary Christian service. The course explores spiritual growth programs, both for the minister and the local congregation.

1 Credit

#### RELP 116 Church Music and Worship 2 Credits

This course introduces students to the theological and practical elements of church worship and church music and assists the student to develop the skills and insights necessary to conduct and lead effective worship and music services in the local churches. The course also prepares students to be able to design and implement participatory Sabbath worship services, prayer meeting services and other services.

#### RELP 141 Mission and Church Growth 2 Credits

This course introduces students to biblical view of mission. It also exposes the students to the Adventist philosophy and strategy of mission, and the strategic implementation of these in given cultural settings. The course is also a study of the foundations and principles of church growth. It deals with such specific topics as: meaning of church growth, causes of church growth, hindrances to church growth, planning for church growth, and contemporary issues in church growth, etc.

#### **RELP 215** Literature Evangelism

This course involves the theory and practice of Literature Evangelism. The student engages in supervised practical literature evangelism for at least three months or 350 contact hours. The student is required to attend a minimum of 10 contact hours during the annual Literature Evangelism training conducted by the Adventist Church Publishing Departments in conjunction with UEAB Literature Evangelists Club. Grade is either Satisfactory (S) or Unsatisfactory (U).

#### **RELP 221 Homiletics I**

This course introduces the student to a study of the art of preaching and the preparation of a sermon. During the course the student is exposed to different types of preaching, and special emphasis is placed on Expository preaching.

#### **RELP 222 Homiletics II**

#### 2 Credits

2 Credits

1 Credit

Emphasis is placed on mastering the art and craft of preaching, the recognition and delivery of the various forms that a sermon can take and the evaluation of sermons. In addition, classroom preaching and preaching for specific occasions is carried out. Prereguisite: RELP 221.

#### **RELP 235** Foundations of Youth Ministry 1 Credit

The course involves selected studies in areas such as ministering to young people, youth leadership, and the possible effects or impact of the home, school, societal and church environments on the spiritual development of young people. Special attention is given to studying this subject from a multicultural perspective.

#### **RELP 275** Marriage and the Family 1 Credits

This course explores the purpose for which God instituted marriage and seeks to help the student understand the fundamentals of marriage and the family, including the primary relationships. It also discusses the basics of family life, the cultural influences on the family, intimacy in marriage, conflict management in the family, and parent-child relationships, among other concepts. The course also introduces the student to gender issues. Areas to be explored are gender and sexuality; the cultural construction of gender; the psychology of sex roles; the ways gender shapes families, workplaces and other social institutions.

#### **RELP 284** Stewardship and Self-Reliance 2 Credits

This course views stewardship and self-reliance as an integral part of living. It explores the contribution these concepts are able to make to an individual's lifestyle and exposes the Biblical principles that underpin them.

#### **RELP 307** Personal and Public Evangelism 2 Credits

This course exposes the student to the theory of personal and public evangelism and prepares the student to be conversant with various aspects of evangelism such as visitation, literature distribution, preaching and etc. A field component is offered off-campus in collaboration with regional church organizations. See RELP 310.

#### **RELP 310** Field School of Evangelism

1 Credit

2 Credits

The course exposes the student to the practical aspects of personal and public evangelism. Students are required to participate in a public evangelistic campaign as arranged by the Department and the host organization. Grade is either Satisfactory (S) or Unsatisfactory (U).

#### **RELP 335** Church Leadership and Administration

This course introduces the student to the various theories of leadership and planning. It acquaints and equips individuals with what is involved in regulating day to day church administration and the implementation of policy decisions.

#### **RELP 385** Pastoral Counseling and 2 Credits **Psychology**

This is a study of the pastor in the role of a counselor. Different types of current theories of counseling are surveyed, along with skills and practices carried out within the classroom in order to develop and sharpen the counseling techniques and skills needed for effective pastoral counseling within an African context.

#### **RELP 402** Introduction to Chaplaincy

1 Credit

The course is an introduction to pastoral ministry in special settings. Some of the institutions to be discussed include educational, prisons, armed forces, hospitals, rehabilitation centers, orphanages and work places. Legal aspects of the ministry are also considered. The student is prepared to serve in religious and secular settings and with clients of varied faiths.

#### **RELP 440** Introduction to Pastoral Ministry 3 Credits

The "call" to ministry is examined along with the response of the minister to expectations placed upon him/her by both the local church members and the church administrators. The minister as church administrator, a leader of worship. counselor, spiritual director and evangelist are also surveyed. Prerequisites: Junior standing or permission of the instructor.

#### **RELP 450** Strategic Planning

2 Credits

This course focuses on decision making and actions which determine whether an enterprise excels, survives or dies. The planning process seeks to make the best use of resources in a changing environment. It leads to the development of effective strategies to help achieve organizational objectives by focusing on preferred futures.

#### **RELP 461** Ministerial Practicum I 1 Credit

This course provides instruction in the principles of public praver. Sabbath School teaching, the interpretative reading of Scripture, platform decorum, witnessing leadership, catering for children in divine worship, planning and conducting church meetings (e.g. youth, prayer, etc.). Evaluated practical pastoral duties in designated churches are included in the course requirements. Emphasis is placed on the SDA Church organization and the work of its officers. Effective leadership styles and gualities are introduced. Prerequisites: RELP 221, RELP 222 or permission of the instructor.

#### **RELP 462** Ministerial Practicum II 1 Credit

This course is a continuation of Ministerial Practicum I. The student is introduced to the policies and constitutions of the Seventh-day Adventist Church, including the General Conference and its subsidiary entities. The student is expected to work in a practical pastoral setting, analyzing and synthesizing the various challenges and opportunities of ministry. Prerequisite: RELP 461.

#### **RELT 128** Adventist History and Philosophy 3 Credits

This course is designed to introduce the students to a brief history of the Adventist Church. The study includes the Millerite origins, major eras in the denominational growth up to modern times. It also involves an introductory study of the nature, history and teachings of the writings of Ellen G. White and principles that govern their interpretation. A position paper is required.

#### **RELT 130 African Traditional Religions** 2 Credits

This course gives the student opportunity to understand the beliefs and practices that are found in the many African Traditional Religions. The course emphasizes the religious beliefs that encompass the totality of life in an African setting and community.

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#### **RELT 131 African Traditional Religions**

**3 Credits** 

This course gives the student opportunity to understand the beliefs and practices that are found in the many African Traditional Religions. The course emphasizes the religious beliefs that encompass the totality of life in an African setting and community. A critical analysis of least a worldview in African Traditional Religions is explored and presented by the students.

#### **RELT 140 Introduction to Logic**

**3 Credits** 

This course is designed to introduce students to the basic principles of philosophical and logical reasoning. The general goal is to learn how to differentiate good from bad arguments. The approach is two-sided: (1) the analysis and classification of fallacies and (2) the analysis as well as the construction of valid arguments.

#### **RELT 207 Christian Beliefs**

#### **3 Credits**

**3 Credits** 

2 Credits

**3 Credits** 

This course introduces the student to the fundamental beliefs of the Christian religion. Special emphasis is placed on the study of themes such as Revelation, Persons of the Godhead, Salvation, the Sabbath, the Sanctuary, the Spirit of Prophecy, and the Second Coming of Christ. Theology and Religion majors and minors do not take this course.

#### **RELT 216 Comparative Religions**

The course is a study of the major religions of the world, namely Hinduism, Buddhism, Confucianism, Judaism, Christianity, Islam, and African Traditional Religions. The course surveys distinctive beliefs and practices as they are taught and observed. Emphasis is on how these teachings, beliefs and practices are manifest in Africa and how they compare with Christianity.

#### **RELT 218 Comparative Religions**

The course is a study of the major religions of the world, namely Hinduism, Buddhism, Confucianism, Judaism, Christianity, Islam, and African Traditional Religions. The course surveys distinctive beliefs and practices as they are taught and observed. Emphasis is on how these teachings, beliefs and practices are manifest in Africa.

#### **RELT 231 Phenomenology of Religion**

The course emphasizes the experiential aspect and the things, which imply a relationship between a believer and the deity. Phenomenology of Religion is concerned with describing the religious phenomenon through the many phenomena in which religion is manifest. The course views religion as an activity, which comprises different components and traditions which all point to the same thing. A critical analysis by the students of at least two of the religious manifestations is required.

#### RELT 255 Introduction to Christian Ethics 2 Credits

The course covers the basic principles of a Christian ethic derived from the knowledge of God and their application to personal and sociopolitical problems, especially as they relate to the ongoing life and work of the Church in Africa.

#### **RELT 280** Philosophy of Religion

**3 Credits** 

The course is an introduction to the study of philosophy and religion. It is an investigation of the dynamics of faith and how

it interfaces with human rationality. The course probes the implications of expressions such fides quaerens intellectum (Faith seeking understanding) (Anselm) and Credo ut intelligam (I believe so that I may understand) (Augustine).

#### RELT 318 New Religious Movements in 2 Credits Africa

The course examines the root cause of religious proliferation in Africa. It surveys the underlying causes in African society and the African psyche that engender the need for new religious movements. The role of the so-called mission churches in this phenomenon is taken into consideration.

#### **RELT 329 Islamic Studies**

2 Credits

**3 Credits** 

2 Credits

The course introduces the student to the background, history, and the growth and development of Islam. The student is introduced to the life and works of Prophet Muhammad Mohamed. Emphasis is put on the beliefs and practices of Islam and teachings such as pillars of Islam, lifestyle and the general praxis of Islam in relation to society in a modern world.

#### **RELT 330 Islamic Studies**

The course introduces the student to the background, history and the growth and development of Islam. The student is introduced to the life and works of Prophet Muhammad Mohamed. Emphasis is put on the beliefs and practices of Islam and teachings such as pillars of Islam, lifestyle and the general praxis of Islam in relation to society in a modern world. A practical exposure should be undertaken by the class.

#### RELT 331 Phenomenology of Religion

The course emphasizes the experiential aspect and the things which imply a relationship between a believer and the deity. Phenomenology of Religion is concerned with describing the religious phenomenon through the many phenomena in which religion is manifest. The course views religion as an activity which comprises different components and traditions which all point to the same thing.

#### **RELT 333 Sociology of Religion**

The thrust of the course proceeds from the argument that religion is an intimate activity found in all human societies. The student is given opportunity to examine the role, function, and position of religion in society. The role, function, and position of an individual believer in society is also presented.

#### RELT 334 African Theological Thought

This is a study of Christian theology in the African context. The course examines the background and environment that have shaped Christian theological thinking in Africa and surveys the contribution of African Christian theologians.

#### **RELT 335** Issues in Ecumenism

The course examines the phenomenon of ecumenism in the light of modern religious pluralism. The course enables the student to understand the contributions of the ecumenical movement in the context of both the Roman Catholic Church and in particular the Protestant view. The Seventh-day Adventist view is duly considered.

2 Credits

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#### 2 Credits context. The

#### **RELT 336 African Theological Thought**

**3 Credits** 

This is a study of Christian theology in the African context. The course examines the background and environment that have shaped Christian theological thinking in Africa and surveys the contribution of African Christian theologians. A research paper on one African theologian is required.

#### **RELT 337 Sociology of Religion**

#### **3 Credits**

The thrust of the course proceeds from the argument that religion is an intimate activity found in all human societies. The student is given opportunity to examine the role, function, and position of religion in society. The role, function, and position of an individual believer in society is also presented. The student is required to undertake an analysis of the role of religion in the modern society.

#### **RELT 338** Religion and the State in Africa 2 Credits

The course examines the interaction between religion and the state in Africa. Religion being an over-arching phenomenon is found among all state institutions and more often than not, stands ready to contribute in one way or another. The course seeks to identify the role of religion in this relationship.

#### RELT 360 Contemporary Themes in 2 Credits Christian Theology

The course offers a survey of some of the contemporary themes in Christian theology today. It deals with such issues as polygamy, divorce, women's ordination, gay marriage, justice and peace, etc.

#### RELT 380 Philosophy of Religion

2 Credits

The course is an investigation of the dynamics of faith and how it interfaces with human rationality. The course probes the implications of expressions such fides quaerens intellectum (Faith seeking understanding) (Anselm) and Credo ut intelligam (I believe so that I may understand) (Augustine). The course also introduces the students to elements of critical thinking.

#### **RELT 389** Issues in Religion and Science 2 Credits

This course is an introduction to some of the scientific issues on religion. The purpose is to allow the student to appreciate the relevance of science to religion. Emphasis is put on how science is to be understood within the context of religion

#### RELT 416 Research Methods in 2 Credits Religious Studies

This course is a study of the theories and methods of doing research in theological and religious fields. The course covers definition of research, research process, kinds of research, value of research, library and online resources, and referencing. It is a guided study into writing a major paper in theology. A major paper is required for this course. When necessary a deferred grade maybe awarded. Prerequisite: ENGL 105.

#### RELT 418 New Religious Movements 2 Credits in Africa

The course examines the root cause of religious proliferation in Africa. It surveys the underlying causes in African society and the African psyche that engender the need for new religious movements. The role of the so-called mission churches in this phenomenon is taken into consideration. A term paper is required.

#### **RELT 423 Christian Doctrines I**

2 Credits

This course deals with systematic and orderly articulation of the major tenets of the Christian faith such as revelation and inspiration, God and the Trinity, the nature of Christ, the Holy Spirit, creation and the Sabbath. Emphasis is placed on the fundamental doctrines of the Seventh-day Adventist Church. A research paper is required.

#### **RELT 424 Christian Doctrines II**

2 Credits

This course is a continuation of RELT 423 and deals with systematic and orderly articulation of the major tenets of the Christian teaching such as humanity, sin, salvation, church and last day events. A research paper is required. Prerequisite: RELT 423.

#### RELT 426 Writings & Philosophy of Ellen G. 2 Credits White

The course involves the student in the study of the nature, history and teachings of the writings of Ellen G. White and principles that govern their interpretation. A research paper is required.

#### **RELT 427** Christian Doctrines

**3 Credits** 

**3 Credits** 

This course is an overview of the major tenets of the Christian faith such as revelation and inspiration, God and the Trinity, the nature of Christ, the Holy Spirit, creation and the Sabbath, humanity, sin, salvation, church and last day events. Emphasis is placed on the fundamental doctrines of the Seventh-day Adventist Church. A research paper is required.

#### **RELT 435 Issues in Ecumenism**

The course examines the phenomenon of ecumenism in the light of modern religious pluralism. The course enables the student to understand the contributions of the ecumenical movement in the context of both the Roman Catholic Church and in particular the Protestant view. The Seventh-day Adventist view is duly considered. A term on a current issues in ecumenism is required.

#### RELT 460 Contemporary Themes in 3 Credits Christian Theology

The course offers a survey of some of the contemporary themes in Christian theology today. It deals with such issues as polygamy, divorce, women's ordination, gay marriage, justice and peace, etc. An exploration by the student on at least two of the contemporary themes is required.

#### RELT 480 History of the Christian 3 Credits Church in Africa

This is a course on the survey of the development of Christianity on the African continent with emphasis on modern missions in Eastern Africa from the mid-19th century to the present. A study is done on the impact of the missionary movement on the modern Christian Church. <image>

# School of Health Sciences



# **School of Health Sciences**

DEAN - Obey Jackie K. MSc., PhD., Associate Professor

#### PHILOSOPHY

Jesus is the healer of broken bodies, minds and souls. He has commissioned us to continue in His healing ministry through education, service and research until He comes. The students in the school will be educated and trained to serve humanity as qualified health professionals in Medical Laboratory Science and Public Health. Moreover, they should be able to skillfully identify disease, promote good health, and prevent disease occurrence. They will also be proficient in providing spiritual comfort and hope and in teaching principles for better living within their communities.

#### MISSION

The mission of the School of Health Sciences is to prepare health professionals whose values are Christ-centered, and who are competent in the delivery of health care services, teaching and research.

#### VISION

The vision of the School of Health Sciences is to be a school that is noted for excellence in training health professionals who are committed to the diagnosis, prevention, restoration and promotion of health.

#### **OBJECTIVES**

The graduates from the School of Health Sciences should be competent health care givers. They should be able to:

 Apply a wholistic approach to their health practices in the diagnosis, prevention, and control of disease and promotion of health.

- Demonstrate professional responsibility towards their clients.
- 3. Utilize their knowledge in providing spiritual care as well as attending to the physical needs of their clients.
- 4. Conduct research that would improve the provision of health care services.
- 5. Assume leadership roles in healthcare.
- 6. Excel in training and educating healthcare givers, and equipping them with professional skills for safe and ethical practice.
- 7. Actively participate in the formulation, implementation and evaluation of health care policies.
- 8. Collaborate with other organizations and agencies in the delivery of health care.
- 9. Work effectively to fulfill the Sustainable Development Goals (SDGs).

#### **DEGREES OFFERED BY THE SCHOOL**

#### MASTERS

Master of Global Health Master of Public Health

#### BACHELORS

Bachelor of Science in Medical Laboratory Sciences Bachelor of Science in Public Health

#### MINOR

Minor in Public Health

# **DEPARTMENT OF MEDICAL LABORATORY SCIENCES**

#### FACULTY

Njagi, E, MSc. (Acting Head of Department) Kittur, A, MSc. Obey, J., PhD. Ogot, A., MSc. Panulo, B., MSc. Tyrus, O., BSc, MSc. Lelei,W., BSc.

#### PHILOSOPHY

Graduates of this program will be individuals who value human life and use the medical laboratory science knowledge to maintain health and save lives. They will be part of the health care teams whose members will work collectively to find solutions to the health problems of individuals. They will be expected to discharge their duties with diligence in the fear of God, and with a sense of commitment to the healing ministry of our Lord Jesus Christ.

#### MISSION

To train technically competent and scientifically innovative clinical laboratory scientists who will serve the people of Kenya and Africa with Christian devotion whether at hospital clinical laboratories, in rural clinics, in government service, or private settings.

#### VISION

To raise the standard and quality of Clinical Laboratory Science training and implementation in Kenya, and on the African continent as a whole.

#### **DEGREE OFFERED BY THE DEPARTMENT**

Bachelor of Science in Medical Laboratory Sciences

#### **EXPECTED LEARNING OUTCOMES**

A graduate from the Department of Medical laboratory Science, should be able to:

- 1. Describe the human anatomy, physiology, and related disorders;
- Collect, transport and analyze specimen from patients for diagnosis and treatment;
- 3. Set up and manage a medical laboratory with manual, electric and electronic equipment;
- Recognize abnormal pathological laboratory results and their causes;
- Detect laboratory results which may be unreasonable or in error;

# SCHOOL OF HEALTH SCIENCES

- - 6. Identify, select, use and maintain clinical laboratory equipment;
  - 7. Set up safety and quality control measures in a clinical laboratory;
  - 8. Demonstrate laboratory procedures, supervisory and managerial skills relevant to running a clinical unit;
  - Apply Christian ethical norms and professional ethics in relation to physicians, colleagues, and patients;
  - Carry out a scientific research project to solve a clinical problem;
  - Continue with graduate studies in specialized areas of laboratory science.

#### **CAREER OPPORTUNITIES**

There is a vast market with a wide variety of options including:

- 1. Hospitals (private or government)
- 2. Research Institutions NGO's, Governmental, university, pharmaceutical, industrial
- 3. Privately Owned Laboratory Business
- 4. Privately Owned Medical Laboratory School
- 5. Teaching/Lecturing
- 6. Government Public Health Departments, Environmental laboratories
- 7. In vitro fertilization labs
- 8. Blood Banks, Red Cross
- 9. Crime labs, forensics
- 10. Inspectors accreditation agencies
- 11. Infection control officer, epidemiology
- 12. Quality assurance director
- 13. Advance to Medicine/Pre-Med Degree
- Master's Degree in Immunochemistry, Medical Education, Blood Transfusion, Immunology, Parasitology, Immunohematology, Clinical Microbiology, Laboratory Administration, Clinical Chemistry, Virology, Cyto-Histology, etc.

#### **ENTRANCE REQUIREMENTS**

#### **DIRECT ENTRY**

- A minimum grade of C+ or better in Kenya Certificate of Secondary Education (KCSE), with a grade of C+ or better in Biology, C+ or better in Chemistry, C+ or better in English or Kiswahili, and C+ in Mathematics or Physics
- Candidates holding baccalaureate degrees in the sciences must show evidence of having relevant transferable credits or evidence of having completed all pre-clinical courses including cognates and general education requirements. The science courses must have been completed within the past eight years (or updated to the satisfaction of relevant department instructors).
- Candidates holding a Medical Laboratory Technology diploma and qualifying as upgraders will be accepted into the program. The conditions for consideration as an upgrader are:
  - a. Have a diploma in Medical Laboratory Technology from a recognized institution.
  - b. Have a current registration with KMLTTB or any other recognized registering body.
  - c. Present a transcript, diploma, and KMLTTB registration certificate or certificate from another recognized registering body
  - d. Present a course syllabus from previous training
  - e. Have an updated CV
  - f. Have at least two years work experience.
- 4. The prospective entrants into the MLS program should be able to hear safety alarms, timers, instrument alarms

and beepers, and telephone/intercom communications, and possess visual acuity and ability to discriminate color distinctively.

#### INTERDEPARTMENTAL TRANSFER

Regulations concerning interdepartmental transfer found in the relevant UEAB Bulletin will be adhered to. In addition, the following will also apply: a GPA of 2.5 or better in MATH 101, CHEM 111, and BIOL 155. An overall GPA of 2.5 is required for all general education requirements, science cognates and mathematics at the time of transfer. No grade should be less than a C in science cognates.

#### **CONDITIONS FOR ADVANCEMENT TO CLINICAL YEAR**

- 1. The student should have successfully completed all general education requirements.
- The student should have successfully completed all science cognates and pre-clinical courses, with a minimum grade of C.
- 3. The student should have clearance from the Clinical Year Admissions Committee.
- 4. The student should have attained an overall GPA of 2.5 or above.

#### Provisional Admission to Clinical Year

An individual with a grade-point average of less than 2.50 but greater than 2.35, or a student with another deficiency may be admitted to clinical year if there are extenuating circumstances and it is the professional judgement of the program of Medical Laboratory Sciences Admissions Committee that the student exhibits reasonable prospects for successful completion of the program. No more than 10% of the admitted class will be comprised of these special-case admissions.

#### **REPEAT POLICY**

- Students should not repeat more than three times, per course or different courses. If there are more than three repeat courses, the student will be advised to change his/ her major from MLS.
- 2. No student will be allowed to take subsequent courses in series if they fail the prerequisite course with a D or F, and have to repeat the course. A student will be allowed to continue to the next course with a C-.

#### **GRADUATION REQUIREMENTS**

In addition to the graduation requirements printed in the relevant UEAB Bulletin the following will also be applicable for prospective graduands in the MLS program:

- An overall cumulative GPA of 2.33 at completion of prescribed courses in the curriculum.
- 2. A minimum grade of C- in all science cognates, including each class in a series.
- 3. A minimum grade of C in all MLS courses, pre-clinical and clinical.
- 4. A minimum GPA of 2.00 in cognates, and 2.33 in all major courses.

#### LICENSING AND REGISTRATION

Each student will be registered with a specified fee by the Kenya Medical Laboratory Technicians and Technologists Board (KMLTTB) upon entry into the Medical Laboratory Sciences program. The board is also responsible for licensing students after completion of the degree program.

# **Course Listing**

## BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES

#### SUMMARY

General Education	19
Core Courses	67
Cognates	44
Clinical Practicum	14
Total	144 Credits

Students in the Medical Laboratory Science program are exempted from the following General Education Requirements:

AGRI 105	Principles of Agricultural Technology	2		
BIOL 105	Human Biology			
ENVI 227	Environment and Society	2		
HIST 111	Concepts of World Civilization	2		
HLED 110	Health Principles	1		
MATH 100	Foundations of Mathematics	3		
MGMT 103	Basic Management and Entrepreneurial Skills	2		
PEAC 107	Physical and Recreational Activities	1		
PHYS 100	Concepts of Physical Sciences	2		
	Vocational Skills	1		
GCAS 107	Music Appreciation	2		
PSYC 101	Introduction to Psychology	2		
	Total 22 Credits			

GENERAL	EDUCATION REQUIREMENTS 19 Credi	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE COL	JRSES 67 Credit	ts			
CLSC 100	Introduction to Clinical Laboratory Science	2			
CLSC 105	105 Medical Terminology				
CLSC 150 Fundamentals of Clinical Microbiology					
CLSC 170	LSC 170 Principles of Immunology				
CLSC 205	CLSC 205 Principles of Nuclear Medicine				
CLSC 206	Principles of Forensic Medicine	2			

CLSC 221	Fundamentals of Clinical Chemistry	3
CLSC 230	Fundamentals of Hematology	3
CLSC 235	Introduction to Pharmacology and Pharmacognosy	2
CLSC 252	Principles of Food and Water Microbiology	3
CLSC 260	Histologic Techniques	2
CLSC 308	Systemic Pathology	2
CLSC 352	Clinical Virology and Vaccines	3
CLSC 358	Clinical Mycology	3
CLSC 361	Medical Parasitology I	3
CLSC 362	Medical Parasitology II	2
CLSC 390	Introduction to Research Methodology	2
CLSC 393	Laboratory Management	2
CLSC 395	Seminar	1
CLSC 412	Specimen Procurement and Body Fluid Analysis	3
CLSC 421	Clinical Chemistry I	3
CLSC 422	Clinical Chemistry II	3
CLSC 441	Hematology	3
CLSC 442	Hemostasis	2
CLSC 451	Clinical Microbiology	3
CLSC 471	Clinical Immunology	2
CLSC 484	Immunohematology and Transfusion Medicine	4

CLINICAL	PRACTICUM 14 Credit	ts
CLSC 413	Specimen Procurement, Handling and Processing Practicum	1
CLSC 423	Clinical Chemistry Practicum	2
CLSC 443	Clinical Hematology and Hemostasis Practicum	2
CLSC 455	Clinical Microbiology and Mycology Practicum	2
CLSC 456	Clinical Parasitology Practicum	2
CLSC 463	Histopathology/Cytopathology Practicum	1
CLSC 476	Clinical Immunology and Virology Practicum	1
CLSC 483	Clinical Immunohematology Practicum	2
CLSC 493	Laboratory Management Practicum	1

COGNATES 44 Credi		s
BIOL 111	Human Anatomy and Physiology I	4
BIOL 112	Human Anatomy and Physiology II	4
BIOL 155	Foundations of Biology I	4
BIOL 292	Fundamental of Cell and Molecular Biology	3
BIOL 449	Genetics	3
CHEM 111	Introductory General Chemistry	4
CHEM 113	Principles of Organic and Biochemistry	4
MATH 101	Pre-Calculus I	3
NUTR 234	Nutrition	3
PHHC 290	Community Health and Diagnosis	3
PHNL 202	Statistics in the Health Sciences	3
PHYS 200	Applied Physics and Bioinstrumentation	3
ZOOL 365	Histology	3

# SCHOOL OF HEALTH SCIENCES

## BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES FOR UPGRADING STUDENTS

#### SUMMARY

General Education Requirements	19
Core Requirements	50
Cognates	44
Clinical Practium	10
Total	123 Credits
Canaral Education Deguirements	

General Education Requirements Exempted for Upgraders

AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
LITE 151	Introduction to Literary Appreciation	2
ENVI 227	Environment and Society	2
HIST 111	Concepts of World Civilization	2
HLED 110	Health Principles	1
MATH 100	Foundations of Mathematics	3
MGMT 103	Basic Management and Entrepreneurial Skills	2
OFTE 120	Keyboarding	0
PEAC 107	Physical and Recreational Activities	1
PHYS 100	Concepts of Physical Sciences	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills	1

Core Course	es Exempted for Upgraders 17 Cred	lits			
CLSC 100	Introductions to Clinical Laboratory Science	2			
CLSC 105	Medical Terminologies	1			
CLSC 230	6,				
CLSC 150	CLSC 230Fundamentals HematologyCLSC 150Fundamentals of Clinical MicrobiologyCLSC 221Fundamentals of Clinical Chemistry				
CLSC 221	Fundamentals of Clinical Chemistry	3			
CLSC 260	Histologic Techniques	2			
CLSC 170	Principles of Immunology	3			

GENERAL	EDUCATION REQUIREMENTS 19 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
0FTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE COU	JRSES 51 Credi	ts
CLSC 205	Principles of Nuclear Medicine	2
CLSC 206	Principles of Forensic Medicine	2
CLSC 235	Introduction to Pharmacology and Pharmacognosy	2
CLSC 252	Principles of Food and Water Microbiology	3
CLSC 308	Systemic Pathology	2
CLSC 352	Clinical Virology and Vaccines	3
CLSC 358	Clinical Mycology	3
CLSC 361	Medical Parasitology I	3
CLSC 362	Medical Parasitology II	2
CLSC 390	Introduction to Research Methodology	2
CLSC 393	Laboratory Management	2
CLSC 395	Seminar	1
CLSC 412	Specimen Procurement and Body Fluid Analysis	3
CLSC 421	Clinical Chemistry I	3
CLSC 422	Clinical Chemistry II	3
CLSC 441	Hematology	3
CLSC 442	Hemostasis	2
CLSC 451	Clinical Microbiology	3
CLSC 471	Clinical Immunology	2
CLSC 484	Immunohematology and Transfusion Medicine	4

COGNATE	S 41 Credi	ts
BIOL 111	Human Anatomy and Physiology I	4
BIOL 112	Human Anatomy and Physiology II	4
BIOL 155	Foundations of Biology I	4
BIOL 292	Fundamental of Cell and Molecular Biology	3
BIOL 449	Genetics	3
CHEM 111	Introductory General Chemistry	4
CHEM 113	Principles of Organic and Biochemistry	4
MATH 101	Pre-Calculus I	3
NUTR 234	Nutrition	3
PHHC 290	Community Health and Diagnosis	3
PHNL 202	Statistics in the Health Sciences	3
PHYS 200	Applied Physics and Bioinstrumentation	3
ZOOL 365	Histology	3

PRACTICU	IM COURSES FOR UPGRADERS 10 Credit	s
PRACTICUM COURSES FOR UPGRADERS10 CreditsCLSC 413Specimen Procurement, Handling and Processing Practicum1CLSC 424Clinical Chemistry Practicum1CLSC 424Clinical Chemistry Practicum1CLSC 444Clinical Hematology and Hemostasis Practicum1CLSC 458Clinical Microbiology and Mycology Practicum1CLSC 459Clinical Parasitology Practicum1CLSC 453Histopathology/Cytopathology Practicum1CLSC 474Clinical Immunology and Virology Practicum2		
CLSC 424	Clinical Chemistry Practicum	1
CLSC 444		1
CLSC 458	, , , , , , , , , , , , , , , , , , ,	1
CLSC 459	Clinical Parasitology Practicum	1
CLSC 463	Histopathology/Cytopathology Practicum	1
CLSC 474	Clinical Immunology and Virology Practicum	1
CLSC 483	Clinical Immunohem Practicum	2
CLSC 493	Laboratory Management Practicum	1

# BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES

## Four-Year Course Plan

Key: Th - Theory; L - Lab; T - Total

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	] [	CODE	COURSE TITLE	Th	L	Т
	CLSC 100	Introduction to CLS	2	0	2	1	BIOL 112	Human Anatomy and Physiology II	3	1	4
1st	CLSC 105	Medical Terminology	1	0	1		INSY 108	Information Technology for the Health Professionals	2	0	2
	RELH 155	Adventist Heritage	2	0	2	1 [	ENGL 106	Speech Communication	1	0	1
	0FTE 120	Keyboarding	0	0	0	] [	CLSC 205	Principles of Nuclear Medicine	2	0	2
	ENGL 105	Writing Skills	3	0	3	] [	RELB 207	Christian Beliefs	3	0	3
	BIOL 111	Human Anatomy and Physiology I	3	1	4		CLSC 170	Principles of Immunology	2	1	3
	BIOL 155	Foundations of Biology I	3	1	4		CHEM 111	Introductory General Chemistry	3	1	4
	MATH 101	Pre-Calculus	3	0	3			Total	16	3	19
		Total	17	2	19						
	CLSC 150	Funds of Clin Microbiology	2	1	3		CLSC 230	Funds of Hematology	2	1	3
2nd	CHEM 113	Principles of Organic & Biochemistry	3	1	4	1	EDUC 215	Philosophy of Christian Education	2	0	2
	CLSC 221	Fundamentals of Clincal Chemistry	2	1	3	1	CLSC 206	Principles of Forensic Medicine	2	0	2
	RELB 220	Life and Teachings of Jesus	2	0	2	1	PHNL 202	Statistics in the Health Sciences	3	0	3
	PHYS 200	Applied Physics and	3	0	3	4  -	RELT 255	Introduction to Christian Ethics	2	0	2
	KISW 114/ FREN 103	Bioinstrumentation Introduction to Kiswahili/ Beginning French II	2	0	2		CLSC 252	Principles of Food and Water Microbiology	2	1	3
		Total	14	3	17	1	CLSC 260	Histologic Techniques	2	0	2
						1	BIOL 292	Funds of Cell And Molec Biol	3	0	3
								Total	18	2	20
	CLSC 235	Intro Pharmacol & Pharmacog	2		2		CLSC 471	Clinical Immunology	2		2
3rd	BIOL 449	Genetics	2	1	3	1	CLSC 362	Medical Parasitology II	1	1	2
	PHHC 290	Community Health & Diagnosis	3		3	1	CLSC 308	Sytemic Pathology	2		2
	CLSC 358	Clinical Mycology	2	1	3	1 [	CLSC 352	Clinical Virology and Vaccines	3		3
	Z00L 365	Histology	2	1	3	1 [	CLSC 421	Clinical Chemistry I	2	1	3
	CLSC 361	Medical Parasitology I	2	1	3	] [	CLSC 442	Hemostasis	1	1	2
	CLSC 441	Hematology	2	1	3		CLSC 390	Introduction To Research Methodology	2		2
		Total	15	5	20		NUTR 234	Nutrition	3		3
								Total	16	3	19
	CLSC 393	Laboratory Management	2		2		CLSC 443	Clin Hematology & Hemos Prac	2		2
4th	CLSC 412	Specimen Procurement and Body Fluid Analysis	2	1	3		CLSC 423	Clinical Chemistry Practicum	2		2
	CLSC 395	Seminar	1		1		CLSC 413	Specimen Procurement, Handling and Processing Practicum	1		1
	CLSC 422	Clinical Chemistry II	2	1	3		CLSC 455	Clinical Microbiology & Mycology Practicum	2		2
	CLSC 484	Immunohematology and Transfusion Medicine	3	1	4		CLSC 456	Clinical Parasitology Practicum	2		2
	CLSC 451	Clinical Microbiology	2	1	3		CLSC 483	Clinical Immunohematology Practicum	2		2
		Total	12	4	16		CLSC 476	Clin Immunol & Virology Pract	1		1
						] [	CLSC 463	Histopath/Cytopath Practicum	1		1
							CLSC 493	Lab Management Practicum	1		1
								Total	14		14



# BACHELOR OF SCIENCE IN LABORATORY SCIENCES FOR UPGRADING STUDENTS Four-Year Course Plan

Key: Th - Theory; L - Lab; T - Total

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	С	ODE	COURSE TITLE	Th	L	Т
	BIOL 155	Foundations of Biology I	4			В	BIOL 112	Human Anatomy and Physiology II	4		
1st	ENGL 105	Writing Skills	3			R	ELB 207	Christian Beliefs	3		
	BIOL 111	Human Anatomy and Physiology I	4			P	PHNL 202	Statistics in the Health Sciences	3		
	MATH 101	Precalculus	3			C	LSC 205	Principles of Nuclear Medicine	2		
	INSY 108	Information Technology for the Health Professionals	2			E	DUC 215	Philosophy of Christian Education	2		
	CHEM 111	Intro. to General Chemistry	4			E	NGL 106	Speech Communication	1		
		Total	20			C	CHEM 113	Principles of Organic and Biochemistry	4		
								Total	19		
	CLSC 206	Principles of Forensic Medicine	2			R	ELB 220	Life and Teachings of Jesus	2		
2nd	PHYS 200	Applied Physics and Bioinstrumentation	3			C	CLSC 390	Introduction to Research Methodology	2		
	CLSC 361	Medical Parasitology I	3			C	CLSC 393	Laboratory Management	2		
	KISW 114 FREN 103	Introduction To Kiswahili/ Beginning French II	2			В	BIOL 449	Genetics	3		
	CLSC 308	Sytemic Pathology	2			В	BIOL 290	Funds of Cell and Molec Biol	3		
	RELH155	Adventist Heritage	2			R	RELT 255	Introduction to Christian Ethics	2		
	CLSC 352	Clinical Virology and Vaccines	3			C	CLSC 441	Hematology	3		
	ZOOL 365	Histology				C	CLSC 421	Clinical Chemistry I			
		Total	20					Total	20		
3rd	CLSC 471	Clinical Immunology	2			C	CLSC 444	Clinical Hematology and Hemostasis Practicum	20		
JIU	CLSC 442	Hemostasis	2			C	CLSC 424	Clinical Chemistry Practicum	1		
	CLSC 412	Specimen Procurement and Body Fluid Analysis	3			C	CLSC413	Specimen Procurement, Handling and Processing Practicum	1		
	CLSC 451	Clinical Microbiology	3			C	CLSC 458	Clinical Microbiology & Mycology Practicum	1		
	CLSC395	Seminar	1			) C	CLSC 493	Lab Management Practicum	1		
	CLSC 422	Clinical Chemistry II	3			C	CLSC 485	Clinical Immunohem Pract	2		
	CLSC 484	Immunohematology and Transfusion Medicine	4					Total	7		
		Total	18								

# **Course Descriptions**

#### CLSC 100 Introduction to Clinical Laboratory

#### **3 Credits**

This is an introduction to the major Clinical Laboratory Science disciplines. A general introduction to laboratory rules and regulations, professional relations and medical ethics are covered. First aid and cardiopulmonary resuscitation (CPR) principles and applications are also covered – clinical conditions/states requiring first aid such as breathing emergencies, injuries to soft tissue, muscles, bones, joints and sudden illness.

#### CLSC 105 Medical Terminology

#### 1 Credit

This course provides a detailed study of medical terms and abbreviations that relate to human body parts, human diseases, drugs, and disorders; it also covers different health disciplines and the medical terms involved in the respective disciplines.

#### CLSC 141 Principles of Hematology and 3 Credits Transfusion Medicine

This course is designed for students taking health-related majors. It introduces the production, maturation, and function of normal blood cells, the morphology of blood cells, anemia and leukemia. Normal hemostasis is introduced. Introduction of blood group antigen systems, some basic blood bank testing, donor selection, donor unit testing, and possible transfusion reactions, routine laboratory testing in hematology, hemostasis, and blood bank are also dealt with. Prerequisites: BIOL 111 and BIOL 112

#### CLSC 150 Funds of Clinical Microbiology 3 credits

This course provides an introduction to selection, collection and transportation of patient specimen. Cultural characteristics are studied. It covers classification, taxonomy, host-parasite relationship, normal flora, immunity, pathogenicity, antimicrobial agents, resistance; susceptibility testing, disinfection procedures, and common staining procedures. Morphological features, microscopy, cultivation, isolation, staining, metabolic biochemical, serological and DNA identification methods are also covered. Prerequisite: BIOL 155

#### CLSC 170 Principles of Immunology

**3 Credits** 

**3 Credits** 

Topics will cover innate and acquired immunity in humans, immunoglobulin production, structure, function, diversity; antigen characteristics, tolerance and memory; complement structure and function; cell-mediated immunity function and regulation; autoimmune disorders; transplantation and tumor immunology; immunodeficiency disorders, hypersensitivity. Principles of laboratory and test quality assurance antigen/ antibody reactions. Prerequisite: BIOL 111, BIOL 155

#### CLSC 171 Basic Clinical Immunology

This course is designed for students taking health-related majors. The course covers non-specific and specific immunity. complement systems; proteins activation and biological properties, cells of immunity, Immunoglobulins, receptors. Antigen antibody interactions, major histocompatibility complex, Antigens; auto immunity, immune deficiencies, transplantation and rejection. Prerequisites: CLSC 250, BIOL 245.

#### CLSC 205 Principles of Nuclear Medicine 2 Credits

This is an introduction to radioactive decay mechanisms. It includes radiation spectra, detectors, gas filled solid state scintillations and detectors. Bone marrow and intestinal studies of iron metabolism, thyroid uptake of radioactive iodine and other radioisotope tests of renal function, vitamin B12 absorption, fat scintigraphy, autoradiographic theory and decay will be studied. All aspects of exposure and disease will be covered. Prerequisite: Sophomore standing.

#### CLSC 206 Principles of Forensic Medicine 2 Credits

This covers application of laboratory tests to the legal system, collection and processing of blood, hair, semen, saliva, sweat, vomitus, nail clipping, bone teeth and other specimens for forensic diagnostic DNA tests in different cases like identifying paternity, detection of sexual offenses and illegal abortion. Other tests will assist in establishing injuries caused by foreign inanimate objects, like guns. Prerequisite: Sophomore standing.

**3 Credits** 

#### CLSC 220 Basic Clinical Chemistry

Biochemical reference values and factors affecting them: principles of sample collection, preservation, and storage, precautions to be taken and possible hazards involved. Acid base balance; water and electrolyte balance, physiology and chemical pathology of renal functions. Clinical chemistry of normal liver function, alterations seen in disease states. Function tests; pulmonary, cardiac, hematologic, hepatic, biliary, pancreatic, splenic, endocrine, renal and urinary tract. Drugs and their clinical and laboratory effects on biochemical values will be covered. Prerequisite: CHEM 111.

#### CLSC 221 Fundamentals of Clinical 3 Credits Chemistry

The course gives an introduction to clinical laboratory techniques and procedures, lab safety and application of quality control. It covers spectrophotometry, chromatography, electrophoresis, electrochemistry, immunoassays, and nucleic acid probe techniques. It covers organ system functions like renal, cardiac and liver function, carbohydrates, lipids, electrolytes and amino acids and proteins. Prerequisite: CHEM 102.

#### CLSC 230 Fundamentals of Hematology 3 Credits

Introduces the production, maturation, and function of normal blood cells; covers the morphology of red blood cells, white blood cells and platelets, both for the immature and mature Cells. Anemia and Leukemia are also introduced. Hemostasis is introduced, covering normal hemostasis, coagulation and fibrinolytic factors. The course also introduces blood group antigen systems, and some basic blood bank testing. Prerequisites: BIOL 111, BIOL 112, BIOL 155.

#### CLSC 235 Introduction to Pharmacology 2 Credits and Pharmacognosy

The course will cover an introduction to pharmacology and pharmacognosy. A brief study of pharmacological procedures and principles of drug administration is covered. The importance and role of medicinal plants and natural products in the health care sector is covered. The presence and identification of active ingredients like flavonoids, saponins, anthraquinones, hormones and vitamins present in various medicinal plants is discussed. Prerequisite: CHEM 111 and CHEM 113.

# SCHOOL OF HEALTH SCIENCES

#### CLSC 251 Principles of Medical Microbiology 3 Credits

This course is designed for students taking a degree in public health and nursing. It covers classification and taxonomy of the various medically important microorganisms. Pathogenicity, morphology, epidemiology, control and treatment of various bacteria will be covered. Factors that determine the virulence of pathogenic organisms will be covered. Laboratory procedure will cover the isolation, staining, biochemical reactions and identification of microbial organisms. Prerequisite: BIOL 151.

#### CLSC 252 Principles of Food and Water 3 Credits Microbiology

Topics to be covered will include surface counts and total counts in enumeration of bacteria; food examination for pathogens; Analysis of milk by Methylene Blue test turbidity test, phosphatase test. Coliform and colony count tests. Examination for tubercle bacilli, water analysis indicator organisms, faecal coliforms and other pathogenic organisms found in water is done. Prerequisites: CLSC 250.

#### CLSC 253 Basic Clinical Parasitology

This course is designed for students taking health-related majors. It will cover the morphology, biology, pathogenesis, epidemiology, and control of mostly parasites of clinical and public health importance. Special emphasis will be placed on the treatment of parasitic infection, patient care and control of parasitic infection. An introduction to laboratory diagnosis of parasitic infection will be covered.

#### **CLSC 260** Histologic Techniques

2 Credits

2 Credits

**3 Credits** 

**3 Credits** 

The course introduces students to histologic preparatory techniques including: microtome use, mounting, staining techniques, preparation and decalcification of bone sections. The student gains insight into the complex technologies involved in producing the results which today's pathologists are required to interpret. If possible, the course should be taken concurrently with histology.

#### CLSC 308 Systemic Pathology

The course deals with definition of methods used in pathology. It covers disturbances in metabolism of the proteins, lipids, carbohydrates and minerals with development of different degenerative changes. Causes and morphological types of necrosis, tumors, disturbances of circulation and disorders of the body fluid (edema, dehydration) are also dealt with. Prerequisite: Junior standing.

#### CLSC 352 Clinical Virology and Vaccines 3 Credits

Lectures will cover pathogenesis and identification of major pathogenic viruses. Organisms covered will be: Respiratory Viruses, Exanthemas, Immunodeficiency Viruses, and Central Nervous System viruses, Viral Agents of gastrointestinal Rabies, Human Papiloma Viruses, Hepatitis Viruses and Herpesviruses. A brief study of antiviral therapy will be covered. Vaccine production, storage and the general importance of immunization will be covered. Prerequisite: CLSC 170.

#### CLSC 361 Medical Parasitology I

This course covers the study of parasitic protozoa, helminthes, ectoparasites and vectors of medical importance. Their

classification, morphology, identification, life cycle, pathogenesis, epidemiology, diagnosis and control will be covered. Clinical laboratory procedures including staining, mounting and preservation of parasites of medical importance will be done. Prerequisite: Junior standing.

#### CLSC 362 Medical Parasitology II

2 Credits

This course covers the study of vectors of parasitic protozoa and helminthes. Their classification, morphology, identification, life cycle, epidemiology, diagnosis, and control will be covered. Clinical lab procedures including staining, mounting, and preservation of the vectors of medical importance will be done. Prerequisite: CLSC 361.

#### CLSC 358 Clinical Mycology

**3 Credits** 

1 Credit

This course covers the general characteristics, taxonomy, clinical sites of infection, specimen collection, handling and transport of fungi. Methods of identification of fungi, direct microscopic examination, and culture will be covered. Safety issues will also be emphasized. Agents studied will include superficial mycoses, subcutaneous mycoses, dermatophytes, systemic mycoses and opportunistic fungal infections. Prerequisite: CLSC 150.

#### CLSC 390 Introduction to Research 2 Credits Methodology

This course covers special research methods in the area of medical research. Study designs in medical research are covered. Non-experimental and experimental research are covered. Descriptive and inferential statistical methods will be covered. Statistical methods in research will be applied. Ethical, legal and scientific aspects of human subject research and proposal writing will be covered. Prerequisites: PHNL 202 and junior standing.

#### CLSC 393 Laboratory Management 2 Credits

In this course, considerations of basic principles of administration and personnel management, supply sources and inventory control, preparing and monitoring budgets, issues and trends in laboratory medicine, evaluation and selection of new techniques and instruments, and problem solving are dealt with. Also includes information systems and professional ethics as applicable to the clinical laboratory.

#### CLSC 395 Seminar

The student will be introduced to skills in seminar presentation. Topics will include communication skills, use of audio visuals during seminar presentation. A proposal on a topic of medical importance will be presented. A research study will be conducted. Students will make both written and oral presentations on the research in an organized, scientific seminar. Prerequisite: CLSC 390, ENGL 105.

#### CLSC 412 Specimen Procurement, and 3 Credits Body Fluid Analysis

The course trains students in venipuncture, skin puncture and collection of other specimens for use in clinical laboratory testing. It covers point of care testing, laboratory safety, specimen collection techniques, hazards/complications, quality assurance methods and medical-legal issues in phlebotomy.

#### CLSC 413 Specimen Procurement, Handling 1 Credits and Processing Practicum

The course covers practical applications and rules to follow in specimen collection and processing. Emphasis is put on the application of professional ethics as patient privacy and rights are taken into consideration.

#### CLSC 421 Clinical Chemistry I

#### **3 Credits**

Biochemical constituents of the human body such as lipids, proteins, carbohydrates, electrolytes, enzymes, acid / base substances, heme derivatives, hormones will be studied and analyzed, to determine their characteristics, concentrations and their parameters compared to normal physiology and abnormal or pathological cases. Assessment of organ system functions such as liver, cardiac, renal, gastrointestinal, and pancreatic function will be done. Prerequisite: CLSC 320.

#### CLSC 422 Clinical Chemistry II

#### **3 Credits**

The course will teach the specialty areas of clinical chemistry: therapeutic drug monitoring, toxicology, and tumor markers, geriatric and pediatric clinical chemistry are covered. Macronutrient, vitamin, and trace element nutritional assessments are done. Chemical and microscopic studies of normal and abnormal constituents of urine and other body fluids will be covered. Body fluids, their evaluation, disease responsible for changes will be presented. There will be 1 laboratory period per week. Prerequisite: CLSC 421.

#### CLSC 423 Clinical Chemistry Practicum 2 Credits

Students will be exposed to the detection of various proteins, lipids carbohydrates in various body fluids including both manual and automated machines used in diagnosis of these substances in pathological conditions.

#### CLSC 424 Clinical Chemistry Practicum 1 Credit

For upgrading students only. Students will be exposed to the detection of various proteins, lipids carbohydrates in various body fluids including both manual and automated machines used in diagnosis of these substances in pathological conditions.

#### **CLSC 441 Hematology**

Normal and abnormal blood cells are studied in this course. Counts of the different components of blood are done. Bone marrow is studied and smears examined. Anemias and white blood cell disorders are studied in detail. Topics will cover thrombosis risk testing, qualitative and quantitative vascular and platelet disorders, defects of plasma clotting factors, and hemorrhagic coagulation disorders and pathways. Evaluation of hemostasis will also be done. Prerequisites: CLSC 230.

#### CLSC 442 Hemostasis

Topics will cover thrombosis risk testing, qualitative and quantitative vascular and platelet disorders, defects of plasma clotting factors, and hemorrhagic coagulation disorders and pathways. Evaluation of hemostasis will also be done. Prerequisites: CLSC 230.

#### CLSC 443 Clinical Hematology and Hemostasis Practicum

2 Credits

2 Credits

This is a hospital-based practical experience that involves professional health-care experience. Emphasis is placed in the application of hematology and hemostasis knowledge to

**3 Credits** 

patient-care. Peripheral blood and bone marrow analyses are done, as well as analyses of other body fluids.

#### CLSC 444 Clinical Hematology and 1 Credits Hemostasis Practicum

For upgrading students only. This is a hospital-based practical experience that involves professional health-care experience. Emphasis is placed in the application of hematology and hemostasis knowledge to patient-care. Peripheral blood and bone marrow analyses are done, as well as analyses of other body fluids.

#### CLSC 451 Clinical Microbiology

**3 Credits** 

The course will cover medically important bacteria in the following areas; The identification of routine and non-routine bacteria; Gramnegative bacilli, Gram-positive cocci, Aerobic Gram-positive bacilli, Anaerobic bacteria, Mycoplasmas and Ureaplasmas, Mycobateria, and Spirochetes, Automation, and quality assurance. Emphasis will be placed on isolation, epidemiology, pathogenesis, identification and antimicrobial susceptibility testing of pathogenic bacteria. Prerequisite: CLSC 150

#### CLSC 455 Clinical Microbiology and 2 Credits Mycology Practicum

This course covers using methods in bacteriology mycology for diagnosis of human disease. Isolation and identification of viral and fungal organisms by culture techniques and molecular techniques will be carried out. Prerequisites: CLSC 451 and CLSC 452.

#### CLSC 456 Clinical Parasitology Practicum 2 Credits

This course covers the direct smear for stool microscopy, sedimentation and floatation concentration techniques for fecal parasities stages. Staining techniques like temporary and permanent staining procedure will be covered. Preparation of blood smears for protozoa and filarial worms will be taught. Serologic tests and molecular techniques for the detection of parasitic diseases will be covered.

#### CLSC 458 Clinical Microbiology and 1 Credits Mycology Practicum

For upgrading students only. This course covers using methods in bacteriology mycology for diagnosis of human disease. Isolation and identification of viral and fungal organisms by culture techniques and molecular techniques will be carried out. Prerequisites: CLSC 451 and CLSC 452.

#### CLSC 459 Clinical Parasitology Practicum 1 Credit

For upgrading students only. This course covers the direct smear for stool microscopy, sedimentation and floatation concentration techniques for fecal parasities stages. Staining techniques like temporary and permanent staining procedure will be covered. Preparation of blood smears for protozoa and filarial worms will be taught. Serologic tests and molecular techniques for the detection of parasitic diseases will be covered.

#### CLSC 463 Histopathology/Cytopathology 1 Credits Practicum

This is a practical experience to expose students to the basic practice of sectioning, preparing and staining tissues of various specimens for examination by the pathologist.

## SCHOOL OF HEALTH SCIENCES

Lectures will present the theoretical aspects of tests for demonstration of antigen/antibody reactions in relation to disease. Serological testing will include precipitation, agglutination, hemolysin reactions, nephelometry, and immunofluorescence, and molecular techniques. An advanced understanding of the immunology and serology of bacteria, fungi, parasite, viruses and autoimmune disease will be presented. Prerequisite: CLSC 170

#### CLSC 474 Clinical Immunology and Virology 1 Credit Practicum

For upgrading students only. This course deals with diagnostic techniques, equipment, specimen transportation, media and cells, specimen processing, serology, isolation, detection methods, interpretation of results. Serology: Plasma fixation, neutralization, haemagglutination, inhibition, passive haemagglutination, radial immune haemolysis, ELISA immunofluorescence, radioimmunoassay. Culture techniques and requirements for viral organisms will be covered.

#### CLSC 476 Clinical Immunology and 1 Credit Virology Practicum

This course deals with diagnostic techniques, equipment, specimen transportation, media and cells, specimen processing, serology, isolation, detection methods, interpretation of results. Serology: Plasma fixation, neutralization, haemagglutination, inhibition, passive haemagglutination, radial immune haemolysis, ELISA immunofluorescence, radioimmunoassay. Culture techniques and requirements for viral organisms will be covered.

#### CLSC 483 Clinical Immunohematology 2 Credits Practicum

This course is a professional-care laboratory practicum that exposes students to applications of the principles of compatibility testing, antibody identification and quality control in blood banking procedures. It emphasizes professional health care in the laboratory and patient-care in the blood bank laboratory.

#### CLSC 484 Immunohematology and 4 Credits Transfusion Medicine

The course covers blood grouping and typing, blood group system antigens, compatibility testing, antibody detection and identification, grouping and compatibility problem solving, and quality control in the blood bank. Patient clinical state correlations are also done. It will also include the organization of blood transfusion service, blood donor recruitment, selection, and phlebotomy. Blood and blood component, processing, distribution and therapy are studied. Prerequisite: CLSC 230

#### CLSC 493 Laboratory Management 1 Credits Practicum

This practical experience is an exposure to lab administration and personnel management. Students are expected to observe what the lab manager and supervisors do and how the lab operates in its different aspects, applying the theory.

# DEPARTMENT OF PUBLIC HEALTH

#### FACULTY

Khol H, MPH., PhD in progress (Acting Head of Department) Amulla W., BSc., MPH in progress Barongo, A., MPH., PhD in progress Makori T., BSc., MSc. Oluoch, E., MPH., PhD in progress Omambia, B., MSc., PhD in progress Opondo B., BSc. Owili, P, PhD.

#### PHILOSOPHY

The department operates on the Seventh-day Adventist worldview which holds that God is the Creator and Sustainer of the universe and life and is the source of true knowledge. God wishes "above all things" that we "prosper and be in good health" (3John 1:2). As public health professionals, we therefore, encourage practices that promote mental, spiritual, physical and social wholeness through preventing and controlling various aspects that affect the health of the community.

#### MISSION

The department endeavors to fulfill health needs through training students on health issues, with emphases on disease prevention, promotion of environmental awareness, physical fitness, and research. In this process, it will be guided by Biblical principles and the philosophy of Christian education.

#### VISION

The vision of the Department of Public Health is to lead in the training of health-care professionals who will serve in positions where they may effectively and efficiently witness for God through sound stewardship and healthful living.

#### **DEGREES OFFERED BY THE DEPARTMENT**

- 1. Master of Global Health
- 2. Master of Public Health
  - a. Generalist and Health Promotion Option b. Epidemiology and Disease Control Option
- 3. Bachelor of Science Public Health (Environmental Health Option).
- 4. Minor in Public Health.

#### **EXPECTED LEARNING OUTCOMES**

By the end of the degree program in Environmental Health, the student will be able to:

- Define terms associated with Environmental health including: ecology, population, public health nutrition, environmental pollution, food hygiene, communicable and non-communicable disease prevention and Control;
- 2. Explain Biblical teachings and practice on health, hygiene and environmental protection;
- 3. Identify types of pollution and their control measures;
- 4. Describe the impact of human activities on water, land and air;
- 5. Analyze water supply and quality control for human habitation;

- - 6. Compare and contrast nutritional needs between rural and urban societies in East Africa;
  - 7. Inspect market food hygiene, public water supply and quality control and waste management systems;
  - 8. Communicate strategies to prevent and control communicable and non-communicable diseases;
  - 9. Explain international and national public health laws and Legislations;
  - 10.Lead out in managing public health units and projects;
  - 11. Carry out research leading to prevention of public health hazards.

#### **CAREER OPPORTUNITIES FOR PUBLIC HEALTH**

Public health offers a very wide range of career opportunities, from community based activities, research, management posts, and Policy Analysts. Upon completion of BSc. in Public Health, one can work for, and across, organizations to improve the health of various population groups. The jobs available at health departments focus on ensuring that the following aspects are maintained which include: Food quality standards, Water safety, Housing standards, Occupational Health and Safety among others. Those interested in working for nonprofit organizations can find jobs in health advocacy, policy, or research for organizations such as World Health Organization (WHO), Red Cross, Care International, ADRA, AMREF, UNESCO or a local non-profit organization that focuses on specific health issues. Still other public health professionals will find work in the private sector - working in randomized control trials for pharmaceutical companies or for health insurance companies. There is also a great scope to practice abroad.

#### **ENTRANCE REQUIREMENTS**

#### **DIRECT ENTRY**

A student who wishes to be admitted into the public health program under direct entry must have:

- 1. Attained a mean grade of C+ or above at the KCSE level, or its equivalent as evaluated by authorized bodies.
- A grade of C+ in the cluster subjects: Biology or Biological Sciences; Chemistry or physical sciences; Mathematics or Physics, and English or Kiswahili.
- Foreign students from non-English speaking countries must have their high school certificates/diplomas translated in English with an accompanying statement showing how their system equates to the Kenyan system.
- 4. Foreign "O" level certificates are sent to the Kenya National Examination Council (KNEC) for equation to the Kenyan system. This is done before admission.

#### **UPGRADERS**

Applicants who hold diplomas in public health or other health related professions may be admitted into the degree program if they meet the following requirements:

- A minimum mean grade of C (plain) or Division III at the Kenya Certificate of Secondary Education or its equivalent;
- 2. Hold a THREE year diploma from a recognized institution;
- 3. Have at least two years of work experience;

OR

- 1. A minimum mean grade of C- (minus) or Division IV at the Kenya Certificate of Secondary Education or its equivalent.
- 2. A certificate in public health or other health related professions from Kenya Medical Training College and or any

other institution recognized by relevant authorities and the government of Kenya.

- A two year diploma in public health or heath related professions from Kenya Medical Training College and or any other institution recognized by relevant authorities and the government of Kenya.
- 4. Have at least two years of work experience;

#### INTERDEPARTMENTAL TRANSFER

Students admitted into other degree programs but wish to enter into the public health program may do an interdepartmental transfer, provided that they have attained a mean grade of C+ (plus) in KCSE, C+ (plus) in each of the cluster subjects: Biology or Biological Sciences; Chemistry or physical sciences; Mathematics or Physics and English or Kiswahili. Students transferring into public health from another department are expected to provide two character references from their respective departments, using forms provided by the Department of Public Health. Personal compliance and commitment to a healthy lifestyle are highly desirable.

# CREDIT TRANSFER AND CHALLENGE EXAMINATION FOR UPGRADERS

An upgrading student admitted to the public health department and wishes to transfer credits/be exempted from doing some courses offered at the university is expected to:

- 1. Refer to the "Transfer Credits" section and "Challenge Examinations' Sections.
- Provide academic transcripts, updated curriculum vitae (CV) and course syllabi/course description from the diploma program in which the qualification was obtained to facilitate evaluation and credit transfer to the public health department.
- 3. Diploma holders in Environmental Health are allowed to transfer (13) credits from the diploma program and challenge a total of 10 credit hours.
- 4. The credit transfer/exemption and suitability for challenge examination will consider differential training like public health, Nursing, Medical Laboratory Services, Clinical Medicine and Pharmacy and notified in writing by the registrar.
- 5. The student must have scored a minimum grade of B (plain) in the equivalent course he/she is seeking exemption/credit transfer and for challenge examination.
- 6. No applicant may be exempted from cognate courses but may be allowed to challenge.

#### POLICY FOR REPEATING CLASSES

- 1. A public health student may repeat a course twice only.
- A student will only be allowed to repeat a maximum of 7 courses from each of the following course areas: no more than 2 cognate courses, 2 core courses and 3 specialization courses can be repeated.

#### **GRADUATION REQUIREMENTS**

To graduate with a BSc in Public Health (Environmental Health Option), a student must have:

- 1. A minimum of 134 credits with an overall GPA of at least 2.33.
- 2. A total of at least 75 credits in public health with no grade less than a C+ in all core courses and an overall GPA of at least 2.50 in the core courses.
- 3. An overall cognates GPA of 2.33 with no grade less than a C.



# **Course Listing**

# BACHELOR OF SCIENCE IN PUBLIC HEALTH (Environmental Health Option)

#### **SUMMARY**

General Education Requirements	23
Core Courses	36
Specialization Courses	39
Cognates	36-37
Total	134-135 Credits

Students in public health are exempted from the following General Education Requirements

Principles of Agricultural Technology	2
Human Biology	2
Speech Communication	1
Environment and Society	2
Concepts of World Civilization	2
Health Principles	1
Pre-Calculus	3
Basic Management and Entrepreneurial Skills	2
Physical and Recreational Activities	1
Concepts of Physical Sciences	2
	Human Biology Speech Communication Environment and Society Concepts of World Civilization Health Principles Pre-Calculus Basic Management and Entrepreneurial Skills Physical and Recreational Activities

GENERAL	EDUCATION REQUIREMENTS 23 Credit	ts
ENGL 105	Writing Skills	3
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

#### Any one of the following:

HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

#### Any one of the following:

GEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

#### **CORE COURSES 36 Credits** PHEH 110 Introduction to Environmental Health 2 Principles of Epidemiology 2 PHEP 100 PHEP 424 Communicable Disease Prevention & Control 3 PHEP 426 Non-communicable Disease Prevention & 2 Control PHHC 120 Philosophy of Health 1 PHHC 140 ntroduction to Public Health 2 Community Health Diagnosis & Rural 3 PHHC 298 Attachment 2 PHHC 440 Health Education & Promotion PHHC 460 Management of Health Services 3 **PHHC 461 Project Planning and Evaluation** 2 PHHC 470 Public Health Law 2 PHHC 495 Research Methods 3 2 PHHC 497 Research Seminar II 2 PHHD 270 Disaster Preparedness, Management and Mitigation PHNL 202 Biostatistics in Health Sciences 3 2 PHNT 330 Public Health Nutrition

#### **CORE COURSES**

UDINE UDI		
PHEH 110	Introduction to Environmental Health	2
PHEP 100	Principles of Epidemiology	2
PHEP 424	Communicable Disease Prevention & Control	3
PHEP 426	Non-communicable Disease Prevention & Control	2
PHHC 120	Philosophy of Health	1
PHHC 140	ntroduction to Public Health	2
PHHC 298	Community Health Diagnosis & Rural Attachment	3
PHHC 440	Health Education & Promotion	2
PHHC 460	Management of Health Services	3
PHHC 461	Project Planning and Evaluation	2
PHHC 470	Public Health Law	2
PHHC 495	Research Methods	3
PHHC 497	Research Seminar II	2

**36 Credits** 

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PHHD 270	Disaster Preparedness, Management and Mitigation	2
PHNL 202	<b>Biostatistics in Health Sciences</b>	3
PHNT 330	Public Health Nutrition	2

SPECIALI	ZATION COURSES 39 Credit	ts
PHEH 160	Biology of Food Animals	2
PHEH 224	Urbanization, Planning and Land Survey	2
PHEH 226	Technical Drawing & Building Materials	3
PHEH 229	Public Health Principles of Building & Construction	2
PHEH 250	Water Quality Control	3
PHEH 263	Conservancy and Drainage Systems	2
PHEH 310	Principles of Environmental Toxicology	2
PHEH 330	Meat Inspection and Hygiene	3
PHEH 340	Food Quality Control	3
PHEH 350	Vectors and Rodent Control	2
PHEH 360	Liquid Waste Management	2
PHEH 361	Solid Waste Management	2
<b>PHEH 400</b>	Occupational Health and Safety	2
PHEH 430	Port Health	2
PHEH 440	Environmental Systems, Planning and Impact Assessment	2
PHEH 470	Pollution & Pollution Control	2
PHEH 487	Professional Practice	3

COGNATE	S 36-37 Credi	ts
BIOL 111	Human Anatomy and Physiology I	4
BIOL 112	Human Anatomy and Physiology II	4
BIOL 286	General Ecology	3
CHEM 111	Introductory General Chemistry	4
CHEM 113	Principles of Organic and Biochemistry	4
CLSC 251	Principles of Medical Microbiology Or	3
BIOL 245	Basic Medical Microbiology	4
CLSC 253	Basic Clinical Parasitology Or	3
ZOOL 325	Parasitology	3
INSY 136	Microcomputer Applications	3
MATH 104	Applied Mathematics in Health & Allied Sciences	3
NUTR 234	Nutrition	3
GEOG 255	Principles of Geographic Information Systems	2

# UPGRADING STUDENTS FROM DIPLOMA TO BSC IN PUBLIC HEALTH

RECOMMENDED COURSES FOR 12 Cred			
PHEH 110	Principles of Environmental Health	3	
PHEH 160	Biology of Food Animals	2	
PHEP 100	Principles of Epidemiology	2	
PHHC 140	Introduction to Public Health	2	
PHHC 298	Community Health Diagnosis and Rural Attachment	3	

#### RECOMMENDED COURSES FOR CHALLENGE 10 Credits EXAMINATION FOR DIPLOMA HOLDERS IN ENVIRONMENTAL HEALTH

The student can challenge up to 10 credits from these courses:

PHEH 224	Urbanization, Planning and Land Survey	2		
PHEH 226	Technical Drawing & Building Materials			
PHEH 229	Public Health Principles of Building & Construction	2		
PHEH 250	Water Quality Control	3		
PHEH 330	Meat Inspection and Hygiene	3		
PHEH 340	Food Quality Control	3		

#### SUMMARY

General Education Requirements	19
Core Courses	33
Specialization Courses	39
Cognates	36-37
Total	127-128 Credits

Upgrading students in Public Health are exempted from the following General Education Requirements:

Principles of Agricultural Technology	2
Human Biology	
Speech Communication	1
Environment and Society	2
Concepts of World Civilization	2
Health Principles	1
Introduction to Literary Appreciation	2
Pre-Calculus	3
Basic Management and Entrepreneurial Skills	2
Keyboarding	0
Physical and Recreational Activities	1
Concepts of Physical Sciences	2
Introduction to Psychology	2
Vocational Skills	
	Human BiologySpeech CommunicationEnvironment and SocietyConcepts of World CivilizationHealth PrinciplesIntroduction to Literary AppreciationPre-CalculusBasic Management and Entrepreneurial SkillsKeyboardingPhysical and Recreational ActivitiesConcepts of Physical SciencesIntroduction to Psychology

Upgrading students in Public Health are exempted from the following Core Course:

PHHC 298	Rural Attachment	3 credits	
	Rararricaonnone	0 01 0 01 00	

GENERAL	EDUCATION REQUIREMENTS 19 Credit	ts
ENGL 105	Writing Skills	3
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE COURSES 33 Credits					
PHEH 110	Introduction to Environmental Health	2			
PHEP 100	Principles of Epidemiology	2			
PHEP 424	Communicable Disease Prevention & Control	3			
PHEP 426	Non-communicable Disease Prevention & Control	2			
PHHC 120	Philosophy of Health	1			
PHHC 140	Introduction to Public Health	2			
PHHC 440	Health Education & Promotion				
PHHC 460	Management of Health Services				
PHHC 461	Project Planning and Evaluation				
PHHC 470	Public Health Law	2			
PHHC 495	Research Methods	3			
PHHC 497	Research Seminar II	2			
PHHD 270	Disaster Preparedness, Management and Z Mitigation				
PHNL 202	Biostatistics in Health Sciences				
PHNT 330	NT 330 Public Health Nutrition				

#### **SPECIALIZATION COURSES**

PHEH 160	Biology of Food Animals	2
PHEH 224	Urbanization, Planning and Land Survey	2
PHEH 226	Technical Drawing & Building Materials	3
PHEH 229	Public Health Principles of Building & Construction	2
PHEH 250	Water Quality Control	3
PHEH 263	Conservancy and Drainage Systems	2
PHEH 310	Principles of Environmental Toxicology	2
PHEH 330	Meat Inspection and Hygiene	3
PHEH 340	Food Quality Control	3
PHEH 350	Vectors and Rodent Control	2
PHEH 360	Liquid Waste Management	2
PHEH 361	Solid Waste Management	2

PHEH 400	Occupational Health and Safety			
PHEH 430	Port Health	2		
PHEH 440	Environmental Systems, Planning and Impact Assessment	2		
PHEH 470	Pollution & Pollution Control	2		
PHEH 487	Professional Practice	3		

#### **COGNATES** 36-37 Credits BIOL 111 Human Anatomy and Physiology I 4 4 Human Anatomy and Physiology II **BIOL 112** 3 **BIOL 286 General Ecology** Introductory General Chemistry 4 **CHEM 111** CHEM 113 Principles of Organic and Biochemistry 4 3 CLSC 251 Principles of Medical Microbiology Or 4 BIOL 245 **Basic Medical Microbiology** 3 CLSC 253 Basic Clinical Parasitology Or ZOOL 325 Parasitology 3 3 **INSY 136 Microcomputer Applications** MATH 104 Applied Mathematics in Health & Allied 3 Sciences NUTR 234 Nutrition 3 2 GEOG 255 Principles of Geographic Information Systems

#### MINOR IN PUBLIC HEALTH

#### **SUMMARY**

Core Courses	24
Total	24 Credits

CORE COL	JRSES 24 Credit	S
PHEH 110	Introduction to Environmental Health	2
PHEH 250	Water Supply & Quality Control	3
PHEH 263	Conservancy and Drainage Systems	2
PHEP 100	Principles of Epidemiology	2
PHHC 120	Philosophy of Health	1
PHHC 140	Introduction to Public Health	2
PHHC 290	Community Health and Diagnosis	3
PHHC 440	Health Education & Promotion	2
PHHC 461	Project Planning and Evaluation	2
PHHD 270	Disaster Preparedness, Management and Mitigation	2
PHNT 330	Public Health Nutrition	3

**39 Credits** 



# BACHELOR OF SCIENCE IN PUBLIC HEALTH Four-Year Course Plan

Key: Th - Theory; L - Lab; T - Total

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	PHHC 140	Introduction to Public Health	2	0	2		PHEP 100	Principles of Epidemiology	2	0	2
1st	BIOL 111	Human Anatomy and Physiology I	3	1	4		PHEH 110	Introduction to Environmental Health	2	0	2
	CHEM 111	Introductory General Chemistry	3	1	4		PHHC 120	Philosophy of Health	1	0	1
	CLSC 254	Medical Parasitology	2	1	3		BIOL 112	Human Anatomy and Physiology II	3	1	4
	RELT 155	Adventist Heritage	2	0	2	]	RELT 207	Christian Beliefs	3	0	3
	0FTE 120	Keyboarding	0	0	0		CHEM 113	Principles of Organic and Biochemistry	3	1	4
	SOCI 121/ PSYC 101/ SWFI 207	Sociology/ Introduction to Psychology/ Family Issues	2	0	2		MATH 104	Applied Mathematics in Health	3	0	3
	ENGL 105	Writings Skills	3	0	3		INSY 108	Information Technology for Health sciences	2	0	2
	LITE 151/ GCAS 107	Introduction to Literary Appreciation/ Music Appreciation	2	0	2			Vocational Skills	1	0	1
		Total	19	3	22			Total	20	2	22
2nd	PHEH 263	Conservancy and Drainage Systems	2	0	2		PHEH 229	Public Health Principles of Building and Construction	2	0	2
Znu	PHEH 224	Urbanization, Planning and Land Survey	2	0	2		GEOG 255	Principles of Geographic Information Systems	2	0	2
	PHEH 250	Water Quality Control	3	0	3		INSY 136	Microcomputer Applications	3	0	3
	PHEH 160	Biology of Food Animals	2	0	2		PHHC 190	Health Care Skills	2	1	3
	PHEH 226	Technical Drawing and Building Materials	3	0	3		PHNL 202	Biostatistics in Health Sciences	3	0	3
	NUTR 234	Nutrition	3	0	3		PHNT 330	Public Health Nutrition	2	0	2
	CLSC 251	Principles of Medical Microbiology	3	0	3		RELB 255	Introduction to Christian Ethics	2	0	2
	RELB 220	Life and Teachings of Jesus Christ	2	0	2		EDUC 215	Philosophy of Christian Education	2	0	2
	KISW 114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2	0	2		Total		19		19
		Total	19		19						
	PHEH 340	Food Quality Control	3	0	3		PHEH 330	Meat Inspection and Hygiene	3	0	3
3rd	BIOL 286	General Ecology	3	0	3		PHEH 360	Liquid Waste Management	2	0	2
Ju	PHHC 298	Rural Attachment	3	0	3		PHEH 361	Solid Waste Management	2	0	2
	PHHC 440	Health Education and Promotion	2	0	2		PHEH 400	Occupational Health and Safety	2	0	2
	PHEH 310	Principles of Environmental Toxicology	2	0	2		PHEH 440	Environmental Systems, Planning & Impact Asses.	2	0	2
	PHEH 350/ ZOOL 342	Entomology	2	0	2		PHEH 470	Pollution & Pollution Control	2	0	2
	PHHD 270	Disaster Preparedness, Management and Mitigation	2	0	2		PHHC 495	Research Methods	3	0	3
		Total	17	0	17			Total	16	0	16
4.1	PHHC 460	Management of Health Services	3	0	3		PHEH 487	Professional Practices	3	0	3
4th	PHEP 424	Communicable Disease Prevention & Control	3	0	3			Total	3	0	3
	PHEP 426	Non-communicable Disease Prevention & Control	2	0	2						
	PHHC 461	Project Planning and Evaluation	2	0	2						
	PHHC 430	Port Health	2	0	2						
	PHHC 470	Public Health Law	2	0	2						-
	PHHC 497	Research Project	2	0	2						-
		Total	16	0	16						

# SCHOOL OF HEALTH SCIENCES

# **Course Descriptions**

#### PHEH 110 Introduction to Environmental 2 Credits Health

The course is an overview of the major areas of environmental health. It includes the study of ecology, population concerns, environmental factors in causing disease, pollution and disposal of hazardous wastes. Management of the interaction between humans and the environment is discussed, with emphasis on environmental effects on human health and well-being. Three lecture hours per week and planned field trips.

#### PHEH 160 Biology of Food Animals

#### 2 Credits

The purpose of the course is to provide students with a basic knowledge of animal life as well as the anatomy and physiology of domestic food animals. Emphasis is placed on the basic science of domestic food animals. Topics covered include the importance of domestic food animals, the comparative anatomy and physiology of various animal systems from the cell level up to the organism level. Two lecture hours and one laboratory work per week. Prerequisites: BIOL 111 and BIOL 112.

#### PHHC 190 Health Care Skills 3 Credits

The purpose of this course is to help students acquire general health care skills in essentials of first aid, principles of pharmacology and to develop professional knowledge and skills on simple health care procedures eg. Theoretical concepts regarding cardiopulmonary resuscitation, bandaging, immobilization of fractures, slings, arresting hemorrhages, triage, management of burns, interpretation of drug prescription, administration of medications, immunizations, taking and recording vital signs and skills of lifting and transferring patients. The course will be done upon completion of 2nd year, 1st semester. A minimum of 2 hours for theory and 1 hour for practicals.

#### PHEH 226 Technical Drawing and Building 2 Credits Materials

The purpose of this course is for students to acquire knowledge and skills using equipment and materials used in technical drawing, apply skills in free hand sketches and scaled drawings, draw to scale various engineering drawings and. The course will also involve knowledge on building materials and their properties, describe the methods of manufacture and treatment of building materials, describe the standards used in determining quality of building materials. Two lecture hours per week and one hour laboratory per week. Prerequisite: MATH, 104, PHEH 110, PHHC 140, and PHH120.

#### PHEH 226 Public Health Principles of 2 Credits Building and Construction

The purpose of the course is for students to acquire knowledge and skills in the use of public health principles in building and construction. The course provides information on public health regulations that apply to construction of houses and buildings in order to ensure their safety and standards as set by the building codes and the Kenya Bureau of Standards. Describe the development of housing in Kenya. It further helps students acquire knowledge and skills in building construction and technology so as to ensure health and safety of the occupants, analyze the health and safety requirements, in buildings. Explain process of building construction from preparation of bill of quantities, the public health periodic building inspection carried out. Two lecture hours and 1 hour of laboratory per week. Prerequisite: PHEH 226, MATH 104, PHEH 110, PHHC 140 and PHHC 120.

#### PHEH 250 Water Quality Control

**3 Credits** 

The course introduces the concepts used in water sanitation, treatment, pollution and quality control issues. It addresses topics in the hydrological cycle, chemistry and characteristics of water, water pollution and control, water-borne diseases, water supply, water delivery systems, water sampling for quality analysis, The Water Act of Kenya and its role in water resource management. Two lecture hours, 1 hour laboratory and planned field trips. Prerequisite: CHEM 111; CHEM 113; PHEH 110, PHHC 140, ZOOL 325 OR CLSC 253 and BIOL 245 OR CLSC 251.

#### PHEH 263 Conservancy and Drainage 2 Credits Systems

The purpose of this course is to enable students to describe the various types and applications of conservancy systems. Describe the health hazards related to poor excreta disposal, and how the waste can be recycled, participate in the design and construction of a conservancy system and explain the laws related to conservancy. The course will also cover drainage system designs, drainage materials, sanitary fittings and appurtenances. Two lecture hours per week and 1 hour laboratory and planned field trips. Prerequisites: BIOL 245 or CLSC 251, BIOL 286, CLSC 253 OR ZOOL 325, PHHC 140, BIOL 286, CHEM 111, CHEM 113, PHEH 110, PHEH 226, PHEH 229.

#### PHEH 310 Principles of Environmental 2 Credits Toxicology

This purpose of this course is to introduce students to the principles of toxicology, environmental toxins and their effects on the human body. The emphasis is on principles and applications of toxicology and the toxic responses of organ systems. Examples will be chosen from toxic agents of importance in the workplace and community. Three lecture hours per week and planned field trips. Prerequisites: CHEM 111, CHEM 113, PHEH 110, PHHC 140, PHEH 250, PHEH 360 and PHEH 361.

#### PHEH 330 Meat Inspection and Hygiene 3 Credits

The purpose of the course is to enable students acquire fundamental knowledge and skills that are essential to ensuring meat hygiene and safety. This includes; features of the abattoir, disease detection, stunning methods, post-mortem and ante mortem inspection procedures, judgment and disposal of condemned meat products. The course also discusses collection and sampling methods, packaging, labeling, storage and transportation, and the chain of custody. Two lecture hours and 1 hour laboratory per week. Prerequisites: PHEH 160; CLSC 251 OR BIOL 245, CLSC 253 OR ZOOL 325, PHEH 226 and PHEH 229.

#### PHEH 340 Food Quality Control

The purpose of the course is to enable the students to develop competencies and skills in food hygiene for ensuring safe supply of food for human consumption. The students will gain

**3 Credits** 

practical experience through involvement in the inspection process of various foods, food processing premises and food outlets. The course discusses the composition of foods and levels of quality, food preservation, additives, analytical methods for food safety assessment, food-borne infections and intoxication, hazard control, food standards and quality control. Two lecture hours, 1 hour laboratory and planned field trips. Prerequisites: CHEM 111, CHEM 113, PHHC 140, PHEH 110, NUTR 234, CLSC 251 OR BIOL 245 and CLSC 253 OR ZOOL 325.

#### PHEH 350 Vectors and Rodent Control 2 Credits

This course covers the morphology, taxonomy, mechanisms of disease transmission, and impact of vectors on humans, animals, and shows how to identify and control the vectors of public health importance. Topics covered include: introduction to biology of insects and rodents, rodents and insects prevalent in Kenya, disease transmission vectors and pesticides. Three lecture hours and planned field trips apply. Prerequisites: BIOL 111, BIOL 112, CLSC 251 OR BIOL 245, CLSC 253 OR ZOOL 325 and BIOL 286.

#### PHEH 360 Liquid Waste Management

2 Credits

This course aims at providing students with knowledge and skills that are essential for safe liquid waste management. Topics covered include the history and legislation of liquid waste management, sources, types and properties of liquid waste. It also includes conventional and non-conventional methods of wastewater treatment and wastewater analysis methods before disposal to the environment. Three lecture hours and planned field trips. Prerequisites: PHEH 110, PHHC 140, BIOL 245 or CLSC 251, CHEM 111, CHEM 113, CLSC 253 OR ZOOL 325, PHEH 250.

#### PHEH 361 Solid Waste Management

2 Credits

This course aims at providing students with knowledge and skills that are essential for safe solid waste management. Topics covered include the history and legislation of solid waste management, sources, types, and properties of solid wastes, classification of hazardous solid wastes, treatment and disposal of sewage sludge, economic considerations in solid waste management. Three lecture hours and planned field trips. Prerequisites: PHEH 110, PHHC 140, BIOL 245 or CLSC 251, CHEM 111, CHEM 113, CLSC 253 OR ZOOL 325.

#### PHEH 400 Occupational Health and Safety 2 Credits

The purpose of the course is to provide students with knowledge in environmental and work hazards, their interactions with human health, and relevance to the effective maintenance and promotion of public health. It covers principles of occupational health, hazards, and accidents. Also, it includes risk assessment, human susceptibility and interactions with occupational and environmental exposures, housing and human health, accident control, and safety management policies and legislation. Three lecture hours per week and planned field trips. Prerequisites: PHEH 110, PHHC 140, PHEH 229, PHEH 224, PHEH 263.

#### PHEH 430 Port Health

#### 2 Credits

This course is designed to equip students with knowledge and skills on the public health services carried out at the ports of entry. It deals mainly monitoring and inspection of people and items being transported across international borders in order to prevent the introduction, transmission and spread of communicable diseases. It also includes the topics on how to report and manage epidemic of infectious diseases when they occur according to international health regulations. Three lecture hours and a planned field trip apply. Prerequisites: PHHC 140, PHEH 110, PHEP 100, PHEH 340, PHEH 350, PHEH 250, PHEH 263, PHEH 360, PHEH 361, PHEH 229 and PHEP 424.

#### PHEH 440 Environmental Systems, Planning 2 Credits and Impact Assessment

The purpose of this course is to enable students to acquire knowledge of the major environmental challenges facing planners, and the tools used to address these challenges. Emphasis is placed on current issues of environmental development and anthropogenic activities that affect the environment negatively. The course introduces environmental impact prediction, state legislation and policies on the environment, the Environmental Impact Assessment process, Environmental Audits, Health Impact Assessment, and cumulative impacts. Two lecture hours and 1 hour field activity per week. Prerequisites: PHEH 110, PHEP 100, PHEH 310, PHEH 224, PHEP 426, and BIOL 286,

#### PHEH 470 Pollution and Pollution Control 2 Credits

This course explores the potential for pollution in the natural resources – land, air and water. It focuses on monitoring, preventing and controlling hazardous waste pollution. It surveys the sources of pollution and their control – indoor and outdoor air pollution, underground and surface water pollution, and land pollution from agriculture and industrial sources. It includes pollution related diseases, methods for measuring pollution, and legislative control. Three lecture hours per week and planned field trips apply. Prerequisites: PHEH 110; PHHC 140, CHEM 11, CHEM 113, PHEH 310, PHEH 250, PHEH 224, PHEH 360, PHEH 361, PHEH 263 and BIOL 286,

#### PHEH 487 Professional Practice

This course is aimed at providing opportunities for students to acquire practical skills through working in a public health setting. The students are enabled to develop professional responsibility preparing them for public health practice. This practical attachment is required upon completion of most of the specialization coursework. The student will develop, implement, or evaluate a public health program or project under supervision. Upon completion, the student will present the public health project in oral and written form. The student will work a minimum of 40 clock hours for each credit. This translates to 120 hours. This course should be taken in the very last semester of study after completion of all courses.

**3 Credits** 

#### PHEP 100 Principles of Epidemiology 2 Credits

This course aims at enabling students to develop knowledge and skills in the basic concepts, principles and practice of epidemiology. It is an introductory course to the basic principles and methods of epidemiology. The course explores the study of distribution and determinants of health and illness in population groups. Vital data is used in calculating and interpreting rates, and in the investigation of epidemics. Three lecture hours each week.

# SCHOOL OF HEALTH SCIENCES

#### PHEP 424 Communicable Disease Prevention and Control

2 Credits

The aim of the course is to enable students to develop knowledge and skills in epidemiology, prevention and control of the communicable diseases. The course uses the dynamics of epidemiology and prevention to control common communicable diseases. Topics include the definition and study of communicable diseases, the natural history of various diseases, prevention and control of communicable diseases, and the role of public health organizations in communicable diseases prevention and control. Three lecture hours and 1 hour field practical per week. Prerequisites: PHHC 140, PHEP 100, PHHC 120, PHHC 298 or PHHC 290, CLSC 251 OR BIOL 245, CLSC 253 OR ZOOL 325, and PHEH 350.

#### PHEP 426 Non-Communicable Disease 2 Credits Prevention and Control

The aim of the course is to enable students gain knowledge and skills in the prevention and control of non-communicable diseases. Topics include the definition and study of noncommunicable diseases, the natural history of various diseases, prevention and control of Non-communicable diseases, and the role of public health organizations in Non-communicable disease prevention and control. Two lecture hours and 1 hour field practical per week. Prerequisites: PHHC 140, PHEP 100, PHHC 120, CHEM 111, CHEM 113, PHHC 298 or PHHC 290, NUTR 234, PHNT 330, PHEH 330 and PHEH 340.

#### PHHC 120 Philosophy of Health

#### 1 Credit

This is a course that provides background information on the Adventist/religious concepts and approaches towards health and the prevention of illness, lifestyle diseases and health care services. It also considers the philosophy of worldwide medical missions, and the restoration to God's image in physical, mental and spiritual realms. The course integrates principles in faith, learning, and healing. Two lecture hours per week.

#### PHHC 140 Introduction to Public Health 2 Credits

This is an introduction to the historical development of the field of public health and to current trends in health care. Political, social and economic contributions to the health of populations are also discussed. Three lecture hours per week.

#### PHHC 290 Community Health and Diagnosis 3 Credits

The aim of this course is to enable students gain knowledge and skills that are essential to effectively execute community health activities and assess the health of communities. The course offers an overview on the principles of epidemiology, nutrition, environmental health aspects, and conservancy systems. The course also develops an understanding of the components of community diagnosis; introduces community entry techniques and sources of community health data that may be used in community diagnosis and reports. The roles of community health providers are also discussed. Two lecture hours and 1 hour field practical per week. The students intending to register for the course must fulfill the requirements of their respective departments and seek approval from their advisors prior to being accepted into the course. Note: THIS IS FOR NON- PUBLIC HEALTH MAJORS. (Nutrition, MLS and Development Studies) and any other non-public health majors.

#### PHHC 298 Rural Attachment

#### **3 Credits**

This course is aimed at providing opportunities for students to acquire practical skills through working in a rural public health setting. The students are enabled to develop professional responsibility preparing them for public health practice. Theoretical concepts regarding health environments, health of special populations, effective school health programs, and primary health care activities are covered. Health care systems in Kenya, role of public health officers in the health fraternity and epidemiological research methods provided in class must be utilized during the attachment period. This rural practical experience is required upon completion of second year; a minimum of 120 clock hours of hands on experience will be required which translates to three to four (3 to 4) weeks. Upon completion, the student will present the experience in oral and written form. Prerequisites: PHEH 100, PHEH 110, PHEH 220, PHHC 140 and PHHC 290.

#### PHHC 440 Health Education and Promotion 2 Credits

This course aims at enabling students to develop knowledge on the basic principles of health education and promotion in health care. It equips students with necessary skills to plan, implement and evaluate a variety of health promotion programs for respective target populations. It explains the importance of health behavior, health education and promotion programs within the context of current health problems. Emphasis is on theories and models of behavior change. Three lecture and planned field activities. Prerequisites: PHHC 120, PHHC 140, PHEP 100, PHEH 110, PHHC 298 or PHHC 290, PHEP 424, PHEP 426.

#### PHHC 460 Management of Health Services 3 Credits

This course prepares students for managerial positions within the public health care system. It analyses the functions and processes of planning in health management, and reviews health personnel services. Financial management in health systems and health care policies are also discussed. Three lecture hours and one hour field activity per week.

#### PHHC 461 Project Planning and Evaluation 2 Credits

The purpose of this course is to enable students develop skills in planning, implementing, monitoring and evaluating development projects. Topics covered will include: National goals, national planning, problems and needs analysis, project identification, formation and implementation, parameters and techniques used in assessing project costs and benefits, project monitoring and evaluation methodologies and project proposal writing. Three lecture hours and planned field trips apply. A student must be in his/her senior year of study to be enrolled in this course.

#### PHHC 470 Public Health Law

2 Credits

The purpose of the course is to enable students to develop understanding of the legislation that is used in public health practice. This includes historical case studies, types of public health law, processes of law enactment and enforcement, interpretation of public health law, laws of torts, international law and health. Three lecture hours and planned field trips. Should be taken during the last semester of classwork. Prerequisites: PHEH 110, PHHC 140, PHEH 250, PHEH 229,PHEH 224,PHEH 330, PHEH 340, PHEH 360, PHEH 361, PHEH 310, PHEH 400, PHEH 430, PHEH 470, PHEH 440.

#### PHHC 494 Research Seminar I

1 Credit

This course involves the development of the data collection instrument/tool, piloting, data collection, coding and cleaning by Statistical Package for Social Sciences, and developing skills in data analysis through the use of relational databases and spreadsheets, and the display of information in forms. One lecture hour and 1 hour laboratory work per week. Prerequisite: PHHC 495.

#### PHHC 495 Research Methods

**3 Credits** 

This course aims at enabling students to gain knowledge and skills in research methodology. It introduces the student to the basic concepts of research methodology in the health sciences, including problem identification, proposal development, hypothesis testing, literature review process and theoretical frameworks. It requires the writing of a review paper and a research proposal. Three lecture hours and 1 hour laboratory work per week. The students submit a written proposal and give an oral presentation of the developed research proposal at the end of the course work. Prerequisites: PHNL 202; INSY 136, ENGL 106, ENGL 105, OFTE 120, PHHC 298 and PHHC 440.

#### PHHC 497 Research Seminar II

#### 2 Credits

This course requires completion of the research paper developed and implemented in research methods and research seminar I. The student writes and submits a project report and gives an oral presentation of the research project findings/ results, discussions, recommendations and conclusions at the end of the course. One lecture hour and 2 hours laboratory work per week. Prerequisites: PHHC 494.

#### PHHD 270 Disaster Preparedness, 2 Credits Management and Mitigation

This course is aimed to equip the students with knowledge and skill of handling emergencies and disasters due to natural or man-made events. Topics to be covered include the nature of emergencies and disaster, pre-disaster activities, emergency response, recovery and sustainable development, shelter and emergency settlement water supply, sanitation, food safety, vector and pest control, control of communicable diseases and prevention of epidemics, mutual service and handling of death, health promotion and community service. Three lecture hours and planned field trips apply. Should be taken during the last semester of classwork. Prerequisites: PHHC 140, PHEH 110, PHEH 250, PHEH 263, PHEH 350, PHEH 360, PHEH 361, BIOL 286, PHNT 330, PHEP 424, PHHC 461 & PHHC 440.

#### PHNL 202 Biostatistics in Health Sciences 3 Credits

The course introduces students to biostatistical methods and applications and covers descriptive statistics, probability theories, and a wide variety of inferential statistical techniques that can be used to make practical conclusions about empirical data. Students will also be learning to use statistical software packages-Statistical Package for Social Sciences (SPSS), EPI-Info and Microsoft Excel. Three lecture hours and 1 hour laboratory work per week. Prerequisites: PHHC 140, INSY 108; PHEP 100, INSY 136, MATH 104.

#### PHNT 330 Public Health Nutrition

This course covers nutritional aspects that have public health implications. It includes, but not limited to, an overview of public health nutrition; assessment of nutritional status of individuals and populations; public health aspects of under nutrition and over nutrition; public health strategies used for intervention at the population level; iron, iodine, and vitamin A deficiencies; adverse outcome of pregnancy; the role of folate and related B vitamins; Diabetes; mellitus, cancer and diet. Three lecture hours and planned field trips apply. Prerequisites: NUTR 234, CHEM 111, CHEM 113, BIOL 111, and BIOL 112.

2 Credits



# School of Nursing



# **School of Nursing**

Korir, I. MScN. (Acting Head of Department) Adero, D., MScN. Akuru, E., MScN. Deya, D., MScN. Giftson, S., MScN. Kamau, S., MScN. Magubu N., MScN. Mwanza, J., MScN. Njeru, M., MScN. Nyakundi, N., BScN. Ondiba, L., MScN. Owino, J, PhD. Poornima, R., MScN., PhD.

#### **Clinical Instructors**

Joshua, G., BScN. Mocha, E., BScN. Nyangena, E. BScN. Odhiambo, R., BScN. Otewa, M., BScN.

Email: nursingdept@ueab.ac.ke

#### **PHILOSOPHY**

The philosophy and conceptual framework of the bachelor's degree in Nursing at the University of Eastern Africa, Baraton are in accordance with the basic beliefs of the Seventhday Adventist Church concerning education and health. The concepts identified in this philosophy are God, Man, Society, Health, Nursing, Christian Witnessing, teaching/Learning and Professional Nursing roles. God, the Supreme Being, created man to be a reflection of His being, including His character. Health, or high-level wellness, is "wholeness" as an outcome of following the physical, mental, social and spiritual laws of the universe. Nursing is an applied science which regardless of social or ethnic backgrounds assists man in his attempt to obtain and maintain health at an optimal level.

As nurse educators, we value the importance of a nurse being proficient in knowledge, attitudes and skills.

Students are considered as responsible adult learners, with knowledge based on previous life experiences. They are viewed as equal partners in the learning process and, as such will be encouraged to take responsibility for their own personal and professional development.

By virtue of the theory and practical experience in education and research available to students, they are prepared to instruct others on nursing knowledge, attitudes and skills which they have developed. They graduate as both health team members and leaders within the health care systems of their regions.

#### MISSION

The mission of the Nursing Department is to enable students to acquire professional nursing and leadership skills in order to

provide wholistic nursing care to alleviate human suffering and to give Christian witness in diverse health care settings.

#### VISION

To provide quality professional education, be leaders in nursing education and research in Kenya and Eastern Africa, and develop a firm foundation for establishment of graduate nursing education programs.

#### **EXPECTED LEARNING OUTCOMES**

At the end of the Nursing program, the student should be able to:

- 1. Define nursing and health care;
- 2. Give a historical background of nursing as a profession;
- Discuss nursing and health care and the value of human life from the physical, psychological, social, spiritual and philosophical dimensions;
- Relate human anatomy, physiology and chemistry to nursing theory and practice;
- Explain determinants of drug administration and right dosing in treating patients and their role on safety nursing care;
- 6. Conduct research in Nursing and health care;
- 7. Discuss theories and practice of nursing care in maternal and child health.
- 8. Identify evidence-based nursing care;
- Provide community health services including assessing children's nutrition, school health care, community assessment, assessing community life style, and immunizing community children;
- 10. Demonstrate the utilization of relevant technology in preparation for appropriate delivery of health care.
- Demonstrate caring for traumatic patients due to pregnancy, family abuse, incest, family violence and rape; accidents etc.
- 12. Practice professional ethics for nurses and physicians;
- 13. Design academic programs for health workers;
- 14. Demonstrate skills in planning and instruction in nursing practice
- 15. Pursue graduate programs to improve their skills in nursing.

#### **PROGRAMS OFFERED BY THE DEPARTMENT**

- 1. Master of Science in Nursing (MScN) Community Health Nursing Option.
- 2. Bachelor of Science in Nursing (BScN)

#### **CAREER OPPORTUNITIES FOR BScN GRADUATES**

- 1. Clinical Nurse Practitioner
  - a. Midwifery
  - b. Community Health
  - c. Medical Surgical Nursing
  - d. Pediatric Nursing
  - e. Anaesthetics Nursing
  - f. Mental Health and Psychiatric Nursing etc.

# SCHOOL OF NURSING

- 2. Nurse Educator
- 3. Nurse Researcher
- 4. Nurse Manager

#### **ADMISSION REQUIREMENTS**

#### **DIRECT ENTRY**

The minimum requirements for admission to the University of Eastern Africa, Baraton must be met.

- A mean grade of C+ (plus) or better in KCSE, division II or better, or its equivalent, is required for all pre-service students.
- A grade of C+ or credit in cluster subjects; Mathematics/ Physics, Chemistry, (or Physical science), Biology, and English.
- 3. Foreign students from non-English speaking countries must have their High School certificates/diplomas translated into English with accompanying statement showing how their system equates to the Kenyan System. Foreign trained nurses must assume responsibility to have their certificates or diplomas translated to English. It is strongly advised that they should apply for registration with the Nursing Council of Kenya before admission to the university
- Foreign '0' level certificates are sent to the Kenya National Examination Council (KNEC) for equation to the Kenyan system. This is done before admission.
- For Registered Nurses, a mean grade of C plain, or Division II, diploma certificate and a current practice license from the Nursing council of Kenya, and 2 years' experience are required. Lack of 2 years' experience will warrant a full year internship after graduation.
- For enrolled nurses, a mean grade of C+ or better in KCSE or Division II in KCE, including a C+ or Credit pass in the following: Biology, Chemistry, Mathematics/Physics and English; OR according to provisions that may be made by the Nursing Council of Kenya.

Students who are admitted to UEAB with the necessary admission requirements for a BScN degree program are considered as pre-clinical nursing students. Upon attainment of required grades in nursing cognate subjects, students proceed to (clinical) professional nursing courses.

#### INTERDEPARTMENTAL TRANSFER

A student wishing to change to Nursing should refer to the section "Interdepartmental Transfer" in the Bulletin. Transfer to Nursing must be completed before beginning nursing. The student must have a '0' level mean grade of C+ and C+ in each of the cluster subjects.

#### **PROGRESSION FROM PRE-CLINICAL**

- 1. The Department of Nursing looks for evidence of personal integrity, intellectual vigor, good health, self-discipline, and self-direction, when registering students for clinical nursing courses.
- 2. Pre-clinical course requirements include:
  - a. A grade of C+ (plus) or better in each cognate.
  - b. Completion of ALL cognates with a minimum of 38 credits. No appeals will be considered.

c. Nursing intakes are in April and August and the Student is indexed within 60 days of admission at the University by the Nursing Council of Kenya at that time.

#### **OFF-CAMPUS COURSES**

All clinical experiences of nursing courses are offered off campus, and there may be some occasions when the theory will also be offered off campus. Where accommodation is required for off-campus courses, the student is responsible for locating his/her own accommodation. The faculty of the Department may assist the students in locating such accommodation. While off-campus, students are expected to conduct themselves according to UEAB main campus policies.

#### **PROGRESSION FOR ALL NURSING STUDENTS**

- All students must earn a grade of C+ in cognates and C+ in clinical nursing courses before progressing to the next course. For most nursing courses there is a practicum and theory component. A grade for these courses consists of theory and practicum marks. Theory comprises 60% and Practicum 40%. Failure to obtain an equivalent of C+ in either of the two parts (i.e. theory and practicum) will result in repeating the whole course and the grade that is less than a C+ will be recorded as the grade earned at that time.
- No more than three (3) nursing courses (cognates and core) should to be repeated. A course may be repeated twice only. A student who fails to meet this requirement will be required to discontinue from the Nursing program.
- 3. Marriages and pregnancies are discouraged while students are registered for clinical nursing courses.
- 4. Nursing courses taken more than 4 years previously will not be accepted for continuing in the program. Students must ensure continuity of study.

#### UPGRADING STUDENTS TO BSCN FROM REGISTERED NURSE (RN), REGISTERED NURSE MIDWIFE (RN/M), REGISTERED COMMUNITY HEALTH NURSE (RCHN) CREDIT TRANSFERS

An upgrading student may transfer credits earned in another Nursing Diploma. To transfer credits, one must apply by completing credit transfer forms and must have passed with a grade of B or higher.

For RN's with exceptional levels of experience and continuing education certificates (determined through submission of detailed professional biography and interview by Nursing faculty), Nursing course challenge examinations may be possible according to the University guidelines in the UEAB Bulletin.

Nurses with specialization in ICU, Psychiatry, and Pediatrics etc. may be exempted from taking relevant courses based on a grade of B. A challenge exam may be taken for a grade of B.

#### **REQUIREMENTS FOR CREDIT TRANSFER**

 Students on the Generic program who want to transfer credits from other Universities must submit official transcripts from their previous institutions. Course descriptions of syllabi will



be required to determine the details of a course in order to determine the content covered. See Bulletin on the section of credit transfer for more information.

- 2. An updated C.V. (for upgraders only).
- 3. An official transcript showing marks and grades that were attained in the professional education.
- 4. Applicants who have been trained in other health related areas other than Nursing are not eligible to request for transfer of credits in the School of Nursing. They must take all the Nursing courses.

#### **GRADUATION REQUIREMENTS**

A candidate for the Generic Bachelor of Science Nursing Degree (direct entry students) should complete a minimum of 151 credits of which:

- A total of 38 credits in Cognate courses with an overall GPA of at least 2.33. In sequence courses, a grade of C+ or above is required for each course.
- 2. A total of 91 credits in Core courses with a minimum grade of C+ (G.P.A of 2.33) in each Nursing Course is required.
- 3. A total of 22 credits of General Education Requirements (GR) courses should be covered.

Students on the RN-BScN track should complete a minimum of 132 credits of which:

- 1. 78 credits are of Nursing Core courses,
- 2. 34 credits of Cognates
- 3. 20 credits of General Education Requirements.

Students on the RN/RM track should complete a minimum of 125 credits of which:

- 1. 71 credits of Nursing Core courses,
- 2. 34 credits of Cognates,
- 3. 20 credits of General Education Requirements

Students on the RCHN track complete a minimum of 120 credits of which:

- 1. 66 credits of Nursing Core courses,
- 2. 34 credits of Cognates and
- 3. 20 credits of General Education Requirements.

# **Course Listing**

# **BACHELOR OF SCIENCE IN NURSING**

#### **SUMMARY**

General Education Requirements	22
Core Requirements	91
Cognates	38
Total	151 Credits

Nursing students are exempted from the following courses: Please note that direct entry International students, except those from Tanzania, are required to take KISW 114: Language use in Kiswahili as a general requirement.

LITE 151	Introduction to Literary Appreciation	2
KISW 114	Language Use in Kiswahili	2
MGMT 103	Basic Management and Entrepreneurial Skills	2
AGRI 105	Principles of Agricultural Technology	2
ENVI 227	Environment and Society	2
BIOL 105	Human Biology	2
HLED 100	Health Principles	1
PHYS 100	Concepts of Physical Sciences	2

Nursing students take the following General Education Requirements as cognates

PSYC 101	Introduction to Psychology	2
SOCI 121	Sociology	2

GENERAL	EDUCATION REQUIREMENTS 22 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

#### Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1

## SCHOOL OF NURSING

ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE CO	JRSES 91 Credit	ts
NRSG 212	Health Assessment	3
NRSG 215	Foundations of Nursing	6
NRSG 220	Pharmacology in Nursing I	3
NRSG 221	Pharmacology in Nursing II	3
NRSG 228	Medical Surgical Nursing I	6
NRSG 238	Childbearing Family I	5
NRSG 240	Human Pathology	2
NRSG 244	Medical-Surgical Nursing II	2
NRSG 248	Community Health Nursing I	5
NRSG 318	Mental Health and Psychiatry Nursing	5
NRSG 323	Pathophysiology	3
NRSG 328	Pediatrics and Child Health Nursing	5
NRSG 338	Childbearing Family II	5
NRSG 345	Out-patient/Casualty Nursing	5
NRSG 348	Critical Care Nursing	5
NRSG 400	Education Concepts and Strategies	5
NRSG 418	Childbearing Family III	4
NRSG 420	Nursing Management	6
NRSG 423	Nursing Research I	3
NRSG 431	Nursing Research Project	2
NRSG 438	Community Health Nursing Leadership	5
PHNL 202	Biostatistics in Public Health	3

COGNATES 38 Credit		ts
BIOL 111	Anatomy and Physiology I	4
BIOL 112	Anatomy and Physiology II	4
BIOL 245	Medical Microbiology	4
CHEM 115	Basic Medical Biochemistry I	4
CHEM 116	Basic Medical Biochemistry II	3
CLSC 141	Principles of Hematology and Transfusion Medicine	3
CLSC 171	Basic Clinical Immunology	3
CLSC 220	Principles of Clinical Chemistry	3
CLSC 253	Basic Clinical Parasitology	3
NUTR 234	Nutrition	3
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2

For Upgrading Nurses on the RN to BScN completion track, the requirements will be as follows depending on their type of Diploma.

## **RN GENERAL TO BScN**

#### SUMMARY

General Education Requirements	20
Core Requirements	78
Cognates	34
Total	132 Credits

Nursing students upgrading from RN General to BScN are exempted from the following General Education Requirements

ENVI 227	Environment and society	2
	Vocational skills	1
PEAC 107	Physical and Recreational Activities	1
OFTE 120	Keyboarding	0
LITE 151	Introduction to Literary appreciation	2
AGRI 105	Principles of Agricultural Technology	2
KISW 114	Language use in Kiswahili	2
MGMT 103	Basic Management and Entrepreneurial skills	2
BIOL 105	Human Biology	2
HLED 110	Health Principles	1
PHYS 100	Concepts of Physical Sciences	2

Nursing students upgrading from RN General to BScN are also exempted from the following cognates

PSYC 101	Introduction to Psychology	2
SOCI 121	Sociology	2

RN (general) applicants upgrading to a BScN will be exempted from:

NRSG 215	Nursing Foundation	6
NRSG 228	Medical-Surgical Nursing, I	6

#### GENERAL EDUCATION REQUIREMENTS 20 Credits

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2



COGNATE	S 34 Credi	ts
BIOL 111	Anatomy and Physiology I	4
BIOL 112	Anatomy and Physiology II	4
BIOL 245	Medical Microbiology	4
CHEM 115	Basic Medical Biochemistry I	4
CHEM 116	Basic Medical Biochemistry II	3
CLSC 141	Principles of Hematology and Transfusion Medicine	3
CLSC 171	Basic Clinical Immunology	3
CLSC 220	Principles of Clinical Chemistry	3
CLSC 253	Basic Clinical Parasitology	3
NUTR 234	Nutrition	3

## **RN WITH RM SPECIALIZATION TO BScN**

#### SUMMARY

20
71
34
125 Credits

Nursing students upgrading from RN with RM Specialization to BScN are exempted from the following General Education Requirements

ENVI 227	Environment and society	2
	Vocational skills	
PEAC 107	Physical and Recreational Activities	1
OFTE 120	Introduction to Keyboarding	0
LITE 151	Introduction to Literary appreciation	2
AGRI 105	Principles of Agricultural Technology	2
KISW 114	Language use in Kiswahili	2
MGMT 103	Basic Management and Entrepreneurial skills	2
BIOL 105	Human Biology	2
HLED 110	Health Principles	1
PHYS 100	Concepts of Physical Sciences	2

Nursing students upgrading from RN with RM Specialization to BScN are also exempted from the following cognates

PSYC 101	Introduction to Psychology	2
SOCI 121	Sociology	2

Nursing students upgrading from RN/RM to BScN will be exempted from the following core requirements:

NRSG 238	Childbearing Family II	5
NRSG 215	Nursing Foundations	6
NRSG228	Medical-Surgical Nursing I	6

They will be required to take NRSG 334 Reproductive Health Nursing I instead of NRSG 338 Childbearing Family II, and NRSG 412 Reproductive Health Nursing II instead of NRSG 418 Childbearing Family III

GENERAL	EDUCATION REQUIREMENTS 20 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## SCHOOL OF NURSING



CORE COL	JRSES 71 Credi	ts
NRSG 212	Health Assessment	3
NRSG 220	Pharmacology in Nursing I	3
NRSG 221	Pharmacology in Nursing II	3
PHNL 202	Biostatistics in Public Health	3
NRSG 240	Human Pathology	2
NRSG 244	Medical Surgical Nursing II	2
NRSG 248	Community Health Nursing I	5
NRSG 318	Mental Health and Psychiatry Nursing	5
NRSG 323	Pathophysiology	3
NRSG 328	Pediatrics and Child Health Nursing	5
NRSG 334	Reproductive Health Nursing I	3
NRSG 345	Out Patient/Casualty Nursing	5
NRSG 348	Critical Care Nursing	5
NRSG 400	Education Concepts and Strategies	5
NRSG 412	Reproductive Health Nursing II	3
NRSG 420	Nursing Management	6
NRSG 423	Nursing Research I	3
NRSG 431	Nursing Research Project	2
NRSG 438	Community Health Nursing Leadership	5

COGNATES 34 Credit		s
BIOL 111	Anatomy and Physiology I	4
BIOL 112	Anatomy and Physiology II	4
BIOL 245	Medical Microbiology	4
CHEM 115	Basic Medical Biochemistry I	4
CHEM 116	Basic Medical Biochemistry II	3
CLSC 141	Principles of Hematology and Transfusion Medicine	3
CLSC 171	Basic Clinical Immunology	3
CLSC 220	Principles of Clinical Chemistry	3
CLSC 253	Basic Clinical Parasitology	3
<b>NUTR 234</b>	Nutrition	3

# **RCHN TO BScN**

#### **SUMMARY**

General Education Requirements	20
Core Courses	66
Cognates	34
Total	120 Credits

Nursing students upgrading from RCHN to BScN are expemted from the following General Education Requirements

ENVI 227	Environment and society	2
	Vocational skills	1
PEAC 107	Physical and Recreational Activities	1
OFTE 120	Introduction to Keyboarding	0
LITE 151	Introduction to Literary appreciation	2
AGRI 105	Principles of Agricultural Technology	2
KISW 114	Language use in Kiswahili	2
MGMT 103	Basic Management and Entrepreneurial skills	2
BIOL 105	Human Biology	2
HLED 110	Health Principles	1
PHYS 100	Concepts of Physical Sciences	2

Nursing students upgrading from RCHM to BScN are also exempted from the following cognates

PSYC 101	Introduction to Psychology	2
SOCI 121	Sociology	2

Nursing students upgrading from RCHNS to BScN will be exempted from the following core requirements:

NRSG 215	Nursing Foundations	6
NRSG 228	Medical-Surgical Nursing I	6
NRSG 238	Childbearing Family I	5
NRSG 248	Community Health Nursing I	5

They will be required to take NRSG 334 Reproductive Health Nursing I instead of NRSG 338: Childbearing Family II, and NRSG 412 Reproductive Health Nursing II instead of NRSG 418 Childbearing Family III

GENERAL	EDUCATION REQUIREMENTS 20 Credit	s
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
MATH 101	Pre-calculus Or	3
MATH 100	Foundations of Mathematics	3
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2



CORE COL	JRSES 66 Credits	S
NRSG 212	Health Assessment	3
NRSG 220	Pharmacology in Nursing I	3
NRSG 221	Pharmacology in Nursing II	
PHNL 202	Biostatistics in Public Health	3
NRSG 240	Human Pathology	2
NRSG244	Medical Surgical Nursing II	2
NRSG 318	Mental Health and Psychiatry Nursing	5
NRSG 323	Pathophysiology	3
NRSG 328	Pediatrics and Child Health Nursing	5
NRSG 334	Reproductive Health Nursing I	3
NRSG 345	Out Patient /Casualty Nursing	5
NRSG 348	Critical Care Nursing	5
NRSG 400	Education Concepts and Strategies	5
NRSG 412	Reproductive Health Nursing II	3
NRSG 420	Nursing Management	6
NRSG 423	Nursing Research I	3
NRSG 431	Nursing Research Project	2
NRSG 438	Community Health Nursing Leadership	5

COGNATES 34 Credit		ts
BIOL 111	Anatomy and Physiology I	4
BIOL 112	Anatomy and Physiology II	4
BIOL 245	Medical Microbiology	4
CHEM 115	Basic Medical Biochemistry I	4
CHEM 116	Basic Medical Biochemistry II	3
CLSC 141	Principles of Hematology and Transfusion Medicine	3
CLSC 171	Basic Clinical Immunology	3
CLSC 220	Principles of Clinical Chemistry	3
CLSC 253	Basic Clinical Parasitology	3
NUTR 234	Nutrition	3

# **SCHOOL OF NURSING**



# **BACHELOR OF SCIENCE IN NURSING**

# Four-Year Course Plan

YEAR		FIRST TRIMESTE	R	SEC	OND TRIMESTER		TH	IRD TRIMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
1st	BIOL 111	Anatomy and Physiology I	4	BIOL 112	Anatomy and Physiology II	4	CLSC 141	Principles of Hematology & Blood Transfusion	3
	CHEM 115	Medical Biochemistry I	3	CHEM 116	Medical Biochemistry II	3	CLSC 220	Principles of Clinical Chemistry	3
	PSYC 101	Psychology	2	CLSC 171	Basic Clinical Immunology	3	BIOL 245	Basic Medical Microbiology	4
	SOCI 121	Introd to Sociology	2	INSY 108	Information Technology for Health Professionals	2	CLSC 253	Basic Clinical Parasitology	3
	RELH 155	Adventist Heritage	2	ENGL 106	Speech Communication	1	NUTR 234	Nutrition	3
	MATH 101	Pre-Calculus	3	<b>RELT 207</b>	Christian Beliefs	3			
		Total	15		Total	16		Total	16
2nd	NRSG 215	Nursing Foundations	5	NRSG 228	Med-Surgical Nursing I	6	NRSG 221	Pharmacology II	3
	NRSG 212	Health Assessment	2	NRSG 240	Human Pathology	2	NRSG 238	Childbearing I	2
	NRSG 220	Pharmacology I	3	EDUC 215	Philosophy of Christian Education	2	NRSG 318	Mental Health Nursing	3
	PEAC 107	Physical and Recreational Activities	1		Vocational Skills	1		Total	13
	ENGL 105	Writing Skills	3		Total	11			
	0FTE 120	Keyboarding	0						
		Total	16						
3rd	NRSG 248	Community Health Nursing I	5	NRSG 338	Childbearing Family II	5	NRSG 418	Child Bearing Family II	14
Ju	NRSG 244	Med- Surgical Nursing	2	NRSG 423	Nursing Research I	3	NRSG 328	Child Health Nursing	5
	PHDT 220	Biostatistics	3	RELT 255	Introduction to Christian Ethics	2	KISW 114	Language Use In Kiswahili (International Students)	2
	RELB 220	Life and Teachings of Jesus	2		Total	10		Total	11
	NRSG 323	Pathophysiology	3						
		Total	15						
/th	NRSG 345	Opd /Casualty	5	NRSG 420	Nursing Management	6	NRSG 438	Comm. Health Nur.	5
4th	NRSG 348	Critical Care Nursing	5	NRSG 431	Nursing Research	2	NRSG 400	Leader Education Concepts	5
	11K30 340	of the out of the out of the out of			Project				

# **Course Descriptions**

#### HLED 110 Health Principles

#### 1 Credit

This course does not apply towards a Nursing Major. It is offered for non-nursing Majors in the University as a general education requirement. This course provides an introduction to important concepts of health which is composed of physical, mental, social and spiritual-philosophical dimensions. University students are guided to recognize responsibilities and opportunities for improving and protecting their own health as well as that of their community. Students are led to identify unhealthy behavior and measures to correct them. This course is offered during the freshman year and must be taken at that time.

#### NRSG 100 First Aid

1 Credit This course teaches how to manage illness and injuries in the

**3 Credits** 

6 Credits

first few minutes until professional help arrives. This course will include Cardiopulmonary Resuscitation (CPR). This course is specifically designed for those who have a duty to respond to a first aid or cardiac emergency because of job responsibilities or regulatory requirements. Also appropriate for the average citizen who wants to be prepared in the event of a cardiac arrest or serious life threatening injury.

#### NRSG 212 Health Assessment

This course is designed to assist the student to apply the knowledge gained in the Anatomy and Physiology and Chemistry courses. It provides opportunity to master assessment skills in various areas relevant to nursing practice. Three clock hours of lab practice sessions are required each week in addition to the two credits of theory. The course carries 2 hours of theory and 1 hour of practical in campus lab. Prerequisites: All Cognates.

#### NRSG 215 Foundations of Nursing

This course carries 5 hours of theory and 3 hours of practical in the skills lab per week. This course consists of an introduction to the Philosophy and conceptual framework of the Nursing Department of the University of Eastern Africa, Baraton and to the roles and functions of Nursing. It includes history, trends in Nursing, basic skills and their application to the nursing process. Opportunity is provided for the student to carry out skills in skills laboratory. This course is also designed to assist the student to apply the knowledge gained in the Anatomy and Physiology and Chemistry courses. It provides opportunity to master assessment skills in various areas relevant to nursing practice. It introduces the student to the tools of communication, teaching and learning, problem solving and spiritual care. Prerequisites: All Cognates.

#### NRSG 220 Pharmacology in Nursing I

#### **3 Credits**

This course is designed to introduce students to drug therapy in order to provide safe patient care. The learner will be guided to acquire knowledge in drug administration, major families of drugs, special dosing, indications, side effects, interactions, pharmacodynamics, pharmacokinetics and nursing considerations. In addition, necessary information to provide patient and family teaching will be covered. The course carries 2 hours of theory. Prerequisites: All cognates.

#### NRSG 221 Pharmacology in Nursing II

**3 Credits** 

6 Credits

This course is a continuation of Pharmacology I. The learner is expected to learn more on drugs affecting different body systems. Knowledge of pharmacodynamics and pharmacokinetics should be continuously applied in this course as in Pharmacology I. Prerequisite: NRSG 220.

#### NRSG 228 Medical Surgical Nursing I

This course builds upon those concepts and skills learned in NRSG 213. It focuses on nursing interventions that promote optimum well-being and restoration among medical and surgical patients. In addition, principles of operating room techniques and administration of medications are explored. This course provides 6 hours of theory and 3 hours of practice in a general hospital setting. Prerequisites: NRSG 212, NRSG 213, and NRSG 215.

#### NRSG 238 Childbearing Family I

**5** Credits

**5 Credits** 

This course explores roles and functions of the family and parenthood. Emphasis is on reproductive physiology, health assessment and health promotion of expectant mothers during each trimester of pregnancy. Content includes the male and female reproductive systems and the various methods of family planning. Students rotate in maternal child health clinics and family planning clinics. The course provides 2 hours of theory and 3 hours of practicum. Prerequisite: NRSG 228.

#### **NRSG 240 Human Pathology**

This course is designed to enable the students to apply concepts and principles of human pathology in providing nursing care. Emphasis is on pathogenesis of diseases, neoplasms, metabolic and pigmentation disorders and genetic disorders. This course provides 5 hours of theory per week.

#### 2 Credits NRSG 244 Medical Surgical Nursing II

The course is a continuation of NRSG 228 Medical-Surgical Nursing I. Students are guided to gain knowledge in the care of the aged population, palliative care and dental care. In addition, principles in nursing care of the aged population will be explained. The course provides 2 hours of theory per week. Prerequisite: NRSG 228.

#### NRSG 248 Community Health Nursing

**5** Credits

This course is designed as an introduction to the roles and functions of the Community Health Nurse in Kenya. The care of the individual, family and community is emphasized. Supervised practical experiences which includes functioning as a member of the health team at a local health center, organizing outreach health programs, conducting community diagnosis and immunizing children. Health promotion, prevention of disease and treatment of diseases is also covered. The course provides 5 hours of theory and 3 hours of practicum per week. Prerequisite: NRSG 238.

#### NRSG 318 Mental health and Psychiatry **5 Credits** Nursing

This course will explore mental health problems or experiences that place clients at risk and the possible nursing problems that result. It will cover problems related to lifestyle, disturbed

# SCHOOL OF NURSING

sensorium and current problems and trends in mental health nursing practice. The course provides 3 hours of theory and 3 hours of practical experience per week in various mental health settings. Prerequisites: NRSG 240, NRSG 248.

#### NRSG 323 Pathophysiology

#### **3 Credits**

This course is designed give understanding of the major pathological processes which occur in the body due to diseases. It helps the student to make sound judgment and set priorities in the management of critically ill patients. This course provides three hours of theory.

#### NRSG 328 Pediatrics and Child Health 5 Credits Nursing

This course is a study of nursing care of children from infancy through adolescent. The emphasis is on the concept of growth, development and the total health needs of children including prevention and treatment of illness occurring this period. This course provides 5 hours of theory and 3 hours practical component which gives the student experience in caring for the pediatric client as well as interacting with his/her family. Prerequisites: NRSG 240, NRSG 248.

#### NRSG 334 Reproductive Health Nursing I 3 Credits

This course focuses on the intrapartum, post-partum, and neonatal periods. It emphasizes nursing responsibilities for high risk pregnancies labor and delivery, operative obstetrics, postpartum and neonatal periods. It includes supportive care for the family during childbirth. Parents are assisted in integrating the newborn infant into the family setting. Roles of family members to provide for maternal-infant bonding are included as well as the concept of sibling rivalry. The course provides 2 hours of theory and 1 hour of clinical practice in antenatal ward, delivery room, post-natal ward, newborn unit and neonatal ICU.

#### NRSG 338 Childbearing Family II

#### **5 Credits**

This course focuses on the intra-partum, post-partum, and neonatal periods. It emphasizes nursing responsibilities for high risk pregnancies labor and delivery, operative obstetrics, postpartum and neonatal periods. It includes supportive care for the family during childbirth. Parents are assisted in integrating the newborn infant into the family setting. Roles of family members to provide for maternal - infant bonding are included as well as the concept of sibling rivalry. The course provides 15 hours of theory and 47 hours of clinical in antepartum ward, labor and delivery room, post-partum ward, new-born unit and neonatal ICU.

#### NRSG 345 Outpatient/Casualty Nursing 5 Credits

This course introduces the student to the concepts related to implementing care to patients at risk. Assessment and examination techniques will be utilized in determining the variables that place clients at risk. Triage principles will be utilized to determine patients who need priority care for medical, surgical, and gynecological emergencies. Tropical diseases and basic life support are also taught. This course also prepares students for the intensive care and high dependency experience. Students also rotate in ENT clinic, Ophthalmology clinic, Dermatology clinic, Casualty Emergency rooms. The course provides 3 hours of theory and 2 hour of clinical practice per week. Prerequisites: NRSG 323 and NRSG 338.

#### NRSG 348 Critical Care Nursing

#### **5 Credits**

The course provides practice in an acute tertiary medical setting. The students are introduced to intensive care, high dependency and renal dialysis units. Learners will have opportunity to utilize relevant technology and to develop skills in caring for patients with cardiovascular, renal, trauma and neurological conditions e.g. ECG monitoring, blood gases analysis, organic transplant monitoring, cardiothoracic surgery monitoring, hemodialysis, mechanical ventilation, CPR, etc. This course provides 3 hours of theory and 2 hours of practical. Prerequisites: NRSG 323 and NRSG 338. Co-requisite: NRSG 345.

#### NRSG 400 Education Concepts and 5 Credits Strategies

The course builds upon the teaching-learning tools presented in NRSG 215. Additional Educational Psychology content allows the student to progress from patient care and health education instruction to teaching other health workers and other Nursing cadres. Basic principles of measurement and evaluation are presented. Practice sessions are required for students to plan and teach class sessions in their own and various nursing curriculum using varied instructional media. The course provides 3 hours of theory and 2 hours of teaching practice in a nursing college. Prerequisites: All 300 series courses.

#### NRSG 412 Reproductive Health II

The course teaches management and nursing care of gynecological conditions associated with pregnancy and child birth such as fistulas, infertility, STI's abortion, menstrual disorders, ectopic pregnancy and reproductive oncology. Students utilize the nursing process to provide care for women who are victims of trauma in pregnancy, family abuse, incest, domestic violence, and rape. Emotional support and counseling for the family are also included. The course provides 2 hours of theory and 1 hour of clinical practice. The course is designed for the RN/M – BScN track. Prerequisite: NRSG 334 or NRSG 338.

#### NRSG 418 Child bearing Family III

4 Credits

6 Credits

**3 Credits** 

The course teaches management and nursing care of gynecological conditions associated with pregnancy and child birth such as fistulas, infertility, STI's abortion, menstrual disorders, ectopic pregnancy and reproductive oncology. Students utilize the nursing process to provide care for women who are victims of trauma in pregnancy, family abuse, incest, domestic violence and rape. Emotional support and counseling for the family is also included .The course provides 2 hours of theory and 2 hours of clinical practice. Prerequisite: NRSG 328, NRSG 338 and NRSG 318.

#### NRSG 420 Nursing Management

This course is devised to enable each student to learn the functions of management that make the delivery of nursing care effective. It will provide the opportunity for the student to gain leadership. Relevant management theories are also covered. Considerable emphasis is placed on identifying the

need for change in the nursing environment and implementing such change. The course provides 5 hours of theory and 3 hours of clinical practice. Prerequisite: NRSG 345, NRSG 348 and NRSG 400.

#### NRSG 423 Nursing Research I

#### **3 Credits**

This course in research methods and utilization provides knowledge needed for giving evidence-based nursing care and critically evaluating nursing literature. The outcome and experience are then used to write a complete research proposal. The course provides 3 hour of theory. Prerequisites: PHNL 202, ENGL 105.

#### NRSG 431 Nursing Research Project 2 Credits

This course builds upon NRSG 423: Introduction to Nursing Research I. It focuses on implementing a research project, critique of nursing research and literature relating to evidence based practice. Students are encouraged to write publishable articles at the end of their project. The course provides 2 hours per week for clinical practice. Prerequisite: NRSG 423, NRSG 420, NRSG 418: Co-requisite: NRSG 438.

#### NRSG 438 Community Health Nursing 5 Credits Leadership

This course provides advanced knowledge of community health leadership and management skills plus practical community health experiences in both urban and rural public health settings. Theoretical concepts regarding health environments, health of special populations, disaster management, epidemiological research methods and planned change strategies are provided in class and must be utilized in practical assignments. Students are required to acquire knowledge, skills and attitudes in initiating different types of health projects. The course provides 8 hours of theory and 10 hours of clinical practice. Prerequisite: NRSG 418, NRSG 420, NRSG 423: Co-requisite: NRSG 431.



# School of Science and Technology



# **School of Science and Technology**

DEAN - Ramesh Francis, MSc., MPhil., PhD - Associate Professor

#### **PHILOSOPHY**

The School of Science and Technology operates on the worldview of the University of Eastern Africa, Baraton which holds that God is the Creator and Sustainer of the universe and is the source of knowledge. The entrance of sin caused man's alienation from God; therefore, the educative process in the School of Science and Technology seeks to restore the relationship of people with God by exposing the student to creative and imaginative appreciation of reality in the universe. This ideal is reached through the virtues espoused in the university which are honesty, integrity, dignity, morality, trustworthiness and uprightness. This approach leads learners into self-actualization and to discover and understand the truth through positive critical thinking.

#### **MISSION**

The Mission of the school of Science and technology is to provide and advance wholistic Christian education which develops men and women to be earnest seekers of truth by equipping them with passion for innovation, using their knowledge to think critically in order to overcome challenges, initiate change and make positive difference to human lives.

#### VISION

The vision of the School of Science and Technology is to be the leading centre of excellence in science and technology and research producing world class scientists and technologists by providing innovative solutions to better quality of life with moral virtues towards global competitiveness.

# DEGREES OFFERED BY THE SCHOOL OF SCIENCE AND TECHNOLOGY

#### **BACHELOR OF SCIENCE**

- 1. Bachelor of Science in Agribusiness
- 2. Bachelor of Science in Agriculture (BSc Agriculture)
- 3. Bachelor of Science in Agriculture (Animal Science Option) 4. Bachelor of Science in Agriculture (Crop and Soil Science
- Option)

- Bachelor of Science in Agriculture (Horticultural Science Option)
- 6. Bachelor of Science in Biology
  - a. Biomedical Option
  - b. Biotechnology Option
  - c. Conservation Biology Option
  - d. General Biology Option
  - e. Microbiology Option.
- 7. Bachelor of Science in Chemistry
  - a. Analytical Chemistry Option
  - b. Analytical Chemistry with Management Option
  - c. Biochemistry Option
  - d. General Chemistry Option
  - e. Industrial Chemistry Option
  - f. Industrial Chemistry with Management Option
- 8. Bachelor of Science in Fashion and Textile Design
- 9. Bachelor of Science in Foods, Nutrition, and Dietetics
- 10. Bachelor of Science in Hotel and Hospitality Management
- 11. Bachelor of Science in Mathematics
- 12. Bachelor of Science in Automotive Technology
- Bachelor of Science in Electronics Technology

   Communication Option
   Industrial Option

#### **MINORS**

- 1. Minor in Agriculture
- 2. Minor in Applied Statistics
- 3. Minor in Biology
- 4. Minor in Chemistry
  - a. Minor in Analytical Chemistry
  - b. Minor in Biochemistry
  - c. Minor in General Chemistry
  - d. Minor in Industrial Chemistry
- 5. Minor in Electronics Technology
- 6. Minor in Fashion and Textile Design
- 7. Minor in Foods, Nutrition and Dietetics
- 8. Minor in Hotel and Hospitality Management
- 9. Minor in Mathematics 10. Minor in Physics

# DEPARTMENT OF BIOLOGICAL SCIENCES AND AGRICULTURE

#### FALCULTY

Francis, R., PhD., (Head of Department) Francis, G. MSc. Kemboi, W., MSc. Kirui, J. MSc. Magubu, Z., MSc. Mkandawire F. MSc. Ngalo, S., MSc. Odhiambo, S. MSc. Onjunga, M., MPhil., PhD in progress Wechuli, D. MSc, PhD in progress Wekesa E., BSc., MSc.

#### **Teaching Assistants**

Chemis, L., BSc. Koech, S. BSc.

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#### PHILOSOPHY

The Department of Biological Sciences and Agriculture operates on the UEAB worldview, which holds that God is the Creator and Sustainer of life and the natural world, and is the source of true knowledge. The entrance of sin caused man's alienation from God; therefore, as intelligent stewards, human beings are the custodians of the earth and its environment. The department aims to enhance human's responsibility to understand life, its unity, diversity and make positive contribution in the areas of

# SCHOOL OF SCIENCE AND TECHNOLOGY

resource utilization and conservation, food production, poverty alleviation, and environmentally sustainable development as God's instituted activity. The knowledge and skills acquire be oriented towards development of man's spiritual and physical powers.

#### **MISSION**

The mission of the Department is to train students in understanding life and its interactions at all levels from biomolecules to the biosphere, and promote production of food, business and employment in a sustainably managed natural environment.

#### VISION

The Department of Biological Sciences and Agriculture envisions that irrespective of whether men and women take only a single course or complete a certificate or a degree, they will become knowledgeable and globally equipped professionals endowed with moral virtues.

# PROGRAMS OFFERED IN THE DEPARTMENT

- 1. Bachelor of Science in Agribusiness
- 2. Bachelor of Science in Agriculture (BSc Agriculture)
- 3. Bachelor of Science in Agriculture (Animal Science Option)
- 4. Bachelor of Science in Agriculture (Crop and Soil Science Option)
- 5. Bachelor of Science in Agriculture (Horticultural Science Option)
- 6. Bachelor of Science in Biology
  - a. Biomedical Option
  - b. Biotechnology Option
  - c. Conservation Biology Option
  - d. General Biology Option
- e. Microbiology Option.
- 7. Minor in Agriculture.
- 8. Minor in Biology

#### **OBJECTIVES**

The programs in agriculture strive to implement the following objectives:

- 1. General Objectives
  - a. To inculcate in the students sound knowledge of Agricultural Sciences and natural resource management.
  - b. To prepare students to become competent skilled agricultural managers or entrepreneurs in private and public service.
  - c. To equip students with moral aptitudes for environmental conservation, natural resource utilization, and poverty alleviation.
  - d. To prepare students for advanced studies, research and career development.

#### 2. Specific Objectives

- To equip students with agricultural research skills and their practice in society.
- b. To prepare students for teaching, research, career development and advanced studies.
- c. To prepare students for careers in food production, plantation management, floriculture industry and Agricultural development programs with Non-Governmental (NGOs), international organizations and other agri-business sectors.

d. To prepare agricultural graduates capable of providing policy guidelines on the roles and limitations of agricultural biosystems and their management in national development.

#### **EXPECTED LEARNING OUTCOMES**

A graduate of a program in agriculture should be able to:

- 1. Define the term agriculture;
- 2. Name and explain different types of agriculture;
- Explain stages of agricultural development in human history;
- Analyze the contribution of agriculture to the social, political and economic stability of human societies;
- 5. Explain the role of agriculture in community, national and global economic development;
- Discuss the evolution of agricultural systems and technology in the development of human society;
- Identify ecological zones suitable for specific types of agriculture activities;
- 8. Promote and market agricultural products;
- 9. Prepare and store animal feeds for different seasons of the year;
- Experiment on ways to improve agricultural sectors of various human society;
- 11. Carry out scientific research to solve agricultural problems and improve on agricultural production;
- 12. Control pests using natural and commercial insecticides;
- 13. Design and construct irrigation schemes for crop production;
- 14. Diagnose and treat diseases that attack animals, birds and crops;
- 15. Devise strategies for water and soil management;
- 16. Carry out scientific and social research aimed at solving problems and improving agriculture.

The Biology programs are designed to:

- Assist the students in developing a conceptual framework within which to deal with philosophical issues relating to the unity and diversity of life.
- 2. Equip the students with positive attitudes towards an appreciation for the natural world including respect for its biotic and abiotic components.
- Provide students with adequate technical and practical skills through well-designed laboratory practicals, and field/industrial attachment programs that will make them competent practitioners of Biology.
- Prepare students for careers in diverse fields such as teaching, research, bio-diversity conservation, biomedical science and environmental studies.
- 5. Equip the students with the knowledge, skills and aptitude for postgraduate studies and professional development.
- Develop in students the ability to think objectively, and to collect, analyze and draw valid conclusions from scientific data.

#### **CAREER OPPORTUNITIES**

#### Agriculture

- 1. Public Service; Research Officers KALRO (Kenya Agricultural and Livestock Research Organization)
- 2. Officers in various extension agencies Agronomist, Livestock Production, Soil Conservation,
- 3. Agro-forestry, Farm Management, Private Sector; Sectoral Commodity Companies/Agro-Industry, Tea Industry:

Agronomy and Factory Management, Coffee Industry, 2. Attain Horticulture, Floriculture, Sugar Factory, in Biol

- Non-Governmental Organizations (NGO's)Project Management Experts,
- Academic; Graduate Studies: Soil Science, Animal Science, Agronomy, Agroforestry, Agricultural Extension, Plant Breeding, Animal Breeding, Environmental Science, Developmental Studies, And Rural Development.
- 6. Self-Employment; Small Business Entrepreneurs

#### **Biology**

The various programs in Biological Sciences provide students with a wide range of career opportunities as follows:

- General Biology Option includes a broad mixture of Zoology, Botany, laboratory and field courses. It is recommended for those students that wish broad training in Biology, that wish to teach biology in secondary schools and for those that are still flexible in respect to their long- term goals.
- Biomedical Option is for students interested in pursuing careers in medical research, medicine and associated disciplines.
- 3. Biotechnology Option is for students interested in pursuing carriers in research institutions, health care, drug manufacturing, agricultural, food processing, bio informatics, pharma sectors and agencies involved in biotechnology. It also presents an opportunities for students to advance in studies in this area.
- 4. Conservation Biology Option is for those students interested in field biology and in working for the national parks system or other governmental or nongovernmental agencies involved in conservation and field research activities.
- 5. The Microbiology Option is for students interested in pursuing careers in Medical, Pharmaceutical, Food and Dairy industry, Agriculture, Biotechnology and Research.
- 6. Any of the undergraduate options can be completed in four academic years. Although a minor is strongly recommended it is not required for any of the options. However, the student is required to take additional electives if necessary to make a total of 130 credits required for graduation.

#### **ENTRANCE REQUIREMENTS**

#### **DIRECT ENTRY**

#### Agriculture

- 1. Satisfied the minimum entry requirements of the University of Eastern Africa, Baraton
- Bachelor of Science in Agriculture, Animal, Crop and Soil, and Horticultural Science Options must pass KCSE or its equivalent with a minimum grade of C+ in Biology and a C+ in Mathematics, Chemistry, or Physics or C+ in Physical Sciences. UEAB diploma in Agriculture graduates with a C+.
- Bachelor of Science in Agribusiness must have a C+ average in KCSE or its equivalent in Mathematics or Commerce and any three of the following: Biological Science, Chemistry, Physical Science and Agriculture.

#### **Biology**

A student wishing to be admitted into any of the Biology program options under direct entry qualifications must have:

1. Satisfied the minimum entry requirements of the University of Eastern Africa, Baraton.

- Attained a grade of C+ or above in Biology (or B- or above in Biological Sciences) and a C+ or above in Mathematics at KCSE level or its equivalent.
- Passed, in addition, any two subjects at KCSE level or its equivalent from the following list at the minimum grade shown for each subject:
  - a. Chemistry C+
  - b. Physical Science B
  - c. Physics C+
  - d. Geography C+

#### INTERDEPARTMENTAL TRANSFER

#### Agriculture

Inter-departmental transfer students into agriculture should have a minimum of a C+ in either MATH 101 and MATH 102 or MATH 113 and MATH 114 and a C in either BIOL 155 and BIOL 156 or CHEM 121 and CHEM 122.

#### Biology

Students admitted into other degree programs but wishing to enter one of the Biology program options can do an interdepartmental transfer into Biology provided they have an average minimum grade of C+ in MATH 101 and MATH 102 with neither grade less than a C-. In addition an average grade of C+ is required in the Foundations of Biology series (BIOL151, 152 and 153) with no grade less than a C-.

#### ADMISSION REQUIREMENTS FOR UPGRADERS

#### Agriculture

This program is designed to tap from and meet the needs of agricultural professionals who hold a diploma in agriculture or agribusiness from recognized colleges and universities both within the eastern and central Africa region and beyond. The program is designed to take two and half to three years at most.

Holders of a diploma in agriculture, agri-business or related field must meet the following criteria:

- A minimum mean grade of C (plain) or division III at Kenya Certificate of Secondary School Education (KCSE) or its equivalent.
- 2. Must have a Diploma in the related area of study agribusiness/ Agribusiness.
- 3. Provide academic transcript, an updated curriculum vitae (CV) and course syllabi from the college/university where the diploma qualification was obtained to facilitate evaluation and credit transfer.

#### **Biology**

This program is designed to tap from and meet the needs of Biomedical, Biotechnology and Conservation professionals who hold a diploma in Applied Biology from recognized colleges and universities both within the eastern and central Africa region and beyond. The program is designed to take 2 - 3 years to complete.

Holders of a diploma in applied Biology or related field must meet the following criteria:

1. A minimum mean grade of C (plain) or division III at Kenya Certificate of Secondary School Education (KCSE) or its equivalent.

- 2. Must have a Diploma in the related area of study in applied Biology.
- Provide academic transcript, an updated curriculum vitae (CV) and course syllabi from the college/university where the diploma qualification was obtained to facilitate evaluation and credit transfer

#### **CREDIT TRANSFER**

A student who wants to be exempted from some courses offered by the University or receives credit transfer, will petition by following procedures outlined in the University bulletin. The petition must be accompanied by documents outlined in Section 3 for qualifying diploma holders. The student must have scored a minimum grade of C+ (plus) in the equivalent course he/she is seeking exemption/credit transfer

#### **GRADUATION REQUIREMENTS**

Students graduating from the Department of Biological Sciences and Agriculture must meet the minimum graduation requirements as specified in this bulletin.

# **Course Listing**

## BACHELOR OF SCIENCE IN AGRI-BUSINESS

#### **SUMMARY**

**OFTE 120** 

Keyboarding

Total	141 Credits
Cognate Courses	30
Agribusiness Option	52
Core Agriculture Courses	33
General Education Requirements	26

Agriculture students are exempted from the following General Education requirements

MGMT 103	Basic Management and Entrepreneurial Skills	2	
MATH 101	Pre-Calculus	3	
BIOL 105	Human Biology	2	
PHYS 100	Concepts of Physical Sciences	2	
HLED 110	Health Principles	1	
AGRI 105	Principles of Agricultural Technology	2	
ENVI 227	Environment and Society	2	
	Vocational skills	1	
Total 15 Credits			

GENERAL	EDUCATION REQUIREMENTS	26 Credit	S
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
KISW 114	Language Use in Kiswahili Or		2
FREN 103	Beginning French II		2
GCAS 107	Music Appreciation Or		2
LITE 151	Introduction to Literary Appreciat	ion	2

EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

#### Two Courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

CORE CO	JRSES 33 Credit	ts
AGRI 101	Crop Production Skills	1
AGRI 102	Animal Production Skills	1
AGRI 108	Introduction to Agriculture	1
AGRI 116A	Agricultural Ecology	2
AGRI 116B	Agricultural Ecology (Field Trip)	1
BIOL 285	Biostatistics	3
AGRI 325	Proposal Writing Lab	1
AGRI 398	Research Project	1
AGRI 433	Agricultural Extension and Rural Sociology	3
AGRI 446	Professional Internship	3
AGRI 499	Agriculture Seminar	1
ANSC 211	Introduction to Animal Science	3
CPSC 213	Introduction to Soils	3
CPSC 314	Crop Production I	3
CPSC 325	Crop Production II	3
HORT 223	Ornamental and Landscape Horticulture	3

AGRIBUSI	NESS OPTION 52 Credit	s
AGEC 215	Introduction to Agribusiness	3
AGEC 227	Co-operative Management	3
AGEC 262	Production Economics and Operational Research	3
AGEC 286	Introduction to Econometrics	3
AGEC 290	Mathematical Methods for Agricultural Economists I	3
AGEC 295	Mathematical Methods for Agricultural Economists II	3
AGEC 315	Agricultural Marketing and value chain Analysis	3

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AGEC 327	International Economics	3
AGEC 330	Personnel Management in Agriculture	3
AGEC 345	Agricultural Economics	3
AGEC 356	Agricultural Policy and Law	3
AGEC 360	Agri-Business Finance	3
AGEC 413	Management of Agricultural Enterprises	3
AGEC 420	Analysis of Agricultural Projects	3
AGEC 445	Farm Management Practicum	1
AGEC 451	Agricultural Entrepreneurship Skills	3
AGEC 455	Agri-Business Management	3
AGEC 470	Economics for Development	3

AGRIBUSINESS OPTION 52 Credits		S
ACCT 111	Principles of Accounting I	4
ACCT 112	Principles of Accounting II	4
BIOL 155	Foundations of Biology I	4
CHEM 121	General Chemistry I	4
ECON 210	Principles of Microeconomics	3
ECON 211	Principles of Macroeconomics	3
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3
GEOG 255	Principles of Geographic Information Systems	2

# BACHELOR OF SCIENCE IN AGRICULTURE

#### SUMMARY

General Education Requirements	26
Core Agriculture Courses	73
Cognates	33
Electives	4
Total	136 Credits

Agriculture students are exempted from the following General Education requirement

MGMT 103	Basic Management and Entrepreneurial S	Skills 2
MATH 101	Pre-Calculus	3
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physical Sciences	2
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
ENVI 227	Environment and Society	2
	Vocational skills	1
	Total 15 Credits	

GENERAL EDUCATION REQUIREMENTS 26 Credits			S
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
KISW 114	Language Use in Kiswahili Or		2

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## Two Courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

CORE COL	JRSES 76 Credit	s
AGEC 345	Agriculture Economics	3
AGEC 413	Management of Agricultural Enterprises	3
AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGRI 101	Crop Production Skills	1
AGRI 102	Animal Production Skills	1
AGRI 108	Introduction to Agriculture	1
AGRI 116A	Agricultural Ecology	2
AGRI 116B	Agricultural Ecology (Field Trip)	1
AGRI 231	Food Processing Technology	2
AGRI 325	Proposal Writing Laboratory	1
AGRI 398	Research Project	1
AGRI 433	Agriculture Extension and Rural Sociology	3
AGRI 446	Professional Internship	3
AGRI 499	Agriculture Seminar	1
ANSC 211	Introduction to Animal Science	3
ANSC 323	Animal Breeding Or	3
CPSC 324	Plant Breeding	3
ANSC 411	Poultry Science	3
ANSC 432	Animal Nutrition and Feeding	3
ANSC 442	Dairy Production	3
BIOL 285	Biostatistics	3
CPSC 213	Introduction to Soils	3
CPSC 279	Crop Physiology	3
CPSC 311	Soil Fertility and Fertilizers	3
CPSC 314	Crop Production I	3
CPSC 321	Weed Science	3

# SCHOOL OF SCIENCE AND TECHNOLOGY

CPSC 325	Crop Production II	3
CPSC 373	Soil and Water Conservation	2
CPSC 412	Crop Protection	3
HORT 223	Ornamental and Landscape Horticulture	3
HORT 312	Olericulture	3

COGNATES 30 Credits		ts
BIOL 155	Foundations of Biology I	4
BIOL 156	Foundations of Biology II	4
BIOL 449	Genetics	3
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
ECON 210	Principles of Micro-Economics	3
GEOG 255	Principles of Geographic Information Systems	2
INSY 136	Microcomputer Applications	3
MATH 101	Pre-calculus	3
MATH 102	Basic Calculus	3

AGRIBUSINESS OPTION 52 Cred		ts
AGEN 235	Tractor Operations and Maintenance	2
AGEN 332	Irrigation and Drainage	3
AGRI 220	Agroforestry	2
AGRI 295	Resource Survey Methods	3
AGRI 300	Projects in Agriculture	1
AGRI 335	Mushroom Production	2
AGRI 399	Special Topics in ()	1
AGRI 457	Special Problems in Agriculture	1
ANSC 227	Artificial Insemination	2
CPSC 313	Agriculture Chemistry	3
CPSC 326	Seed Production Technology	3
CPSC 378	Sustainable and Conservation Agriculture	2

## **BACHELOR OF SCIENCE IN AGRICULTURE** (ANIMAL SCIENCE OPTION)

#### **SUMMARY**

Total Credits	136 Credits
Electives	2
Cognates	33
Animal Science Option	43
Core Courses	32
General Education Requirements	26

Agriculture students are exempted from the following General Education requirement

MGM	IT 103	Basic Management and Entrepreneurial Skills	2
MATI	H 101	Pre-Calculus	3
BIOL	105	Human Biology	2
PHYS	S 100	Concepts of Physical Sciences	2

HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
ENVI 227	Environment and Society	2
	Vocational skills	1
Total 15 Credit		ts

GENERAL	EDUCATION REQUIREMENTS 26 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

# Two Courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

#### CORE COURSES

CORE COL	JRSES 32 Credit	s
AGEC 345	Agriculture Economics	3
AGEC 413	Management of Agriculture Enterprises	3
AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGRI 101	Crop Production Skills	1
AGRI 108	Introduction to Agriculture	1
AGRI 116A	Agricultural Ecology	2
AGRI 116B	Agricultural Ecology (Field Trip)	1
AGRI 325	Proposal Writing Laboratory	1
AGRI 398	Research Project	1
AGRI 433	Agriculture Extension and Rural Sociology	3
AGRI 446	Professional Internship	3
AGRI 499	Agriculture Seminar	1
BIOL 285	Biostatistics	3
CPSC 213	Introduction to Soils	3
CPSC 279	Crop Physiology	3



ANIMAL S	CIENCE OPTION 42 Credit	ts
AGEN 311	Construction of Farm Structures	3
AGRI 102	Animal Production Skills	1
ANSC 211	Introduction to Animal Science	3
ANSC 222	Ruminant Husbandry	3
ANSC 232	Apiculture	3
ANSC 245	Livestock Practicum	1
ANSC 300	Processing and Marketing of Animal Products	3
ANSC 310	Aquaculture	3
ANSC 315	Dairy Practicum	1
ANSC 323	Animal Breeding	3
ANSC 411	Poultry Science	3
ANSC 421	Reproductive Physiology and Artificial Insemination	3
ANSC 432	Animal Nutrition and Feeding	3
ANSC 442	Dairy Production	3
ANSC 453	Animal Parasitology and Diseases	3
CPSC 333	Pasture and Forage Production	3

COGNATE COURSES 33 Credits		ts
BIOL 155	Foundations of Biology I	4
BIOL 156	Foundations of Biology II	4
BIOL 449	Genetics	3
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
ECON 210	Principles of Micro-Economics	3
GEOG 255	Principles of Geographic Information Systems	2
INSY 136	Microcomputer Applications	3
MATH 101	Pre-calculus	3
MATH 102	Basic Calculus	3

ELECTIVE COURSES 2 Credits		ts
AGEN 315	Animal Traction Practicum	1
AGRI 300	Projects in Agriculture	1
AGRI 399	Special Topics in ()	1
AGRI 457	Special Problems in Agriculture	1
CPSC 311	Soil Fertility and Fertilizers	3
CPSC 314	Crop Production I	3
CPSC 321	Weed Science	3
CPSC 373	Soil and Water Conservation	2
CPSC 412	Crop Protection	3
HORT 223	Ornamental and Landscape Horticulture	3
HORT 312	Olericulture	3

# BACHELOR OF SCIENCE IN AGRICULTURE (CROP AND SOIL SCIENCE OPTION)

#### SUMMARY

General Education Requirements	26
Core Courses	30
Crop and Soil Science Option	44
Cognates	33
Electives	3
Total	136 Credits

Agriculture students are exempted from the following General Education requirements

MGMT 103	Basic Management and Entrepreneurial Skills	2
MATH 101	Pre-Calculus	3
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physical Sciences	2
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
ENVI 227	Environment and Society	2
	Vocational skills	1
Total 15 Credits		

GENERAL	EDUCATION REQUIREMENTS 26 Credi	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian	2
	Education	
PEAC 107	Physical and Recreational Activities	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

Two Courses from the following (

(4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2



CORE COURSES 30 Credits		ts
AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGEN 235	Tractor Operations and Maintenance	2
AGEC 345	Agriculture Economics	3
AGEC 413	Management of Agriculture Enterprises	3
AGRI 108	Introduction to Agriculture	1
AGRI 116A	Agricultural Ecology	2
AGRI 116B	Agricultural Ecology (Field Trip)	1
AGRI 325	Proposal Writing Laboratory	1
AGRI 398	Research Project	1
AGRI 433	Agriculture Extension and Rural Sociology	3
AGRI 446	Professional Internship	3
AGRI 499	Agriculture Seminar	1
BIOL 285	Biostatistics	3
HORT 312	Olericulture	3

<b>CROP AN</b>	D SOIL SCIENCE OPTION 45 Credi	ts
AGRI 101	Crop Production Skills	1
AGRI 231	Food Processing Technologies	2
CPSC 213	Introduction to Soil Science	3
CPSC 279	Crop Physiology	3
CPSC 311	Soil Fertility and Fertilizers	3
CPSC 314	Crop Production I	3
CPSC 321	Weed Science	3
CPSC 324	Plant Breeding	3
CPSC 325	Crop Production II	3
CPSC 326	Seed Production Technology	3
CPSC 333	Pasture and Forage Production	3
CPSC 345	Crops Practicum	1
CPSC 373	Soil and Water Conservation	2
CPSC 378	Sustainable and Conservation Agriculture	2
CPSC 411	Soil Management	3
CPSC 412	Crop Protection	3
CPSC 422	Crop Harvesting, Processing, Storage and Marketing	3

COGNATE COURSES 33 Credits		ts
BIOL 155	Foundations of Biology I	4
BIOL 156	Foundations of Biology II	4
BIOL 449	Genetics	3
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
ECON 210	Principles of Micro-Economics	3
GEOG 255	Principles of Geographic Information Systems	2
INSY 236	Microcomputer Applications	3
MATH 101	Pre-Calculus	3
MATH 102	Basic Calculus	3

ELECTIVE COURSES 3 Credit		ts
AGEN 332	Irrigation and Drainage	3
AGRI 220	Agroforestry	2
AGRI 300	Projects in Agriculture	1
AGRI 335	Mushroom Production	2
AGRI 399	Special Topics in ()	1
AGRI 457	Special Problems in Agriculture	1
CPSC 333	Pastures and Forage Production	3
HORT 223	Ornamental and Landscape Horticulture	3

## HORTICULTURAL SCIENCE OPTION

#### **SUMMARY**

Total	136 Credits
Cognates	33
Horticultural Science Option	40
Core Agriculture Courses	37
General Education Requirements	26

Agriculture students are exempt from the following General Education requirements

MGMT 103 Basic Management and Entrepreneurial Skills		s 2
MATH 101	MATH 101 Pre-Calculus	
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physical Sciences	2
HLED 110	Health Principles	1
AGRI 105 Principles of Agricultural Technology		2
ENVI 227	Environment and Society	2
	Vocational skills	1
Total 15 Credit		dits

# GENERAL EDUCATION REQUIREMENTS 26 Credits

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian	2
	Education	
PEAC 107	Physical and Recreational Activities	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health	2
	Professionals	
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two Courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

CORE COURSES 37 Credit		ts
AGEC 345	Agriculture Economics	3
AGEC 413	Management of Agriculture Enterprises	3
AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGRI 108	Introduction to Agriculture	1
AGRI 116A	Agricultural Ecology	2
AGRI 116B	Agricultural Ecology (Field Trip)	1
AGRI 325	Proposal Writing Laboratory	1
AGRI 398	Research Project	1
AGRI 433	Agriculture Extension and Rural Sociology	3
AGRI 446	Professional Internship	3
AGRI 499	Agriculture Seminar	1
BIOL 285	Biostatistics	3
CPSC 279	Crop Physiology	3
CPSC 324	Plant Breeding	3
CPSC 314	Crop Production I	3
CPSC 321	Weed Science	3

HORTICULTURAL SCIENCE OPTION 40 Credit		ts
AGEN 332	Irrigation and Drainage	3
AGRI 101	Crop Production Skills	1
CPSC 213	Introduction to Soil Science	3
CPSC 311	Soil Fertility and Fertilizers	3
CPSC 412	Crop Protection	3
HORT 113	Fundamentals of Horticulture	3
HORT 210	Greenhouse Crop Management	3
HORT 212	Propagation of Horticulture Plants	3
HORT 223	Ornamental and Landscape Horticulture	3
HORT 235	Horticulture Practicum	1
HORT 245	Vegetable production Practicum	1
HORT 312	Olericulture	3
HORT 318	Floriculture	3
HORT 323	Fruits, Nuts and Spices	3
HORT 409	Field Trips	1
HORT 411	Handling, Processing, Storage and Marketing of Hort. Crops	3

COGNATE	COURSES 33 Credi	33 Credits	
BIOL 155	Foundations of Biology I	4	
BIOL 156	Foundations of Biology II	4	
BIOL 449	Genetics	3	

OUEM 101	Concred Chamistry I	1.
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
ECON 210	Principles of Micro-Economics	3
GEOG 255	Principles of Geographic Information	2
	Systems	
INSY 136	Microcomputer Applications	3
MATH 101	Pre-Calculus	3
MATH 102	Basic Calculus	3

# UPGRADING COURSE INTO A BACHELOR OF SCIENCE IN AGRICULTURE

#### SUMMARY

Total Credits	125 Credits
Elective Courses	6
Cognate Courses	33
Core Agriculture Courses	67
General Education Requirements	19

Holders of a diploma in agriculture are exempt from the following General Education Requirements:

AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
ENVI 227	Environment and Society	2
HIST 111	Concepts of World Civilization	2
HLED 110	Health Principles	1
KISW 114	Language Use in Kiswahili	2
MATH 100	Foundations of Mathematics	3
MGMT 103	Basic Management and Entrepreneurial Skills	2
OFTE 120	Keyboarding	0
PEAC 107	Physical and Recreational Activities	1
PHYS 100	Concept of Physics	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills	1
Total 22 Credi		lits

Upgrading students are exempt from the following core courses:

AGRI 101	Crop Production Skills	1
AGRI 102	Animal Production Skills	1
AGRI 108	Introduction to Agriculture	1
AGRI 116A	Agricultural Ecology	2
AGRI 116B	Agricultural Ecology (Field Trip)	1
Total		credits

Upgrading students may challenge the following courses:

AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGRI 220	Agroforestry	2
AGEN 235	Tractor Operations and Maintenance	2



GENERAL	EDUCATION REQUIREMENTS 19 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
LITE 151	Literature Appreciation	2
EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technology Today	2
RELB 220	Life and Teachings of Jesus	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2
<b>RELH 155</b>	Adventist Heritage	2

CORE COU	URSES 67 Credit	ts
AGEC 345	Agriculture Economics	3
AGEC 413	Management of Agricultural Enterprises	3
AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGRI 231	Food Processing Technology	2
AGRI 325	Proposal Writing Laboratory	1
AGRI 398	Research Project	1
AGRI 433	Agriculture Extension and Rural Sociology	3
AGRI 446	Professional Internship	3
AGRI 499	Agriculture Seminar	1
ANSC 211	Introduction to Animal Science	3
ANSC 323	Animal Breeding Or	3
CPSC 324	Plant Breeding	3
ANSC 411	Poultry Science	3
ANSC 432	Animal Nutrition and Feeding	3
ANSC 442	Dairy Production	3
BIOL 285	Biostatistics	3
CPSC 213	Introduction to Soils	3
CPSC 279	Crop Physiology	3
CPSC 311	Soil Fertility and Fertilizers	3
CPSC 314	Crop Production I	3
CPSC 321	Weed Science	3
CPSC 325	Crop Production II	3
CPSC 373	Soil and Water Conservation	2
CPSC 412	Crop Protection	3
HORT 223	Ornamental and Landscape Horticulture	3
HORT 312	Olericulture	3

COGNATE	COURSES 33 Credit	ts
BIOL 155	Foundations of Biology I	4
BIOL 156	Foundations of Biology II	4
BIOL 449	Genetics	3
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
ECON 210	Principles of Micro-Economics	3
GEOG 255	Principles of Geographic Information Systems	2
INSY 136	Microcomputer Applications	3
MATH 101	Pre-Calculus	3
MATH 102	Basic Calculus	3

ELECTIVE COURSES 6 Credits		ts
AGEN 235	Tractor Operations and Maintenance	2
AGEN 332	Irrigation and Drainage	2
AGRI 220	Agroforestry	2
AGRI 295	Resource Survey Methods	3
AGRI 300	Projects in Agriculture	1
AGRI 335	Mushroom Production	2
AGRI 399	Special Topics in ()	1
AGRI 457	Special Problems in Agriculture	1
ANSC 227	Artificial Insemination	2
CPSC 313	Agriculture Chemistry	2
CPSC 326	Seed Production Technology	3
CPSC 378	Sustainable and Conservation Agriculture	2

# UPGRADING COURSE INTO BACHELOR OF SCIENCE IN AGRI-BUSINESS

### **SUMMARY**

Total Credits	128 Credits
Cognates	30
Core Agriculture Courses	27
Agribusiness Option	52
General Education Requirements	19

Holders of a Diploma in Agriculture are exempted from the following General Education Requirements:

AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
ENVI 227	Environment and Society	2
HIST 111	Concepts of World Civilization	2
HLED 110	Health Principles	1
KISW 114	Language Use in Kiswahili	2
MATH 100	Foundations of Mathematics	3
MGMT 103	Basic Management and Entrepreneurial Skills	2
OFTE 120	Keyboarding	0
PEAC 107	Physical and Recreational Activities	1
PHYS 100	Concept of Physics	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills	1
Total 22 Credits		its

Upgrading students are exempted from the following core courses:

AGRI 101	Crop production Skills		1
AGRI 102	Animal Production Skills		1
AGRI 108	Introduction to Agriculture		1
AGRI 116A	Agricultural Ecology		2
AGRI 116B	Agricultural Ecology (Field Trip)		1
Total 6 Credits		s	

Upgrading students may challenge the following courses:

AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGRI 220	Agroforestry	2
AGEN 235	Tractor Operations and Maintenance	2

GENERAL	EDUCATION REQUIREMENTS 19 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
LITE 151	Literature Appreciation	2
EDUC 215	Introduction to Philosophy of Christian	2
	Education	
INSY 107	Information Technology Today	2
RELB 220	Life and Teachings of Jesus	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2
<b>RELH 155</b>	Adventist Heritage	2

CORE COURSES 27 Credits		ts
AGRI 325	Proposal Writing Laboratory	1
AGRI 398	Research Project	1
AGRI 433	Agricultural Extension and Rural Sociology	3
AGRI 446	Professional Internship	3
AGRI 499	Agriculture Seminar	1
ANSC 211	Introduction to Animal Science	3
BIOL 285	Biostatistics	3
CPSC 213	Introduction to Soils	3
CPSC 314	Crop Production I	3
CPSC 325	Crop Production II	3
HORT 223	Ornamental and Landscape Horticulture	3

AGRIBUSI	NESS OPTION 52 Credit	ts
AGEC 215	Introduction to Agribusiness	3
AGEC 227	Co-operative Management	3
AGEC 261	Intermediate Microeconomic Theory	3
AGEC 262	Production Economics and Operational Research	3
AGEC 286	Introduction to Econometrics	3
AGEC 290	Mathematical Methods for Agricultural Economists I	3
AGEC 295	Mathematical Methods for Agricultural Economists II	3
AGEC 315	Agricultural Marketing	3
AGEC 330	Personnel Management in Agriculture	3
AGEC 345	Agricultural Economics	3
AGEC 356	Agricultural Policy	3
AGEC 360	Agri-Business Finance	3
AGEC 413	Management of Agricultural Enterprises	3
AGEC 420	Analysis of Agricultural Projects	3
AGEC 445	Farm Management Practicum	1

AGEC 451	Agricultural Entrepreneurship Skills	3
AGEC 455	Agri-Business Management	3
AGEC 470	Economics Development	3

COGNATE	COURSES 30 Credit	ts
ACCT 111	Principles of Accounting I	4
ACCT 112	Principles of Accounting II	4
BIOL 155	Foundations of Biology I	4
CHEM 121	General Chemistry I	4
ECON 210	Principles of Microeconomics	3
ECON 211	Principles of Macroeconomics	3
GEOG 255	Principles of Geographic Information	2
	Systems	
MATH 113	Business Mathematics I	3
MATH 114	Business Mathematics II	3

## **BACHELOR OF SCIENCE IN BIOLOGY**

### SUMMARY

General Education Requirements	27
Core Courses	43
Concentration	24
Cognates for all Options	32
Electives	6
Total	132 Credits

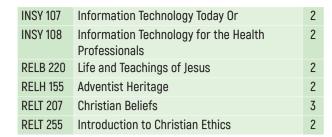
Biology students are exempted from the following General Education Requirements:

HLED 110	Health Principles	1
PHYS 100	Concepts of Physical Sciences	2
AGRI 105	Principles of Agricultural Technology	2
ENVI 227	Environment and Society	2
BIOL 105	Human Biology	2
MGMT 103	Basic Management & Entrepreneurial Skills	2
Total 11 Credit		ts

Biology students take the following General Education Course as a cognate

4ATH 101	Pre-Calculus	3
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GENERAL	EDUCATION REQUIREMENTS 27 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1



## Two courses from the following (4 Credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE COURSES 43 Credits		S	
BIOL 155	Foundations of Biology I		4
BIOL 156	Foundations of Biology II		4
BIOL 176	Introduction to Microbiology		3
BIOL 246	Introduction to Biotechnology		3
BIOL 285	Biostatistics		3
BIOL 286	General Ecology		3
BIOL 293	Cell Biology		3
BIOL 296	History and Philosophy of Biology		3
BIOL 326	Bioinformatics		3
BIOL 447	Molecular Biology		3
BIOL 449	Genetics		3
BIOL 451	Biology Seminar I		2
BIOL 452	Biology Seminar II		2
BIOL 484	Biology Practicum		4

COGNATES FOR ALL OPTIONS 32 Credit		ts
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 211	Organic chemistry I	4
CHEM 212	Organic chemistry II	4
CHEM 310	Biochemistry for Life Sciences	4

MATH 101	Pre-calculus	3
MATH 102	Basic Calculus	3
PHYS 155	General Physics	3
PHYS 165	Heat and thermodynamics	3

#### GENERAL BIOLOGY OPTION

At least two upper-division courses must be selected from each of the following groups:

24 Credits

GROUP A (ENVIRONMENTAL BIOLOGY) 6 Credi		
BIOL 200	Natural History of Kenya	3
BIOL 315	Introduction to Marine Biology	3
BIOL 344	Hydrobiology	3
BOTN 374	Systematic Botany	3
Z00L 322	Invertebrate Zoology	3
ZOOL 333	Ichthyology	3
Z00L 334	Herpetology	3
ZOOL 336	Ornithology	3
ZOOL 338	Mammalogy	3
Z00L 342	Entomology	3
GROUP B (MORPHOLOGICAL BIOLOGY) 6 Cred		6 Credits
BOTN 320	Plant Anatomy	3
ZOOL 310	Comparative Vertebrate Anatomy	3
ZOOL 365	Histology	3
ZOOL 396	Mammalian Anatomy	3
Z00L 448	Developmental Biology	3
GROUP C (	FUNCTIONAL BIOLOGY)	6 Credits
BIOL 460	Immunology	3
BOTN 432	Plant Physiology	3
Z00L 384	Animal Behavior	3
Z00L 464	Systems Physiology	4

At least TWO of these courses must have a BOTN prefix and at least TWO must have a ZOOL prefix. Students to select at least 6 credit hours from any of the three groups to make up for the remaining credits.

BIOMEDI	CAL OPTION 24 Credit	S
Select at le	east six courses from the following list:	
BIOL 396	Human Anatomy	3
BIOL 397	Human Physiology	3
BIOL 460	Immunology	3
BIOL 476	General Microbiology	3
ZOOL 310	Comparative Vertebrate Anatomy	3
ZOOL 325	Parasitology	3
ZOOL 360	Parasitology & Immunology	3
ZOOL 342	Entomology	3
ZOOL 365	Histology	3
ZOOL 396	Mammalian Anatomy	3
ZOOL 448	Developmental Biology	3
ZOOL 464	Systems Physiology	4

24 Credits

24 Credits

In addition, at least one ZOOL course from Group A (Environmental Biology) is required and at least one BOTN course (from any group) is required. Select additional upper division courses to make up 24 elective credits for this option. (See Course description for course). BIOL 397 Human Anatomy and BIOL398 Human Physiology are recommended for those intending to pursue medicine.

#### **BIOTECHNOLOGY OPTION**

All students in this option must take all courses from the following list:

BIOT 330	Environmental Biotechnology	3
BIOT 334	Plant Biotechnology	3
BIOT 335	Animal Biotechnology	3
BIOT 451	Microbial Biotechnology	3
BIOT 453	Recombinant DNA Technology	3
BIOT 455	Biotechnology in Agriculture and Health	3

In addition, at least one ZOOL course from Group B (Morphological Biology) is required and at least one BOTN course (from Group A or C) is required. Select additional upper division courses to make up 24 elective credits for this option. (See Course description for course).

#### CONSERVATION BIOLOGY OPTION

All students in this option must take BIOL 374 Conservation Biology. In addition they will select at least six other upper division courses from the following list:

BIOL 344	Hydrobiology	3
BOTN 374	Systematic Botany	3
ZOOL 333	Ichthyology	3
ZOOL 336	Ornithology	3
ZOOL 338	Mammalogy	3
Z00L 342	Entomology	3
ZOOL 384	Animal Behavior	3
ZOOL 464	Systems Physiology	4
Z00L 334	Herpetology	3

In addition select at least one course from Group B (Morphological Biology) and at least one course of all the courses taken must have a BOTN and BIOL prefix.

#### MICROBIOLOGY OPTION

24 Credits

Select at least six courses from the following list:

ZOOL 325	Parasitology	3
ZOOL 360	Parasitology and Immunology	3
BIOM 321	Mycology	3
BIOM 322	Virology	3
BIOM 323	Bacteriology	3
BIOM 420	Microbial Ecology	3
BIOM 421	Microbial Physiology and Biochemistry	3
BIOM 422	Microbial Genetics	3
BIOL 460	Immunology	3

BIOM 390	Genomics and Proteomics	
BIOM 372	Evolution of Genes, Genome and Biosytems	3

In addition, at least one ZOOL course and one BOTN course (from any group) is required. Select additional upper division courses to make up 24 elective credits for this option.

ELECTIVE COURSES 6 Credit		ts
BIOL 128	Bird Watching	1
BIOL 150	Introduction to Natural History of Kenya	2
BIOL 250	Introduction to Biosafety	3
PHHC 290	Community Health and Diagnosis	3
BIOL 315	Marine Biology	3
BIOL 327	Metabolism	3
BIOL 401	Topics in Biology	3
BIOM 423	Applied and Industrial Microbiology	3
BIOM 424	Food, dairy and water Microbiology	3
BIOL 495	Independent Research	1
CLSC 441	Hematology	3
PHEP 100	Principles of Epidemiology	3

## UPGRADING COURSE INTO A BACHELOR OF SCIENCE IN BIOLOGY

#### SUMMARY

General Education Requirements	27
Core Courses	29
Concentration	24
Cognates for all Options	17
Electives	6
Total	103 Credits

Upgrading students in biology are exempted from the following General Education Requirements:

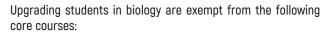
HLED 110	Health Principles	1
PHYS 100	Concepts of Physical Sciences	
AGRI 105	Principles of Agricultural Technology	
ENVI 227	Environment and Society	
BIOL 105	Human Biology	
MGMT 103	Basic Management & Entrepreneurial Skills	2
Total 11 Credit		ts

Biology students take the following General Education Course as a cognate:

MAIN IUI PIE-Calculus J	MATH 101	Pre-Calculus		3
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Upgrading students in biology are exempt from the following cognates:

CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
PHYS 155	General Physics	3
PHYS 165	Heat and Thermodynamics	3



BIOL 155	Foundations of Biology I	4
BIOL 156	Foundations of Biology II	4
BIOL 176	Introduction to Microbiology	3
BIOL 293	Cell Biology	3

GENERAL	EDUCATION REQUIREMENTS 27 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
FREN 103	Beginning French II Or	2
KISW 114	Language Use in Kiswahili	
LITE 151	Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	
PEAC 107	Physical and Recreational Activities	1
INSY 107	Information Technology Today	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2
HIST 111	Concept of World Civilization	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills	1

CORE CO	JRSES	29 Credit	s
BIOL 246	Introduction to Biotechnology		3
BIOL 286	General Ecology		3
BIOL 296	History and Philosophy of Biology		3
BIOL 447	Molecular Biology		3
BIOL 449	Genetics		3
BIOL 451	Biology Seminar I		2
BIOL 452	Biology Seminar II		2
BIOL 484	Biology Practicum		4
BIOL 326	Bioinformatics		3
BIOL 285	Biostatistics		3

COGNATE	S FOR ALL OPTIONS 17 Credi	ts
MATH 101	Pre-calculus	3
MATH 102	Basic Calculus	3
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 346	Applied biochemistry and biotechnology	3

## MINOR IN AGRICULTURE

### SUMMARY

SOMINA Core Course Electives Total		
CORE COL	JRSES 20 Credit	ts
AGEN 115	Introduction to Farm Machinery and Mechanization	3
AGRI 101	Crop Production Skills	1
AGRI 102	Animal Production Skills	1
AGRI 108	Introduction to Agriculture and Ecology	3
AGRI 231	Food Processing Technology	2
AGRI 295	Resource Survey Methods	3
ANSC 211	Introduction to Animal Science	3
CPSC 213	Introduction to Soils	3
HORT 223	Ornamental and Landscape Horticulture	3

#### **ELECTIVE COURSES 6** Credits AGEN 235 Tractor Operations and Maintenance 2 **Projects in Agriculture** 1 AGRI 300 2 ANSC 227 Artificial Insemination 3 ANSC 411 **Poultry Science** 3 ANSC 442 Dairy Production CPSC 314 **Crop Production I** 3 CPSC 321 Weed Science 3 2 CPSC 378 Sustainable and Conservation Agriculture 3 HORT 312 Olericulture

## **MINOR IN BIOLOGY**

#### **SUMMARY**

Core Courses	17
Option Courses	12
Total	29 Credits

CORE COL	JRSES 17 Credi	ts
BIOL 155	Foundations of Biology I	4
BIOL 156	Foundations of Biology II	4
BIOL 246	Introduction to Biotechnology	3
BIOL 250	Introduction to Biosafety	3
BIOL 296	History and Philosophy of Biology	3

### **OPTION COURSES**

#### 12 credits

Select a minimum of 12 credits from any option with at least one course with a BIOL prefix, one with a BOTN prefix and one with a ZOOL prefix



# **BACHELOR OF SCIENCE IN AGRI BUSINESS** Four-Year Course Plan

YEAR	F	FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	CODE		COURSE TITLE	Th	L	Т
	LITE 151/	Literary Appreciation/	2		2	INSY 1	07	Information Tech. today	2		2
1st	GCAS 107	Music Appreciation									
	0FTE 120	Keyboarding	0		0	RELT 2	207	Intro. to Christian Beliefs	3		3
	RELH 155	Adventist Heritage	2		2	MATH	114	Business Mathematics II	3		3
	PSYC 101/	Intro. to Psychology/	2		2	ACCT	112	Principles of Accounting II	4		4
	SOCI 121/	Sociology/									
	SWFI 207	Family Issues							_		
	MATH 113	Business Mathematics I	3		3	AGRI 1		Animal Production Skills	0	1	1
	ACCT 111	Fund Of Accounting I	4		4	AGEC		Coop Management	3		3
	AGRI 101	Crop Production Skills	0	1	1	AGEC	215	Intro. to Agribusiness	3		3
	AGRI 116A	Agriculture Ecology	2		2			Total	19	1	20
	AGRI 108	Intro. to Agriculture	1		1						
		Total	19	1	20						
	RELB 220	Life and Teachings of Jesus	2		2	RELT 2	255	Intro. to Christian Ethics	2		2
2nd	PEAC 107	Phys and Recre Games	1		1	EDUC	215	Philo of Christian Educ	2		2
	HIST 111/	Concepts of World Civi/	2		2	AGEC	295	Math Meth Agr Econ II	3		3
	HIST 119	Issues in Development Studies									
	KISW 114/	Lang Use in Kiswahili/	2		2	BIOL 2	85	Biostatistics	3		3
	FRENC 103	Beginning French II	-						_		<u> </u>
	BIOL 115	Foundations of Biology 1	3	1	4	HORT			2	1	3
	CPSC 213	Introduction to Soils	2	1	3	GEOG	255	Principles of Geographic Info. Systems	2	0	2
	ANSC 221	Intro. to Animal Science	2	1	3	AGRI 1	16B		1	0	1
	AGEC 290	Math Meth Agr Econ I	3		3			Total	15	1	16
	I	Total	17	3	20						
	ECON 210	Princ of Microecon	3		3	AGEC	330	Pers Mgmt in Agric	3		3
3rd	CHEM 121	General Chemistry 1	3	1	4	AGRI 3		Research Project	1		1
JIU	AGEC 286	Intro To Econometrics	3		3	AGEC		Agric Mktg & Price Anal	3		3
	AGRI 325	Proposal Writing Lab	1		1	AGEC	356		3		3
	CPSC 314	Crop Production I	2	1	3	AGEC	360	Agri Business Finance	3		3
	AGEC 262	Prod Econ and Oper Res	3		3	AGEC	445	Farm Mgmt. Practicum	1		1
	AGEC 345	Agricultural Economics	3		3	AGEC	327	Internal Economics	3		3
		Total	18	2	20	CPSC	325	Crop Production II	2	1	3
								Total	22	1	23
	AGEC 470	Economic Development	3		3	AGRI 4	46	Professional Internship	3		3
4th	AGEC 413	Mgmt of Agric Enterpr	2	1	3			Total	3		3
	AGRI 433	Agric. Extension & Rural Sociology	3		3						
	AGEC 455	Agric Business Mgmt	3		3						
	AGRI 499	Agriculture Seminar	1		1						
	AGEC 451	Agric Entrepre Skills	3		3						
	AGEC 420	Analy of Agric Projects	3		3						
		Total	18	1	19						



# **BACHELOR OF SCIENCE IN AGRICULTURE** Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	ENGL 105	Writing Skills	3		3	1	ENGL 106	Speech Communication	1		1
1st	LIT 151/ GCAS 107	Literary Appreciation/ Music Appreciation	2		2		INSY 107	Information Tech. Today	2		2
	0FTE 120	Keyboarding	0		0	1	RELT 207	Intro. to Christian Beliefs	3		3
	RELH 155	Adventist Heritage	2		2		MATH 102	Basic Calculus	3	1	3
	PSYC 101/ SOCI 121/ SWFI 207	Intro to Psychology/ Sociology/ Family Issues	2		2		BIOL 156	Foundations of Biology II	3	1	4
	MATH 101	Pre-Calculus	3		3		AGRI 102	Animal Production Skills	0	1	1
	BIOL 155	Foundations of Biology I	3	1	4		AGRI 116B	Agricultural Ecology Trip	1		1
	AGRI 101	Crop Production Skills	0	1	1		AGEN 115	Intro. to Farm Mach. & Mech	2	1	3
	AGRI 116A	Agriculture Ecology	2		-			Total	15	3	18
	AGRI 108	Intro. to Agriculture	1			-		lotal	15	J	10
	AGINI 100	Total	18	2	20						
		lotal	10	-	20						
	RELB 220	Life and Teach Of Jesus	2		2		RELT 255	Intro. to Christian Ethics	2		2
2nd	PEAC 107	Physical and Recreational Activities	1		1		EDUC 215	Philo of Christian Educ	2		2
	HIST 111/ HIST 119	Concepts of World Civi/ Issues in Development	2		2		CHEM 122	General Chemistry II	3	1	4
	KISW 114/ FREN 103	Lang Use in Kiswahili/ Beginning French II	2		2		AGRI 231	Food Processing Technology	1	1	2
	CHEM 121	General Chemestry 1	3	1	4	1 [	BIOL 285	Biostatistics	3		3
	CPSC 211	Introduction to Soils	2	1	3	1	HORT 223	Orna & Landscape Hort	2	1	3
	ANSC 211	Intro. to Animal Science	2	1	3		GEOG 255	Principles of Geographic Info Systems	2		2
	CPSC 279	Crop Physiology	2	1	3	1		Total	15	3	18
		Total	16	4	20	1		· · · · · · · · · · · · · · · · · · ·			
	500N 010		7		7		0000 705	Our Durch stiller II	0	4	7
	ECON 210 INSY 136	Princi of Microeconomics Microcomp Applications	3		3		CPSC 325 CPSC 321	Crop Production II Weed Science	2	1	3
3rd	BIOL 446	Genetics	2	1	3		CPSC 311	Soil Fertility and Fertilizers	2	1	3
	AGRI 325	Proposal Writing Lab	1	1	1		AGRI 398	Research Project	1		1
	CPSC 314	Crop Production I	2	1	3		ANSC 323/ CPSC 324	Animal Breeding/ Plant Breeding	2	1	3
	AGEC 345	Agriculture Economics	3		3	1	HORT 312	Olericulture	2	1	3
	CPSC 373	Soil & Water Conservation	2		2			Elective	4		4
		Total	16	2	- 18	-		Total	15	5	20
				-						Ŭ	
1+h	ANSC 432	Animal Nutrition & Feeding	2	1	3		AGRI 466	Professional Internship	3		
4th	CPSC 412	Crop Protection	2	1	3			Total	3		
	ANSC 442	Dairy Production	2	1	3						
	AGEC 413	Man of Agric. Enter	2	1	3	1					
	AGRI 433	Agricultural Extension and Rural Sociology	3		3						
	AGRI 499	Agriculture Seminar	1		1	1					
		Total	14	5	19	1					



# **BACHELOR OF SCIENCE IN AGRICULTURE ANIMAL SCIENCE OPTION**

# Four-Year Course Plan

YEAR		FIRST SEMESTER			-			SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	1 [	CODE	COURSE TITLE	Th	L	Т
	ENGL 105	Writing Skills	3		3	1	ENGL 106	Speech Communication	1		1
1st	LITE 151/ GCAS 107	Literary Appreciation/ Music Appreciation	2		2		INSY 107	Information Tech. Today	2		2
	0FTE 120	Keyboarding	0		0	1	RELT 207	Intro. to Christian Beliefs	3		3
	RELH 155	Adventist Heritage	2		2	1 [	BIOL 156	Foundations of Biology II	3	1	4
	PSYC 101/ SOCI 121/ SWFI 207	Intro. to Psychology/ Sociology/ Family Issues	2		2		MATH 102	Basic Calculus	3		3
	MATH 101	Pre-Calculus	3		3	1 [	AGRI 102	Animal Production Skills	0	1	1
	BIOL 155	Foundations of Biology 1	3	1	4	1	AGRI 116B	Agricultural Ecology Trip	1		1
	AGRI 101	Crop Production Skills	0	1	1	1	AGEN 115	Intro. to Farm Mach. & Mech	2	1	3
	AGRI 116A	Agriculture Ecology	2		2	1	ANSC 245	Livestock Practicum	1		1
	AGRI 108	Intro. to Agriculture	1		1	1		Total	16	3	19
		Total	18	2	20				1		
	RELB 220	Life and Teach Of Jesus	2		2		RELT 255	Intro. to Christian Ethics	2		2
2nd	PEAC 107	Physical and Recreational Activities	1		1		EDUC 215	Philo of Christian Educ	2		2
	HIST 111/ HIST 119	Concepts of World Civi/ Issues In Development Studies	2		2		CHEM 112	General Chemistry II	3	1	4
	KISW 114/ FREN 103	Lang Use in Kiswahili/ Beginning French II	2		2		ANSC 232	Apiculture	2	1	3
	CHEM 121	General Chemestry I	3	1	4	1 [	BIOL 285	Biostatistics	3		3
	CPSC 213	Introduction to Soils	2	1	3		GEOG 255	Principles of Geographic Info Systems	2		2
	ANSC 221	Intro to Animal Science	2	1	3			Total	14	2	16
	CPSC 279	Crop Physiology	2	1	3	1 [					
		Total	16	4	20						
	ECON 210	Princi of Microeconomics	3		3		AGRI 398	Research Project	1		1
3rd	INSY 136	Microcomp Applications	3		3	J L	ANSC 232	Animal Breeding	3		3
ora	BIOL 446	Genetics	2	1	3	1	ANSC 310	Aquaculture	3		3
	AGRI 325	Proposal Writing Laboratory	1		1		AGEN 311	Construction of Farm Structures	2	1	3
	AGEC 345	Agriculture Economics	3		3		ANSC 315	Dairy Practicum	1		1
	ANSC 300	Process & Mktg of Ani Pro	3		3		CPSC 333	Pasture & Forage Prod	2	1	3
	ANSC 222	Ruminant Husbandry	3		3		ANSC 421	Reproductive Physiology and Artificial Insemination	2	1	3
		Total	18	1	19	1		Elective	3		3
								Total	17	3	20
	ANSC 411	Poultry Science	2	1	3		AGRI 466	Professional Internship	3		3
4th	ANSC 432	Animal Nutrition & Feeding	2	1	3	1		Total	3		3
	ANSC 442	· · · · ·	2	1	3	1					
	AGEC 413	Mgnt. of Agriculture Enterprises	2	1	3	1					
	AGRI 433	Agric. Ext. & Rural Sociolgy	3		3	]					
	AGRI 499	Agriculture Seminar	1		1						
	ANSC 453	Animal Paras & Disea	2	1	3						
		Total	14	5	19						



# BACHELOR OF SCIENCE IN AGRICULTURE CROP AND SOIL SCIENCE OPTION Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
1st	LITE 151/ GCAS 107	Literary Appreciation/ Music Appreciation	2		2		INSY 107	Information Technology Today	2		2
	0FTE 120	Keyboarding	0		0		RELT 207	Intro. to Christian Beliefs	3		3
	RELH 155	Adventist Heritage	2		2		MATH 102	Basic Calculus	3		3
	PSYC 101/	Intro. to Psychology/	2		2		BIOL 156	Foundations of Biology II	3	1	4
	SOCI 121/	Sociology/									
	SWFI 207	Family Issues			_						
	MATH 101	Pre-Calculus	3		3		AGEN 115	Intro. to Farm Mach & Mech	2	1	3
	BIOL 155	Foundations of Biology I	3	1	4		AGRI 116B	Agricultural Ecology (Field Trip)	1		1
	AGRI 101	Crop Production Skills	0	1	1			Total	15	2	17
	AGRI 116A	Agriculture Ecology	2		2						
	AGRI 108	Intro. to Agriculture	1		1						
		Total	18	2	20						
	RELB 220	Life and Teachings of Jesus	2		2		RELT 255	Intro. to Christian Ethics	2		2
2nd	PEAC 107	Physical and Recreational Activities	1		1		EDUC 215	Philo of Christian Educ	2		2
	HIST 111/ HIST 119	Concepts of World Civi/ Issues in Development Studies	2		2		CHEM 122	General Chemistry II	3	1	4
	KISW 114/ FREN 103	Lang Use in Kiswahili/ Beginning French II	2		2		BIOL 285	Biostatistics	3		3
	CHEM 121	General Chemistry I	3	1	4	] [	CPSC 326	Seed Prod Technology	2	1	3
	CPSC 211	Introduction to Soils	2	1	3		CPSC 333	Pasture & Forage Prod	2	1	3
	AGRI 231	Food Processing Technologies	2		2		AGEN 235	Tractor Operation & Maintenance	1	1	2
	CPAS 279	Crop Physiology	2	1	3		GEOG 255	Principles of Geographic Information Systems	2		2
		Total	16	3	19			Total	17	4	21
	INSY 136	Microcomp Applications	3		3		AGRI 398	Research Project	1		1
3rd	BIOL 449	Genetics	2	1	3		CPSC 321	Weed Science	2	1	3
JIU	ECON 210	Princ of Micro-Econ	3		3		CPSC 311	Soil Fertility and Fertilizer	2	1	3
	AGRI 235	Proposal Writing Lab	1		1		CPSC 324	Plant Breeding	2	1	3
	CPSC 314	Crop Production I	2	1	3		CPSC 325	Crop Production II	2	1	3
	AGEC 345	Agricultural Economics	3		3		HORT 312	Olericulture	2	1	3
	CPSC 373	Soil and Water Conserv	2		2			Elective	3		3
		Total	16	2	18			Total	14	5	19
441.	AGEC 413	Mgmt of Agric Enter	2	1	3		AGRI 466	Professional Internship	3		3
4th	AGRI 433	Agric Exte & Rural Socio	3		3			Total	3		3
	AGRI 499	Agriculture Seminar	1		1						
	CPSC 412	Crop Protection	2	1	3	1					
	CPSC 411	Soil Management	2	1	3	]					
	CPSC 422	Crop Harv, Proc & Mhtg	2	1	3	]					
	CPSC 345	Crops Practicum	1		1						
	CPSC 378	Sust and Conserv Agric	2		2						
		Total	15	4	19						

# BACHELOR OF SCIENCE IN AGRICULTURE HORTICULTURE OPTION

# Four-Year Course Plan

YEAR		FIRST SEMESTER					SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	CODE	COURSE TITLE	Th	L	Т
	ENGL 105	Writing Skills	3		3	ENGL 10	D6 Speech Communication	1		1
1st	LITE 151/ GCAS 107	Literary Appreciation/ Music Appreciation	2		2	INSY 10	7 Information Tech. Today	2		2
	0FTE 120	Keyboarding	0		0	RELT 20	07 Intro. to Christian Beliefs	3		3
	RELH 155	Adventist Heritage	2		2	MATH 1	02 Basic Calculus	3		3
	PSYC 101/ SOCI 121/ SWFI 207	Intro. to Psychology/ Sociology/ Family Issues	2		2	BIOL 15	6 Foundations of Biology II	3	1	4
	MATH 101	Pre-Calculus	3		3	AGEN 1	15 Intro. to Farm Mach & Mech	2	1	3
	BIOL 155	Foundations of Biology 1	3	1	4	AGRI 11	6B Agric Ecology Trip	1		1
	AGRI 101	Crop Production Skills		1	1		Total	15	2	17
	AGRI 116A	Agriculture Ecology	2		2					<u> </u>
	AGRI 108	Intro. to Agriculture	1		1					
		Total	18	2	20					
	RELB 220	Life and Teach of Jesus	2		2	RELT 25	5 Intro. to Christian Ethics	2		2
2nd	PEAC 107	Physical and Recreational Activities	1		1	EDUC 2	15 Philosopy of Christian Education	2		2
	HIST 111/ HIST 119	Concepts of World Civi/ Issues In Development Studies	2		2	CHEM 1		3	1	4
	KISW 114/ FREN 103	Lang Use in Kiswahili/ Beginning French II	2		2	HORT 2	12 Propagation of Hort Plants	2	1	3
	CHEM 121	General Chemistry I	3	1	4	BIOL 28	Biostatistics	3		3
	HORT 113	Funds of Horticulture	3		3	HORT 2	45 Veg Pro Practicum	1		1
	CPSC 213	Introduction to Soils	2	1	3	HORT 2	33 Orna & Landscape Hort	2	1	3
	HORT 235	Horticulture Practicum	1		1	GEOG 2	55 Principles of Geographic Info Systems	2		2
	CPSC 279	Crop Physiology	2	1	3		Total	17	3	20
		Total	18	3	21					
	ECON 210	Princ Of Microecon	3		3	AGRI 39	8 Research Project	1		1
3rd	BIOL 449	Genetics	2	1	3	CPSC 3		2	1	3
JIU	INSY 136	Microcomp Applications	3		3	CPSC 3	11 Soil Fertility and Fertilizer	2	1	3
	AGRI 325	Proposal Writing Lab	1		1	CPSC 3	Ţ	2	1	3
	CPSC 314	Crop Production I	2	1	3	AGEN 3		2	1	3
	AGEC 345	Agricultural Economics	3		3	HORT 3		2	1	3
	HORT 210	Greenhouse Crop Mgmt	2	1	3	HORT 3		2	1	3
		Total	16	3	19		Total	13	6	19
	HORT 411	Handling, Pro, Storage	2	1	3	AGRI 44	6 Professional Internship	3		3
4th	AGEC 413	Mgmt Of Agric Enter	2	1	3		Total	3		3
	AGRI 433	Agric Ext & Rural Socio	3		3					
	AGRI 499	Agriculture Seminar	1		1					
	CPSC 412	Crop Protection	2	1	3					
	HORT 409	Field Trips	1		1					
	HORT 323	Fruits Nuts And Spices	2	1	3					
		Total	13	4	17					



# **BACHELOR OF SCIENCE IN BIOLOGY (GENERAL)**

# Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	T
	BIOL 155	Foundations of Biology I	3	1	4		BIOL 156	Foundations of Biology II	3	1	4
1st	CHEM 121	General Chemistry I	3	1	4		BIOL 176	Introduction to Microbiology	2	1	3
	MATH 101	Pre-Calculus	3		3		CHEM 121	General Chemistry II	3	1	4
	LITE 151/	Intro. to Literary Appreciation/	2		2	1	MATH 102	Basic Calculus	3		3
	GCAS 107	Music Appreciation									
	ENGL 105	Writing Skills	3		3		INSY 107	Information Technology Today	2		2
	RELH 155	Adventist Heritage	2		2		ENGL 106	Speech Communication	1		1
	PSYC 101/	Introduction to Psychology/	2		2		RELT 207	Christian Beliefs	3		3
	SOCI 121/ SWFI 207	Sociology/ Family Issues									
	OFTE 1207	Keyboarding	0		0		VOC SKL	Any Vocational Course	1		1
		Total	18	2	20	-	VUC SIL	Total	18	3	21
		IU(di	10	2	20			IUCAI	10	J	21
	BIOL 293	Cell Biology	2	1	3		BIOL 286	General Ecology	2	1	3
2nd	BIOL 296	History & Philosopy of Biology	3		3		PHYS 165	Heat and Thermodynamics	2	1	3
	BIOL 246	Intro. to Biotechnology	2	1	3		BIOL285	Biostatistics	3		3
	PHYS 155	General Physics	2	1	3		RELT 255	Introduction to Christian Ethics	2		2
	PEAC 107	Physical and Recreational	1		1		EDUC 215	Intro. Philosophy of Christian	2		2
		Activities						Education			
	RELT 220	Life and Teachings of Jesus	2		2			Total	11	2	13
	FREN 103/	Beginning French II/	2		2						
	KISW 114	Language Use in Kiswahili	-		-	-					
	HIST 111/ HIST 119	Concept of World Civ./ Issues in Development Studies	2		2						
		Total	16	3	19	-					
				•							
	BIOL 326	Bioinformatics	2	1	3		ZOOL 300	Group B	2	1	3
3rd	BOTN 300	Group A	2	1	3			Botany Course	2	1	3
	Z00L 300	Group A	2	1	3		Z00L 300	Group B	2	1	3
	Z00L 300	Group C	2	1	3	-	CHEM 212	Organic Chemistry II Elective	3	1	4
	CHEM 211	Organic Chemisry I		1	4	-			2		3
	BIOL 451	Biology Seminar I	2		2		BIOL 452	Biology Seminar II	2		2
		Total	13	5	18			Total	13	5	18
	BIOL 447	Molecular Biology	2	1	3		BIOL 449	Genetics	2	1	3
4th		Elective	2	1	3	1	BIOL 484	Biology Practicum	4		+
		Zoology	2	1	3	1	-	Total	6	1	7
	CHEM 310	Biochem Life Sciences	3	1	4					I	
	BIOL 400	Group C	3		3						
		Total	12	4	16	1					

# BACHELOR OF SCIENCE IN BIOLOGY (BIOMEDICAL OPTION)

## Four-Year Course Plan

YEAR		FIRST SEMESTER					SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	CODE	COURSE TITLE	Th	L	Т
	BIOL 155	Foundations of Biology I	3	1	4	BIOL 156	Foundations of Biology II	3	1	4
1st	CHEM 121	General Chemistry I	3	1	4	BIOL 176	Introduction to Microbiology	2	1	3
	MATH 101	Pre-Calculus				CHEM 121	General Chemistry II	3	1	4
	GCAS 107/ Lite 151	Music Appreciation/ Introduction to Literary Appreciation	2		2	MATH 102	Basic Calculus	3		3
	ENGL 105	Writing Skills	3		3	<b>INSY 107</b>	Information Technology Today	2		2
	RELH 155	Adventist Heritage				ENGL 106	Speech Communication	1		1
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2		2	RELT 207	Christian Beliefs	3		3
	OFTE 120	Keyboarding	0		0	VOC SKL	Any Vocational Course	1		1
		Total	18	2	20		Total	18	3	21
	BIOL 293	Cell Biology	2	1	3	BIOL 286	General Ecology	2	1	3
2nd	BIOL 296	History and Philosophy of Biology.	3		3	<b>PHYS 165</b>	Heat and Thermodynamics	2	1	3
	BIOL 246	Intro. to Biotechnology				BIOL285	Biostatistics	3		3
	PHYS 155	General Physics	2	1	3	RELT 255	Introduction to Christian Ethics	2		2
	PEAC 107	Physical and Recreational Activities	1		1	EDUC 215	Intro. Philosophy of Christian Education	2		2
	RELT 220	Life and Teachings of Jesus	2		2		Total	11	2	13
	FREN 103/ KISW 114	Beginning French II/ Language Use in Kiswahili	2		2					
	HIST 111/ HIST 119	Concept of World Civ./ Issues in Development Studies	2		2					
		Total	16	3	19					
	BIOL 326	Bioinformatics	2	1	3		Option Course	2	1	3
3rd		Option Course	2	1	3		Option Course	2	1	3
		Botany Course	2	1	3		Elective	3	0	3
		Option Course	2	1	3	CHEM 212	Organic Chemistry II	3	1	4
	CHEM 211	Organic Chemisry I	3	1	4	BIOL 452	Biology Seminar II	2		2
	BIOL 451	Biology Seminar I	2		2		Total	12	3	15
		Total	13	5	18					
	BIOL 447	Molecular Biology	2	1	3	BIOL 449	Genetics	2	1	3
4th	5101 44/	Option Course	2	1	3	BIOL 449 BIOL 484	Biology Practicum	4	1	4
	CHEM 310	Biochem Life Sciences	3	1	4		Total	6	1	7
		Elective	2	1	- 3					1
		Option Course	2	1	3					
		Group A Zoology Course	2	1	3					



# BACHELOR OF SCIENCE IN BIOLOGY (BIOTECHNOLOGY OPTION)

# Four-Year Course Plan and Checklist

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	BIOL 155	Foundations of Biology I	3	1	4		BIOL 156	Foundations of Biology II	3	1	4
1st	CHEM 121	General Chemistry I	3	1	4		BIOL 176	Introduction to Microbiology	2	1	3
	MATH 101	Pre-Calculus	3		3		CHEM 121	General Chemistry II	3	1	4
	GCAS 107/ LITE 151	Music Appreciation/ Introduction to Literary Appreciation	2		2		MATH 102	Basic Calculus	3	0	3
	ENGL 105	Writing Skills	3		3		INSY 107	Information Technology Today	2	0	2
	RELH 155	Adventist Heritage	2		2		ENGL 106	Speech Communication	1	0	1
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2		2		RELT 207	Christian Beliefs	3	0	3
	0FTE 120	Keyboarding	0		0		VOC SKL	Any Vocational Course	1	0	1
		Total	18	2	20			Total	18	3	21
	BIOL 293	Cell Biology	2	1	3		BIOL 286	General Ecology	2	1	3
2nd	BIOL 296	History and Philosophy of Biology	3		3		PHYS 165	Heat and Thermodynamics	2	1	3
	BIOL 246	Intro. to Biotechnology	2	1	3		BIOL285	Biostatistics	3		3
	PHYS 155	General Physics	2	1	3		RELT 255	Introduction to Christian Ethics	2		2
	PEAC 107	Physical & Recreational Activities	1		1		EDUC 215	Intro. Philosophy of Christian Education	2		2
	RELT 220	Life and Teachings of Jesus	2		2			Total	11	2	13
	KISW 114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2		2						
	HIST 111/ HIST 119	Concept of World Civ/ Issues in Development Studies	2		2						
		Total	16	3	19						
	BIOL 326	Bioinformatics	2	1	3			Botany Course	2	1	3
3rd	BIOT 330	Environmental Biotechnology	3		3	1	BIOT 335	Animal Biotechnology	2	1	3
	BIOT 334	Plant Biotechnology	2	1	3			Zoology Course	2	1	3
		Elective	2	1	3		CHEM 212	Organic Chemistry II	3	1	4
	CHEM 211	Organic Chemistry I	3	1	4		BIOL 452	Biology Seminar II	2		2
	BIOL 451	Biology Seminar I	2		2			Total	11	4	15
		Total	14	4	18						
441.	BIOL 447	Molecular Biology	2	1	3		BIOL 449	Genetics	2	1	3
4th		Elective	2	1	3		BIOL 484	Practicum	4		4
	BIOT 451	Microbial Biotechnology	2	1	3		BIOT 455	Biotechnology in Agriculture and Health	2	1	3
	CHEM 310	Biochem Life Sciences	3	1	4		BIOT 453	Recombinant DNA Technology	2	1	3
		Total	9	4	13	1		Total	10	3	13

# **BACHELOR OF SCIENCE IN BIOLOGY (CONSERVATION OPTION)**

# Four-Year Course Plan and Checklist

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	BIOL 155	Foundations of Biology I	3	1	4		BIOL 156 A	Foundations of Biology II	3	1	4
1st	CHEM 121	General Chemistry I	3	1	4		BIOL 176	Introduction To Microbiology	2	1	3
	MATH 101	Pre-Calculus	3		3		CHEM 121	General Chemistry II	3	1	4
	GCAS 107/ Lite 151	Music Appreciation/ Introduction to Literary Appreciation	2		2		MATH 102	Basic Calculus	3		3
	ENGL 105	Writing Skills	3		3		INSY 107	Information Technology Today	2		2
	RELH 155	Adventist Heritage	2		2		ENGL 106	Speech Communication	1		1
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2		2		RELT 207	Christian Beliefs	3		3
	OFTE 120	Keyboarding	0		0		VOC SKL	Any Vocational Course	1		1
		Total	18	2	20			Total	18	3	21
	BIOL 293	Cell Biology	2	1	3		BIOL 286	General Ecology	2	1	3
2nd	BIOL 296	History and Philosophy of Biology	3		3		PHYS 165	Heat and Thermodynamics	2	1	3
	BIOL 246	Intro. to Biotechnology	3		3		BIOL285	Biostatistics	3		3
	PHYS 155	General Physics	2	1	3		RELT 255	Introduction to Christian Ethics	2		2
	PEAC 107	Physical & Recreational Activities	1		1		EDUC 215	Intr. Philosophy of Christian Education	2		2
	RELT 220	Life and Teachings of Jesus	2		2			Total	11	2	13
	KISW 114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2		2						
	HIST 111/ HIST 119	Concept of World Civ/ Issues in Development Studies	2		2						
		Total	17	2	19						
	BIOL 326	Bioinformatics	2	1	3			Option Course	2	1	3
3rd		Option Course	2	1	3			Group B	2	1	3
		Botany Course	2	1	3			Option Course	2	1	3
		Option Course	2	1	3		CHEM 212	Organic Chemistry II	3	1	4
	CHEM 211	Organic Chemistry I	3	1	4		BIOL 452	Biology Seminar II	2		2
	BIOL 451	Biology Seminar I	2		2			Elective	3		3
		Total	13	5	18			Total	14	4	18
4.1	BIOL 447	Molecular Biology	2	1	3		BIOL 449	Genetics	2	1	3
4th		Elective	2	1	3	1	BIOL 484	Biology Practicum	4		4
		Option Course	2	1	3	1	BIOL 449	Genetics	2	1	3
	CHEM 310	Biochem Life Sciences	3	1	4	1	BIOL 484	Biology Practicum	4		4
		Option Course	2	1	3			Total	6	1	7
		Total	10	6	16						



# **BACHELOR OF SCIENCE IN BIOLOGY (MICROBIOLOGY OPTION)**

# Four-Year Course Plan and Checklist

YEAR		FIRST SEMESTER					SECOND SEMESTER	2		
	CODE	COURSE TITLE	Th	L	Т	CODE	COURSE TITLE	Th	L	Т
	BIOL 155	Foundations of Biology I	3	1	4	BIOL 15	56 Foundations of Biology II	3	1	4
1st	CHEM 121	General Chemistry I	3	1	4	BIOL 17	76 Introduction to Microbiology	2	1	3
	MATH 101	Pre-Calculus	3		3	CHEM '	121 General Chemistry II	3	1	4
	GCAS 107/ LITE 151	Music Appreciation/ Introduction to Literary	2		2	MATH 1	102 Basic Calculus	3		3
	ENOL 405	Appreciation	-		-	11101/10				-
	ENGL 105	Writing Skills	3		3	INSY 10	0, ,			3
	RELH 155	Adventist Heritage	2		2	ENGL 1		1		1
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2		2	RELT 20	07 Christian Beliefs	3		3
	0FTE 120	Keyboarding	0		0	VOC SK	KL Any Vocational Course	1		1
		Total	18	2	20		Total	18	3	21
	BIOL 293	Cell Biology	2	1	3	BIOL 28	86 General Ecology	2	1	3
2nd	BIOL 296	History and Philosophy of Biology	3		3	PHYS 1	165 Heat and Thermodynamics	2	1	3
	BIOL 246	Intro. to Biotechnology	3		3	BIOL28	Biostatistics	3	0	3
	PHYS 155	General Physics	2	1	3	RELT 25	55 Introduction to Christian Ethic	s 2		2
	PEAC 107	Physical & Recreational Activities	1		1	EDUC 2	215 Intr. philosophy of Christian Education	2		2
	RELT 220	Life and Teachings of Jesus	2		2		Total	11	2	13
	KISW 114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2		2			i		_
	HIST 111/ HIST 119	Concept of World Civ./ Issues in Development Studies	2		2					
		Total	17	2	19					
	BIOL 326	Bioinformatics	2	1	3		Option Course	2	1	3
3rd		Option Course	2	1	3		Elective	2	1	3
		Option Course	3		3	CHEM 2	212 Organic Chemistry II	3	1	4
	CHEM 211	Organic Chemistry I	3	1	4	BIOL 45	52 Biology Seminar II	2		2
	BIOL 451	Biology Seminar I	2		2		Option Course	3		3
		Elective	2	1	3		Total	12	3	15
		Total	14	4	18					
4.1	BIOL 447	Molecular Biology	2	1	3	BIOL 44	49 Genetics	2	1	3
4th		Option Course	2	1	3	BIOL 48	84 Practicum	4		4
		Botany Course	2	1	3		Option Course	2	1	3
	CHEM 310	Biochemistry for Life Sciences	3	1	4		Total	8	2	10
		Zoology Course	2	1	3					
		Total	11	5	16					

# **Course Descriptions**

#### AGEC 215 Introduction to Agri-business **3 Credits**

This course covers the fundamentals of agribusiness including: Concepts and tools of agribusiness, the structure of agribusiness, goals, strategies, objectives, plans, targets and tactics in agribusiness: nature of decisions in agribusiness: organizations of production, processing, storage and distribution of agricultural commodities, equipment and farm supplies. Three lectures per week. Prerequisites: Sophomore standing in Agriculture and Departmental approval.

#### AGEC 227 Cooperative Management **3 Credits**

This course deals with the definition and philosophies of cooperation; cooperative principles, organization and structure, operations and management, contributions to the national economy, cooperative performance, management problems and the role of government in cooperative development. Three lecture hours per week.

#### AGEC 258 Financial Management in **3 Credits A**ariculture

The course deals with financial management in agriculture; nature and scope of financial management, managerial goals. financial analysis, planning and control, capital structure, liquidity, risk and fraud management, financial markets in agriculture, types of record books and accounts, cash analysis, depreciation methods and stock taking, financial statements; balance sheet, income statement, cash flow statements, analysis and interpretation of financial statement; farm records and accounts for internal control and external appraisal, budgeting and types of budgets. Three lecture hours per week.

#### AGEC 261 Intermediate Microeconomic **3 Credits** Theory

The course covers consumer demand theory; theory of consumer choice; equilibrium of the consumer; use of the consumer demand theory; theory of the firm; market factor pricing; general equilibrium analysis. Three lecture hours per week.

#### AGEC 262 Production Economics and **3 Credits Operations Research**

In this course, topics to be covered include: Scope of production economics, Production environment, Nature and characteristics of production, Factors of productions, risk and uncertainty, Production functions, risk and uncertainty; production functions: Concepts of production functions; physical product, average product, marginal product, elasticity of production; law of diminishing returns and three stages of production; technical and economic efficiency; costs concepts in production; economies and diseconomies of scale; production relationships and decision making; factor product, factor-factor, factorproduct product technological change; correlation analysis techniques, simple linear programming solutions, simplex methods, econometrics and economic theory; maximizing versus minimizing techniques; dummy variable; forecasting models. Three lecture hours per week.

#### AGEC 286 Introduction to Econometrics

**3 Credits** The topics to be covered in this course include: definition, scope and divisions of econometrics, methodology of econometric research, correlation theory, simple linear regression models, ordinary least squares (OLS), assumptions of OLS, significance tests: R2, F-tests, T-tests, the assumption of randomness, zero mean, constant variance and normality of the disturbance variable, homoscedasticity, heteroscedasticity, autocorrelation, multi-collinearity and errors in variable, introduction to simultaneous equations in econometrics, statistical estimation and hypothesis testing, correlation analysis, types of limitations of correlation method, applications of simple linear regression models, detection methods and estimation techniques of homoscedasticity, heteroscedasticity, autocorrelation, multicollinearity, and errors in variables, the use of simultaneous equations, models in econometric analysis, the problem of identification in econometrics. Three lecture hours per week.

#### AGEC 290 Mathematical Methods for **3 Credits Agricultural Economists**

Topics to be covered include mathematical techniques used in analyzing economic problems, set theory, static analysis, linear models and matrix algebra, functions and rate of change, the concept of derivatives and their applications in economics, the derivatives and the rules of differentiation, the concept of integration, definite and infinite integrals, exponents and logarithms and introduction to linear programming. Prerequisites: MATH 113 and MATH 114.

#### AGEC 295 Mathematical Methods for **3 Credits** Agricultural Economists II

Introduction to economic functions, differential and difference equations and their uses in economics, use of comparative statics in mathematical economics, mathematical optimization, techniques including constrained and logarithmic functions in economics, mathematical programming including solution, use of Lindo and Tora linear programming software, linear programming using a graphic approach and the simplex algorithm. Three lecture hours per week. Prerequisite: AGEC290.

#### AGEC 315 Agricultural Marketing and **3 Credits Value Chain Analysis**

Topics covered under this course include: The marketing concept of marketing approaches, the marketing mix, future markets, product planning and role of marketing in the economy and in development, organization of agricultural marketing, advertising and public relations, sales promotion and physical distribution of agricultural products, commodity marketing, stock and commodity exchange, analysis of supply and demand and elasticity of some named agricultural commodities and, role of marketing in economic development.. The course will also cover the whole series of activities that create and build value at every step of the business enterprise (Value Chain). Three lectures per week. Prerequisite: ECON 210.

#### AGEC 327 International Economics **3 Credits**

The course covers the importance of agricultural exports to Kenya's economy, channels for Kenyan agricultural exports, export linkages between production for export and the use of domestic economy, intra-African trade, regional with reference to COMESA and the European economic community, role

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of agriculture in import substitution and export promotion development strategies, form of foreign assistance, balance of payments disequilibrium and adjustment, foreign exchange control and polices, international material movements of capital, theory of comparative advantage and gains from trade. Three lecture hours per week.

#### AGEC 330 Personnel Management in 3 Credits Agriculture

This course covers principles and practices that are used for employee planning recruitment in the agricultural sector, focusing on skills for efficient productivity from the employees. It includes employer /employee relationships, motivation, human resource legislation, training, orientation to safety and environmental concerns, discipline issues, team building and performance appraisals.

#### AGEC 345 Agricultural Economics

#### **3 Credits**

The course covers the economics of agricultural production and trade, including population and food policies. Topics include; the role of Agriculture in economic development, theory of Agricultural production, farm-planning control, Agricultural marketing and international trade in Agriculture, and Food policies and food security in less developed economies. Three lecture hours each week. Prerequisites: ECON 210 and Junior standing in Agriculture Department.

### AGEC 356 Agricultural Policy and 3 Credits Business Law

The course covers basic elements of strategic planning, analytical sequence for problem solving, and sensitivity analysis. Other topics include: agricultural sector policies, production policy, marketing policy, agribusiness development planning, resource use and financing policies, multinationals and developing countries, agribusiness and economic development. Foundations of Agrarian law; the development of land use law; the development of property law; aspects of Land Control Act; Aspects of the Agricultural Act; aspects of the Agricultural Finance Act; a lot of emphasis will be on the Agricultural Act and some basics of the Contract Act. Threelectures per week. Prerequisites: AGEC 215 and Junior standing in Agriculture Department.

#### AGEC 360 Agri-Business Financing

#### 3 Credits

Topics covered in this course include micro-agricultural finance to farm and agribusiness, elementary mathematics of finance and objectives of financial management, analysis of financial ratios and uses of financial statements, cash-flow analysis, capital investment theory and applications, investment appraisal and costs of capital to agribusiness, financial management decisions. Three-lectures per week. Prerequisite: AGEC 345.

#### AGEC 413 Management of 3 Credits Agricultural Enterprises

The course deals with the organization and management of agricultural enterprises including production units, power and equipment, use of physical and financial records, marketing and other factors affecting management and the attainment of maximum yields and profits. In the laboratory the student identify a farmer and works with him/her throughout the semester, farm plan, resources available, decision making, financial management etc. the student submits a report at the end of the semester.

#### AGEC 420 Analysis of Agricultural 3 Credits Projects

The course introduces the student to the concept of an Agricultural development project, preparation and financing of project costs and benefits and other measures of project worth. Using case studies, simple farm income analysis will also be covered. Students will identify a project, do an analysis of it, and present a paper at the end of the semester. Three lectures per week.

#### AGEC 445 Farm Management Practicum 1 Credit

Areas of emphasis for this course include: Hands-on experience in the management of production units, power and equipment, records and marketing. At least two clock hours per week are required per credit. Prerequisite: ECON 210 or senior standing in Agriculture Department.

#### AGEC 451 Agricultural Entrepreneurship 3 Credits

This course covers enterprises and national economy, economics of crop production: the cereals enterprise, the leguminous crop enterprise; the sugarcane enterprise, the fodder crop enterprise; the economics of horticultural enterprises; farm data and their importance; methods of data collection; types of records and accounts; the cash analysis books; depreciation methods; valuation and stock taking, financial statements; balance sheets and income statement accounts. Three lecture hours per week.

#### AGEC 455 Agribusiness Management 3 Credits

The course covers functions of management and organizational theories, motivation and group dynamics; nature of decisions and plans, decision- making and uncertainty; efficiency studies; Agribusiness analysis and control for macro and micro-business; strategic development in Agribusiness. Threelectures per week.

#### AGEC 470 Economics of Development 3 Credits

The course covers historical aspects of economic development, the importance of agriculture in economic development, the food problem and growth of labor force, comparative analysis of agrarian systems in Latin America, Africa and Asia. Concept of economic development, meaning of growth and economic development, international economic issues, the peasant exports conflicting view. The course also covers institutional background of some world organizations such as GATT, UNCTAD and the World Bank and current problems of primary exporters. The role of government, planning and administration, emphasis on industrialization and economic planning, technology and resource endowment, strategies for agricultural development, technology and innovation, the green revolution, the uni-model and bi-model approach, the institutional frame work and case studies. Three lecture hours per week.

### AGEN 115 Introduction to Farm Machinery 3 Credits and Mechanization

This course covers a wide spectrum of equipment used in the various branches of agriculture such as crops, horticulture, livestock, food or feed handling, storage and processing. Theoretical aspects will include an introduction to the principle of force, work, simple machines, mechanics, power transmission and sources of farm power. Tillage equipment and essential components of the internal combustion engine will also be covered. In addition farm machinery depreciation. cost determinants, machine life, calibration and maintenance will be considered. The laboratory will involve identification of specific equipment, primary, secondary and tertiary tillage equipment, parts of an internal combustion engine, how they work and calculations on machine capacity etc. Two lecture hours and one laboratory per week.

#### AGEN 235 Tractor Operations and Maintenance

2 Credits

The course is designed to teach students the essentials of tractor operations and maintenance. A total of 6 theory hours are required for this course. Students will be examined on the theory component of the course. The practical part will involve tractor-driving skills and at the end of the course the Students will be examined on how to operate and drive the farm tractor.

#### AGEN 311 Construction of Farm Structures 3 Credits

Introduction to planning and setting of farm structures (fences, crushes, stores, calf pens, dairy shed, poultry houses, fishpond, beehives). Factors in the site selection of the farmstead. Materials used in the construction of farm structures. In the lab the students will design, construct and maintain fences, construct farm structures such as mini-green houses, mushroom home etc. Two hours of lecture and three hours of laboratory per week

#### AGEN 315 Animal Traction Practicum

In this course the student will develop skills in handling and training of farm animals to provide source of power for primary tillage, cultivation and transportation. The student will learn how to make appropriate shelter animal harness and provide proper nutrition for draft animals. The acquired skills will be used in the department during the duration of the course. Requires three clock hours per week per credit.

#### AGEN 332 Irrigation and Drainage

A study of various irrigation methods, Soil-water relationships and general management practices of irrigated agriculture. Types, operations and maintenance of water pumps and other selected irrigation equipment will be studied. In the lab students are expected to visit a typical irrigation scheme. Participation in actual irrigation within campus e.g. drip and sprinkler systems. Estimate amounts of water applied, period of time and do actual calculations on water retention capacities of drip. Design a simple drip irrigation system. Two lecture hours and three hours of laboratory each week

#### AGRI 101 Crop Production Skills

1 credit

This is a hands-on course to develop practical crop production skills in students. The laboratory sessions include practicals to develop skills in operations such as: land preparation, planting, care of crops, vegetables, orchards, harvesting and storage, organic farming, compost making and management of greenhouses. Students will be assigned additional duties to reinforce what was covered in the labs in order to develop positive attributes such as dependability. One three-hour laboratory every week.

#### AGRI 102 Animal Production Skills

1 credit

1 Credit

2 Credits

2 Credits

This is a hands on course to develop animal production skills in students. The skills covered are: animal handling and restraining techniques, dehorning, castrating, de-beaking, product harvest, feed preparation and formulation, feeding, animal hygiene practices, farm structure repairing and maintenance, Additional duties will be assigned to students to reinforce learnt skills and to develop positive attributes such as dependability. One threehour laboratory every week.

#### AGRI 105 Principles of Agricultural 2 Credits **Technologies**

The course is designed to create awareness in the importance. influence and contribution of agriculture to human development. The student will acquire practical skills essential for food production and food security. The course is open to all non-agricultural majors. One hour of lecture and three hours of laboratory every week.

### AGRI 108 Introduction to Agriculture

Introduction to modern agricultural systems, their evolution and history. Considers elements of agriculture, agricultural development and its contribution to national economic development and food security especially in tropical Africa.

#### AGRI 116A Agricultural Ecology

The study of primary ecological zones, their characteristics, identifying marks and common land use systems and human activities.

#### AGRI 116B Agricultural Ecology Field Trip 1 Credit

Field study of important ecological sites, Agricultural practices, Human settlement and identification of common Fauna and Flora and preparation of a herbarium. Students will pay a fee to meet the cost of a 2-3 week field study trip.

#### AGRI 220 Agroforestry

This course deals with the concepts, principles and practices used to cultivate trees or shrubs in association with crops. livestock and pastures. A land use systems approach, which considers agricultural resources, is taken. Principles of agroforestry for cropland, rangeland, waterways, home compounds and boundaries and border spaces will be covered. Aspects such as the use of multipurpose trees, research and extension will be explored. Two lectures each week. Field study visits will be arranged as necessary and students will meet the cost.

#### AGRI 227 Cooperative Management

**3 Credits** 

This course covers topics dealing with the concept of cooperatives, history, principles and practices in cooperative management and how these relate to agribusiness especially for rural communities. Three lectures per week.

#### AGRI 231 Food Processing Technology 2 Credits

This is a hand-on course to introduce students to the production of value-added products from raw Agricultural materials. This may include techniques in oil extraction, cheese making, production of herbal teas, fruit and vegetable preservation etc. While the principles are applicable to large-scale industrial production, emphasis will be placed on developing skills in production methods that are applicable to the cottage industry.

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# **3 Credits**

Students will do practices in vegetable, fruits and root crops preservation techniques. Process animal products such as yoghurt, ice cream to add value to Agricultural products. This is a practical course that is designed to be taught in one lecture hour and one three-hour laboratory period per week.

#### AGRI 295 Resource Survey Methods

#### 2 Credits

1 Credit

1 Credit

This course covers topics on participatory and interdisciplinary scientific field survey methods used in environmental and natural resource assessment for the purpose of managing rural development programs. Among these resource survey methods are Rapid Rural Appraisal (RRA), Participatory Rural Appraisal (PRA), Participatory Project Analysis (PPA) and Participatory Gender Analysis (PGA). Two lectures per week and field practical survey to be arranged.

#### AGRI 300 Project in Agriculture

This is independent study or individual guided project/work in a chosen area or field of Agriculture under the direction of an instructor. A comprehensive study or project report, which exhibits scholarship, skill and knowledge, is required. It is expected that, during the semester, a student will spend at least 48 clock hours per credit working on his or her own project. Prerequisites: Senior standing in Agriculture and departmental approval.

#### AGRI 325 Proposal Writing Laboratory

The focus of this course deals with exercises in writing, criticizing and developing proposals. In consultation with a faculty advisor, a senior project proposal must be developed and presented for approval. After approval, a project concentrating on laboratory and fieldwork, teaching and course development, extension or Agribusiness must be initiated by enrolling in AGRI 398 Research project. One two-hour laboratory each week. Prerequisites: BIOL 285 and ENGL 105.

#### AGRI 335 Mushroom Production

A practical skills oriented course on mushroom cultivation. Topics include: Mushroom culture, spawns and substrates, environmental factors for the crop cultivation problems and solutions, processing and marketing of mushrooms. The laboratory involves sterilization, making nutrient agar, tissue culture, and media preparation, spawn production and mushroom production. One lecture hour and one three hour laboratory period per week.

#### AGRI 398 Research Project

The course deals with the implementation through completion of the research project that was proposed while completing AGRI 325 Proposal Writing Laboratory. This course is designed and instructed so that the student shall demonstrate ability to carry out field research independently. This course must be repeated until the project is completed. The student shall be under guidance of an Instructor/advisor. One credit will be counted towards the degree requirements. A fee will be charged to cover cost of research materials. Prerequisite: AGRI 325.

#### AGRI 399 Special Topics in (......)

1 Credit

A course on a topic that is of current interest, but is not covered by an established course. Prerequisite: Department approval.

### AGRI 433 Agricultural Extension 3 Credits and Rural Sociology

The study of Agricultural extension as an educational process facilitated by fact-finding needs identification, conducting surveys and utilizing their results in developing extension programs. The principles, impact and influence of sociology, social systems, cooperative management, food production and agricultural development will be covered. Students to be assigned a farmer to be visited once every week. The students will monitor the activity of the farmer on daily basis and should be able to provide guidance on farm plans and activities. At the end of the period, the student will write a paper. Three lecture hours per week Fieldtrips and labs are arranged as appropriate.

### AGRI 446 Professional Internship 3 Credits

This is a carefully planned program providing professional training and practice at a commercial farm or enterprise. A faculty member and the Farm Manager/Operator will supervise the work activities. A minimum of eight weeks of full time work is required. This is a laboratory course. The student will meet transport costs of supervision.

#### AGRI 457 Special Problems in Agriculture 1 Credit

The course involves Individual research work in some field of Agriculture under the direction of members of staff.

#### AGRI 499 Agriculture Seminar

1 Credit

**3 Credits** 

2 Credits

The course consists the presentation of the research project findings to the university community during a scheduled conference. The seminar topic based on work successfully completed in course AGRI 398.Grading in this course is by panel. Prerequisites: Completion of a research project and at least one credit of AGRI 398.

#### ANSC 211 Introduction to Animal Science 3 Credit

An introduction to livestock industries. Origin, development characteristics and improvement of cattle, sheep, goats, horses, donkeys and camels as well as poultry. The lab involves identification of ruminants, physiological differences and digestive, reproductive, and respiratory systems and restraining animals. Two lecture hours and one three-hour laboratory per week. Prerequisite: BIOL 155.

#### ANSC 222 Ruminant Husbandry

A study of the care of and management of beef cattle, sheep, and goats involving the efficiency of production of meat and wool as well as milk from goats. Topics include reproduction, feeding, health management systems and marketing. In the laboratory student will learn to identify ruminants, the different methods of keeping ruminants, food sources for ruminants, ruminant digestive system, and handling ruminants. Two lecture hours and one three-hour laboratory per week.

#### ANSC 227 Artificial Insemination

This is a hands-on course covering general livestock improvement through increased use of outstanding sires to enhance production potential and to control diseases transmitted through natural service. Emphasis will be on developing skills in artificial insemination. The laboratory will cover the physiology of male and female reproductive organs, heat detection, handling of equipment for AI, semen storage

# 1 Credit

etc., actual insemination of the cow, pregnancy diagnosis to be done in the presence of a vet doctor. One lecture hour and one three-hour laboratory per week.

#### ANSC 232 Apiculture

#### **3 Credits**

The course focuses on the role of bees in agriculture. Importance of beekeeping in Kenya. Biology of the honeybee. Breeding, diseases and pests. The management of a bee colony with respect to flowering vegetation, foraging behavior and feeding. Swarm control and types of hives. Harvesting, handling, processing, grading and marketing of honey wax. The honey industry includes a visit to a honey processing plant. The laboratory includes the construction of different types of beehives, honey harvesting, processing, storage and marketing, processing of byproducts from the bee industry. Two lecture hours and one three-hour laboratory per week.

#### ANSC 245 Livestock Practicum

#### 1 Credit

In this course, the student will develop skills necessary to handle, care for and manage farm livestock. The student may also become involved in the processing of livestock products such as eggs or milk and be exposed to proper techniques for the storage and handling of manure. Training will be confined to one phase of livestock enterprise per guarter, although various phases of the same enterprise may be allowed in different quarters (i.e. poultry, dairy, sheep and goats). Requires three clock hours per week. Prerequisite: Sophomore standing or Department approval.

#### ANSC 300 Processing and Marketing of **3 Credits Animal Products**

The course covers the processing and marketing of different types of animal meats, hides and skins, milk chemistry, milk hygiene, production and processing of various dairy products such as butter, cheese, yoghurt, ice cream, ghee. Also includes storage and marketing of the products and quality control.

#### ANSC 310 Aquaculture

The focus of this course is on the role and potential of fish farming. Fresh water fish with emphasis on selected species. their feeding reproduction and techniques for harvesting and handling. Fish culture, breeding, construction and management of fishponds, harvesting, and handling of fish. Diseases, parasites and their control. Seawater fishes with emphasis on two selected species, their environment, feeding habits, reproduction, harvesting and handling. Fish processing, grading and marketing. Planned visit to a fish farm. In the laboratory the students will learn about Fish identification, construction of fishponds, fish feeding, harvesting, handling, processing and marketing. Two lecture hours and one three-hour laboratory per week.

#### ANSC 315 Dairy Practicum

**3 Credits** 

1 Credit This course provides on-the-job training in dairying. Experience will be gained in the care and feeding of small calves, and growing young stock, disease prevention, sanitation procedures and identification of dairy animals. Students will be trained in feeding and ration formulation for the milking herd, maintenance and repair of feeding equipment, cleaning and sanitation of milking equipment and facilities. Students will learn proper preparation and milking procedures of the dairy cow, maintenance and operation of milking equipment, sire selection and breeding of dairy animals, parturition and care of new born calf. This experience may be obtained during any semester of the year. Requires three clock hours per week per credit.

#### ANSC 323 Animal Breeding

**3 Credits** 

**3 Credits** 

**3 Credits** 

This course deals with gualitative and guantitative inheritance, quantitative variations in breeding, relationships, heritability, sire testing, genetic selection, cross breeding as basis for livestock improvement and biotechnology application to animal breeding. The laboratory deals with gualitative and guantitative inheritance, quantitative variations in breeding, relationships, heritability, sire testing, genetic selection, cross breeding as basis for livestock improvement and biotechnology application to animal breeding. Identification of different types and breeds of animals, calculating estimated breeding values. Two lecture hours and one three-hour laboratory per week. Prerequisite: BIOL 449.

#### **ANSC 411 Poultry Science**

The topics covered in this course include the fundamentals, origin, history and development of poultry breeds, systems of poultry keeping, biology of poultry; breeding, incubation and hatchery management. Also covers: The management of poultry from day old to maturity, as well as, the production and marketing of poultry products. The laboratory includes digestive system, reproductive system, circulatory system, structure of an egg, candling, egg grading, meat handling etc. Two lecture hours and one three-hour laboratory per week. Prerequisite: ANSC 211.

#### ANSC 421 Reproductive Physiology and **3 Credits Artificial Insemination**

This is a hand on course covering general livestock improvement through increased use of outstanding sires to enhance production potential and to control diseases transmitted through natural service. Topics covered will include: Physiology of reproduction, the anatomy of the cow and bull, estrus detection, factors affecting fertility, A.I. equipment, types of semen, their handling, and the practical considerations of A.I. Emphasis will be on developing skills in artificial insemination. The laboratory will examine male and female reproductive system; observe various animal reproductive behavior witness calving down and practice AI. Two lecture hours and one threehour laboratory per week.

#### ANSC 432 Animal Nutrition and Feeding **3 Credits**

This course covers the nutritional requirements of different animal classes, evaluation of animal feeds and feeding methods, classification of feeds, feed intake, ration formulation and its relationship to efficient livestock production. The laboratory covers different types of feed, calculations of feed requirements, feed formulation. Two lecture hours and one three hour laboratory per week. Prerequisite: ANSC211.

#### **ANSC 442** Dairy Production

This course covers the basic principles of dairy production, including, feeding, breeding, milking, record keeping, disease control and other basic management tools. Demonstrations and hands-on activities in management aspects of efficient, clean milk production and processing are also covered in this course. Field visits to nearby dairies will be arranged. The

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laboratory covers the Identification of dairy breeds, feeding, milking, record keeping, heat detection, calculations on feed in-take and utilization by the dairy cow, handling dairy animals. Two lecture hours and one three-hour laboratory per week. Prerequisite: ANSC211.

#### ANSC 453 Animal Parasitology and 3 Credits Diseases

Introduction to parasitism and host-parasite relationships. Classification, and identification of important parasites of domestic animals; protozoa, helminthes and ecto-parasites. Lifecycles of parasites of economic importance and their importance in disease causation. Principles of control of animal parasites. The commonest parasitic diseases of economic importance in domestic animals will be discussed on the basis of their causative agent, species affected, transmission and control. In the laboratory, the students will learn to identify various parameters affecting animals, tick identification, and identify various methods of parasite control; acaricide calibration and spray race management. Two lecture hours and one three-hour laboratory per week.

#### **BIOL 105 Human Biology**

#### 2 Credits

An integrated study of human anatomy and physiology designed to meet the general education requirements of the non-nursing, non-biology major. All major organ systems are studied with emphasis on the relation between their structure and function. Two lecture hours each week.

### BIOL 111 Human Anatomy and 4 Credits Physiology I

This is the first part of a course designed primarily for students majoring in Nursing and health-related professions. This course is a systematic approach to the integrated study of human anatomy and physiology with emphasis placed on physiology. The first term covers organization of the human body, cells and tissues, skeletal system, muscular system, nervous system and endocrine system. Topics covered in the laboratory include organization of the human body, cells and tissues, skeletal system, muscular system, nervous system and endocrine system. Three lecture hours and one three-hour laboratory per week.

### BIOL 112 Human Anatomy and 4 Credits Physiology II

This is the second part of the introductory course in human anatomy and physiology designed for students majoring in nursing and health-related professions. Areas covered include the circulatory system, respiratory system, digestive system, urinary system, reproductive system and the immune system. The laboratory will cover the circulatory system, respiratory system, digestive system, urinary system, reproductive system and the immune system. Three lecture hours and one threehour laboratory per week. Prerequisite: BIOL 111.

### BIOL 113 Human Anatomy and 7 Credits Physiology I

This is the first part of a course designed primarily for students majoring in Nursing and health-related professions. This course is a systematic approach to the integrated study of human anatomy and physiology with emphasis placed on physiology. The first term covers organization of the human body, human cells, principles of histology, basic genetics, embryology including the processes of different development i.e. gametogenesis, embryogenesis, organogenesis, and terotogenesis. Topics covered in the laboratory include organization of the human body, cell structure, cell division mitosis, meiosis, chromosomes, organs and tissues and special sense organs There will be two three-hours lectures and one three-hour laboratory each week.

#### BIOL 114 Human Anatomy and 7 Credits Physiology II

This is the second part of the introductory course in human anatomy and physiology designed for students majoring in nursing and health-related professions. Areas covered include the structural organization of the human body, body systems :- skeletal system, muscular system, nervous system and endocrine system circulatory system, respiratory system, digestive system, urinary system, reproductive system and the immune system. Topics to be covered in the laboratory include: circulatory system, respiratory system, digestive system, urinary system, respiratory system, digestive system, urinary system, reproductive system and the immune system. There will be two-three hour lectures and one three-hour laboratory per week. Prerequisite: BIOL 113

#### BIOL 128 Bird Watching

A laboratory and field study of the local Kenyan birds. One three or four hour laboratory/field- trip per week. Open to all interested in birds except those who have completed a course in ornithology.

#### BIOL 150 Introduction to the Natural 2 Credits History of Kenya

A study of the plants, animals, geology, topography and climate of Kenya. It includes a study of the distribution of and interrelations between these biotic and abiotic factors in various regions of the country. This is a field course that involves camping and extensive travel which includes visits to several Kenyan national parks and game reserves. A field course fee will be charged.

#### BIOL 151 Foundations of Biology I

An introductory course in Botany and zoology designed to form a firm foundation for students majoring in teaching biology. The course explores some major areas of Biology including the Chemistry of life, cell biology, genetics, protein synthesis, philosophy of Biology, principles of plant and animal classification and plant anatomy and physiology. Students will be exposed to hands on laboratory work in Chemistry of life, cell structure and function, genetic analysis, protein isolation, principles of plant and animal classification and plant anatomy and physiology. Two lecture hours and one three-hour laboratory each week.

#### BIOL 152 Foundations of Biology II 3 Credits

This is the second part of the introductory course in botany and zoology. Areas covered include philosophy of biology, principles of plant and animal classification and plant anatomy and physiology. Two lecture hours and one three-hour laboratory each week. Areas covered in the laboratory include plant classification, plant anatomy and physiology, ecology, anatomy and physiology of plants. Two lecture hours and one three-hour laboratory per week. Prerequisite: BIOL 151.

1 Credit

#### **BIOL 153** Foundations of Biology III

**3 Credits** 

This is the third part of the introductory course in botany and zoology. Areas covered include ecology, anatomy and physiology of animals and animal behavior. Areas covered include plant classification, plant anatomy and physiology, ecology, anatomy and physiology of plants. Two lecture hours and one three-hour laboratory each week. Prerequisite: BIOL 152.

#### BIOL 155 Foundations of Biology I

#### 4 Credits

An introductory course in Botany and zoology designed to form a firm foundation for students majoring in the biological sciences and agriculture. The course explores some major areas of Biology including the Chemistry of life, cell biology, genetics, protein synthesis, philosophy of Biology, principles of plant and animal classification and plant anatomy and physiology. Students will be exposed to hands on laboratory work in Chemistry of life, cell structure and function, genetic analysis, protein isolation, principles of plant and animal classification and plant anatomy and physiology. Three lecture hours and one three-hour laboratory each week.

#### BIOL 156 Foundations of Biology II

4 Credits

This is the second and last series of the introductory course in botany and zoology. Areas covered include philosophy of biology, principles of plant and animal classification and plant anatomy and physiology, ecology, anatomy and physiology of animals and animal behavior. Areas covered include plant and animal classification, plant anatomy and physiology, ecology, anatomy and physiology of animals. Three lecture hours and one three-hour laboratory each week. Prerequisite: BIOL 155.

#### BIOL 176 Introduction to Microbiology 3 Credits

Introductory Microbiology deals with the nature of bacteria, fungi, viruses, and other microscopic organisms applied to human economy and nature. Themes for the course include microscopy, cell structures and functions, metabolism, genetics, host defense, disease transmission, control of infectious disease, impacts of microbes on the environment, and discipline specific laboratory skills. Areas to be covered in the laboratory include introduction to microbiology laboratory, staining techniques, culturing techniques and diagnostic microbiology. There will be two lecture hours and one threehour laboratory per week.

#### **BIOL 200** Natural History of Kenya

#### **3 Credits**

4 Credits

A study of the plants, animals, geology, topography and climate of Kenya. It includes a study of the distribution of and interrelations between these biotic and abiotic factors in various regions of the country. An ecological paper including the taxonomy, life history, distribution and behavior of select animal groups is mandatory.

#### BIOL 245 Basic Medical Microbiology

This course is designed primarily for students in nursing and health related professions. Topics covered include history, morphology, classification, control, growth, transmission and pathogenicity of selected bacteria, viruses, rickettsias, fungi and parasites. Areas covered in the laboratory include, morphology, classification, control, growth, control transmission and pathogenicity of selected bacteria, viruses, rickettsias, fungi and parasites. Three lecture hours and two two-hour laboratories each week. Pre-requisites: BIOL 111 and BIOL 112.

#### BIOL 246 Introduction to Biotechnology

This course provides an introduction to biotechnology and its application in a variety of medical, clinical and science disciplines. Topics covered include GLP, GMP, solution chemistry, spectroscopy, chromatography, basic microbiology techniques and DNA and protein purification/separation techniques. Three lecture hours per week.

#### **BIOL 250** Introduction to Biosafety

This course provides the framework to the practices and principles of the safe manipulation of infectious biological agents. Focus is on developing and implementing a risk assessment, routes of exposure, concepts of bio-containment, personal protective equipment, safety equipment in the laboratory and management practices aimed at mitigating the risks associated with working with bio-hazardous agents. Special attention will be given to genetically engineered products. Three lecture hours every week.

#### **BIOL 286 General Ecology**

**3 Credits** 

**3 Credits** 

**3 Credits** 

This course deals with the study of plants and animals in relation to their environment. Topics include ecological systems, climate, soil, energy flow through ecosystems, cycling of matter, freshwater, marine and terrestrial ecosystems, forests, social ecology, community structure, plant communities, populations and predator-prey interactions. Topics covered in the laboratory include a visit to national parks, game reserves, and various ecosystems. Two lecture hours and one three- hour laboratory (including field projects) each week. Prerequisites: BIOL 151/BIOL 155, BIOL 153/BIOL 156.

### BIOL 292 Fundamentals of Cell and 4 Credits Molecular Biology

This course is designed for non-biology students in the health sciences. Information from chemistry, biophysics, electron microscopy and molecular biology are integrated to present the cell as a functional unit. Topics covered include plasma membrane organization, membrane transport, nerve and muscle physiology, mechanisms of hormone action, bioenergetics, metabolism, cytoskeleton, nucleic acid structure and function, DNA replication, transcription, translation, mutations and DNA repair mechanisms, regulation of gene expression and recombinant DNA technology. The laboratory session will cover the topics that include techniques used in cell biology including electrophoresis, chromatography, centrifugation, microscopy, western blot, PCR and ELISA. There will be three lecture hours and one three-hour laboratory each week. Prerequisites: BIOL 151/BIOL 155, CHEM 113.

#### **BIOL 293 Cell Biology**

Information from Chemistry, Biophysics, electron microscopy and genetics are integrated to present the cell as a functional unit. Specific topics emphasized include plasma membrane organization, membrane transport, nerve and muscle physiology, mechanisms of hormone action, bioenergetics, metabolism, photosynthesis and immunology. The laboratory will cover techniques used in cell biology include electrophoresis and chromatography. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 155, BIOL 156.

### BIOL 296 History and Philosophy of Biology 3 Credits

A survey of the history and philosophy of modern science particularly as it relates to the interpretation of biological

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phenomena in the context of Biblical revelation. Emphasis is on the biological and geological data that relates to earth history and the origin of life. Specific topics include the nature and limitations of science, the scientific method, scientific revolution, theories of the origin of life, speciation, catastrophism, the paleontological record, geochronology, and the relation between science and religion. Three lecture hours each week. Prerequisites: BIOL 153/BIOL 156.

#### BIOL 315 Introduction to Marine Biology 3 Credits

An introduction to the biology of the marine environment. This course includes a discussion of the physical and chemical aspects of the marine environment, a survey of marine plants and animals and an emphasis on the ecology of marine organisms. Various marine environments are considered. Physical and biological factors are studied in relation to the distribution of marine organisms. Laboratory and field work (in coastal areas) consists primarily of the study of the classification and ecology of marine organisms. A field course fee will be charged. Two lecture hours and one three-hour laboratory each week. Prerequisites: BIOL 153/BIOL 156.

#### **BIOL 326 Bioinformatics**

#### **3 Credits**

This course provides an introduction to Bioinformatics. The course content includes: Historical perspectives, definitions. Introduction to sequences; sequence formats. Introduction to databases; sequence retrieval from public databases. Sequence alignment; local and global alignment. The FASTA and BLAST methods for database searches. Matrix sequence comparisons. Dynamic programming algorithm; scoring matrices. Phylogenetic analysis; CLUSTAL W and T-Coffee MSA tools. Gene prediction in microbial and in eukaryotes. Protein classification and structure prediction. Genome analysis- gene anatomy. Comparative genomics. Applications of Bioinformatics. Two lecture hours and one three-hour laboratory per week. Prerequisite: CHEM 361.

#### **BIOL 344 Hydrobiology**

This course provides a study of fresh water ecosystems. Topics include the physical-chemical properties of water, the abundance, distribution and role of water in the biosphere, the classification and ecology of aquatic organisms, and plankton and productivity of fresh water ecosystems. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

#### **BIOL 374** Conservation Biology

3 Credits

**3 Credits** 

**3 Credits** 

This course provides a sound understanding of the principles and practices of conservation biology. Conservation strategies are discussed and explored at different levels: local, national, and international. Challenges to conservation of biological diversity are considered. Strategies of restoring degraded ecosystems (e.g., forests, grasslands and wetlands) are included. Intensive fieldwork is involved. Two lecture hours and one three-hour laboratory each week. Prerequisite: BIOL 348.

#### **BIOL 285 Biostatistics**

Introduction to quantitative treatment of biological data. Sampling, data collection and presentations using tables and diagrams. Descriptive and inferential statistics. Measures of central tendency and dispersion. Probability. Binomial, poison and normal probability distributions, 2-scores.Hypothesis, significance test and level. Confidence intervals and limits. Data transformations. Parametric statistics: students' t-test, F-tests. ANOVA I, ANOVA II. Non-parametric statistics: Chi Square tests, sign test, wilcoxon's rank test, Kruskal-wallis test. Correlation and regression analysis. Computer statistical programs. Three lecture hours per week.

#### **BIOL 327** Metabolism

This course provides concepts of metabolism. Topics to be covered include; metabolic pathways of carbohydrates, proteins, lipids, nucleic acids. Biochemistry of hormones, vitamins, and enzymes. Two lecture hours and one three-hour laboratory per week. Prerequisite BIOL 153/BIOL 156, CHEM 212.

#### **BIOL 396 Human Anatomy**

An advance course of detailed study of the human body with emphasis on the gross and histological study of the following body systems: integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive. Two lecture hours and one three-hour laboratory each week. Prerequisites: BIOL 151/BIOL 155, BIOL 156.

#### **BIOL 397 Human Physiology**

This course is designed to provide students with an understanding of the functions and regulations of the human body, and physiological integration of the organ systems to maintain homeostasis. The course content includes neural and hormonal homeostatic control mechanisms, musculoskeletal, cardiovascular, respiratory, digestive, urinary, immune, reproductive and endocrine organ systems. Two lecture hours and one three-hour laboratory per week.

#### BIOL 401 Topics in Biology

Topics of current or special interest to faculty and students that are not covered adequately by regular courses are offered under this title. This course may be repeated for different topics. Consult your advisor for more information. Prerequisites: BIOL 153/BIOL 156.

#### **BIOL 445 Molecular and Microbial Genetics 3 Credits**

Nature, structure and functions of the genetic material in microorganisms. DNA synthesis, transcription and protein synthesis. The genetic code. Molecular basis of mutation. Genetic recombination, transformation, conjugation and transduction in bacteria. Plasmids, recombinant DNA technology. Gene regulation and suppression in microorganisms. Genetic engineering of plants, viral vectors, haploids, protoplasts, hybrids and fusion. Mutagenesis, molecular and somatic hybridization. Genetic engineering, Fermentation, and downstream processing. Biosensors, formation and recovery of biological. Applications in agriculture, medicine, industry, health care and food processing with reference to Kenyan situations. Prerequisites: BIOL 151/BIOL 155 and BIOL 176.

#### BIOL 447 Molecular Biology

The course explores prokaryotic and eukaryotic molecular biology. Topics include nucleic acid structure and function, DNA replication, transcription, translation, chromosome structure and remodeling and regulation of gene expression in prokaryotes and eukaryotes, biotechnology and recombinant

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**3 Credits** 

#### **3 Credits**

**3 Credits** 

**3 Credit** 

DNA technology. Laboratory practicals will cover molecular biology techniques, such as, Southern blot, electrophoresis, and gene cloning. Two hour lectures and one three-hour laboratory each week. Prerequisite: BIOL 293.

#### **BIOL 449 Genetics**

This course seeks to provide an in-depth background in all areas of classical/Mendelian genetics. Specific topics include Mendelian genetics, chromosome theory of inheritance, chromosome mapping, gene and chromosome mutations, human genetics, population and evolutionary genetics. Problem solving is emphasized. The laboratory deals with probability theory and statistics (as related to genetics) problem-solving and techniques of molecular genetics. Two lecture hours and one three-hour laboratory each week. Prerequisite: BIOL 447.

#### **BIOL 451 Biology Seminar I**

2 Credit

2 Credits

**3 Credits** 

**3 Credits** 

**3 Credits** 

This course provides students with an opportunity to actively engage in guided scientific research. Each student is required to design a research project, write a research proposal and perform the research. Each student will prepare written and oral reports and a "poster" presentation of the research they did in Biology Seminar. Prerequisites: BIOL 151/155, BIOL 156 and BIOL 285 or STAT 150, ENGL 105.

#### **BIOL 452 Biology Seminar II**

In this second section of Biology Seminar, each student will prepare written and oral reports and a "poster" presentation of the research they did in Biology Seminar I. Prerequisite: BIOL 451.

#### BIOL 460 Immunology

This course deals with the study of the essential principles of immunology. Topics discussed include the defense mechanisms of the human body against foreign agents, innate immunity, acquired immunity, the development and structure of cells within the immune response, immunogenetics, the roles of complement, and hypersensitivity reactions. Three lecture hours each week. Prerequisites: BIOL 449 highly recommended.

#### **BIOL 476 General Microbiology**

Historical development of microbiology. Classification and characteristics of bacteria, viruses, fungi, algae, protozoa, prion, mycoplasmas, Chlamydia and rickettsia. Economic importance of microorganisms: microorganism physiology and micro-organisms as pathogens to man, plants and animals. Public health and emerging microbial diseases. Isolation and identification of bacteria, fungi and viruses. Growth and culturing of microorganisms. Culture improvements. Biotech products. The immune system, microorganism control methods and strategies. The topics covered in the laboratory include, culturing techniques, isolation of bacteria and diagnostic microbiology. Two lecture hours and one three- hour laboratory per week. Prerequisite: BIOL 153/BIOL 156.

#### BIOL 484 (B, C, D) Biology Practicum 2, 3, 4 Credits

This course designed to provide the student with an opportunity to gain practical experience in conservation or field Biology and laboratory research. The student will undertake a study or research project, the subject of which is to be arranged between the student, an official designated by the park management or research institution and the faculty advisor

to the department a written progress report. The student is required to work for a minimum of 30 clock hours for each credit. Prerequisites: BIOL 153/BIOL 156 and certain advanced courses depending on the nature of the attachment.

involved. Upon completing the program the student will submit

#### **BIOL 495** Independent Research

A course that permits the student to do independent study in biology. The topic and method of study are selected by the student in consultation with their supervisor. The selected topic is investigated through library research and laboratory or field research. A report detailing the major findings and organized in standard journal format should be submitted to the supervisor at the end of the study. A minimum of 30 clock hours will be required for each unit of credit. Prerequisites: BIOL 153/BIOL 156.

#### **BIOM 321 Mycology**

This course deals with the study of fungi. It covers: general characteristics of fungi: structure, nutrition - saprophitism, parasitism, and mutualism. Reproduction. Classification: main distinguishing characteristics and life cycles of Oomycota. Zygomycota, Ascomycota. Basidiomycota and mitosporic fungi, collection and identification. The laboratory sessions of the course focuses on the collection and identification of fungi. Economic significance of fungi. Lichens. Two 2 hrs Lab session per week. Prerequisite BIOL 156 and BIOL 176.

#### **BIOM 322 Virology**

## **3 Credits**

**3 Credits** 

1 Credit

**3 Credits** 

This course focuses on fundamentals of plant and animal virology-morphology of the virion; composition and structure of virus particles; Classification of animal and plant viruses; Biochemistry of virus replication and replicative cycle; Nucleic acid viral infections; cellular consequences of viral infection; viral genetics; viral epizootiology; key factors in viral epizootiology. Control- Antiviral agents and chemotherapy; factors affecting efficacy and safety. Application technology. Prerequisite: BIOL 156 and BIOL 176.

#### **BIOM 323 Bacteriology**

This course covers morphological, biochemical, taxonomic, genetic and evolutionary characteristics of microorganisms with a primary focus on bacteria. Focuses on the structural, mechanical and biochemical adaptations employed by microorganisms in their interactions with host cells and substrates. The laboratory sessions of the course focus on the structural, mechanical and biochemical adaptations employed by microorganisms in their interactions with host cells and substrates. Two 2-hour lab session per week. Prerequisite BIOL 156 and BIOL 176.

#### BIOM 372 Evolution of Genes, Genome 3 Credits and Biosystems

This is a study of essential principals on genome changes in structure (sequence) or size over time. The study of genome evolution involves multiple fields such as structural analysis of the genome, Mechanisms of genome evolution the study of genomic parasites, gene and ancient genome duplications, polyploidy, and genomics. Interrelation between the cell structure and the genetics function, Mitosis, Meiosis (explaining Mendel's ratios).

#### **BIOM 390** Genomics and Proteomics

**3 Credits** 

This study is an introduction to Prokarvotic transposable elements- IS elements, Composite transposons, Tn-3 elements; Chromosomal Mutations: Deletion, Duplication, Inversion, Translocation, Gene mutations: Induced versus Spontaneous mutations, Back versus Suppressor mutations, Molecular basis of Mutations in relation to UV light and chemical mutagens, Detection of mutations: CLB method, Attached X method, DNA repair mechanisms. Gene Annotation and analysis of transcription and translation; Post-translational analysis-Protein interaction. The laboratory component will emphasize Gene Annotation and analysis of transcription and translation; Post-translational analysis- Protein interaction. Two lecture hours and one three-hour laboratory per week.

#### **BIOM 420 Microbial Ecology**

#### **3 Credits**

Microbial ecology encompasses aspects of microbiology relating to environmental Research. It covers Microorganisms in natural environments: diversity, distribution, energetics, and growth of heterotrophic and autotrophic microbes in oxic and anoxic habitats. Roles of microbial populations and communities in biogeochemical cycling, ecosystem functioning, landscapes, and industrial, agricultural, and environmental applications. Prerequisites: BIOL 156/BIOL 153, BIOL 176 and BIOL 286.

#### **BIOM 421** Microbial Physiology and **3 Credits Biochemistry**

This is an intensive course with the goal of integrating biochemistry and physiology to enhance the understanding of the microbial cell and the robust and diverse nature of life. It covers .the structure, growth, and metabolic path-ways used by bacteria, yeasts, and molds. Emphasis is placed on the comparative biochemical aspects of microbial life. The laboratory sessions of the course focuses on the structure, growth, and metabolic path-ways used by bacteria, yeasts, and molds. Emphasis is placed on the comparative biochemical aspects of microbial life. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 156, BIOL 176 and CHEM 310.

#### **BIOM 422** Microbial Genetics

#### **3 Credits**

This course provides students with exposure to selected topics in the field of microbial genetics, focusing on the processes of heredity in bacteria including a discussion of gene structure and evolution, gene expression and its control, the exchange of genetic material in the microbial world and genetic engineering and its applications. The laboratory component will emphasize modern approaches to genetic engineering. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 156, BIOL 176, and BIOL 449.

# **Microbiology**

# BIOM 423 Applied and Industrial

#### **3 Credits**

This course covers Principles of applied microbiology and microbial technology. An overview on the utilization and application of microbes in different products and processes, and the importance of disease causing organisms as they relate to these processes and public health Topics covered: Historical perspective on utilizing and "domesticating" microbes: Physiological and ecological diversity of useful microbes; Identification of microorganisms; Microbial growth and nutrition, growth kinetics - Bioreactors; Microbial death and control: Molecular techniques and genetic engineering: Food spoilage, Microbiology of fermented foods, including lactic acid fermentations and fermented milk products, yeasts alcoholic fermentations (beer, wine): Large-scale industrial fermentations; Antibiotics; Microbial enzymes; Sanitation. water and wastewater treatment, Environmental microbiology. Educational trip is essential for the course to actualize theoretical aspect in class. Prerequisites: BIOL 156 and BIOL 176.

#### BIOM 424 Food, Dairy and Water **3 Credits** Microbiology

An introduction through theory and laboratory work to microorganisms of importance to the food and dairy industries. Quality control of raw materials and finished products, microbial metabolism, food and drug regulations and guidelines, theory of Good Manufacturing Practice for food manufacturers and Hazard Analysis and Critical Control Point Programs (HACCP) Educational trip is essential for the course to actualize theoretical aspect in class. Prerequisites: BIOL 156/BIOL 153 and BIOL 176.

#### **BIOT 330** Environmental Biotechnology **3 Credits**

This course deals with the study of the environment in relation to an organism. Topics include components of environment, global environment problems, environment pollution and degradation, environmental management, modern fuels and their environmental impact, bioremediation, biofertilizers and bioleaching. Three lecture-hours each week. The course includes a field excursion to areas relevant to the course. Prerequisite: BIOL 286.

#### **BIOT 334 Plant Biotechnology**

This course deals with the application of biotechnology in plant study. Topics include plant nutrition, plant cell culture, totipotency, somatic embryogenesis, micropropagation and somaclonal culture, protoplast culture and somatic cell hybridization, gene transfer in plant cells, induction of haploids and polyploidy through tissue culture, and production of secondary metabolites by plant tissue culture. Laboratories provide practical skills in these topics. Laboratories provide practical skills in micropropagation and somaclonal culture, protoplast culture and somatic cell hybridization, gene transfer in plant cells, induction of haploids and polyploidy through tissue culture, and production of secondary metabolites by plant tissue culture. Two lecture hours and one three-hour laboratory per week. Prerequisite: BIOL 447.

#### **BIOT 335** Animal Biotechnology

#### **3 Credits**

**3 Credits** 

This course deals with the application of biotechnology in study of animals. Topics covered are: history and development of cell cultures, sterilization techniques, animal cell culture techniques, animal cell lines, cell fusion and production of monoclonal antibodies, genetic engineering in animal cells, in vitro fertilization, embryo transfer and cloning. Laboratory practicals provide skills in these areas. Laboratory practicals provide skills in development of cell cultures, sterilization techniques, animal cell culture techniques, animal cell lines, cell fusion and production of monoclonal antibodies, genetic engineering in animal cells, in vitro fertilization, embryo transfer and cloning. Two lecture hours and one three hour laboratory per week. Prerequisite: BIOL 447.

#### **BIOT 451 Microbial Biotechnology**

**3 Credits** 

This course discusses the use of microorganisms in biotechnology. Microbial growth kinetics, metabolism, strain improvement, genetics, diseases and chemotherapy, food and dairy microbiology and the use of genetically engineered microbes in agriculture industries and medicine. The laboratory emphasize on microbiological techniques and genetic manipulation of microorganisms. The laboratory emphasize on microbiological techniques and genetic manipulation of microorganisms. Two lecture hours and two two-hour laboratories per week. Prerequisite: BIOL 476.

#### BIOT 453 Recombinant DNA Technology 3 Credits

This course focuses on development and advancement of recombinant DNA technology. Historical perspectives, molecular tools and applications are covered. Other topics include gene cloning, transformation, nucleic acid purification, DNA sequencing, restriction enzymes, DNA libraries, genome mapping, DNA fingerprinting and gene manipulations. The laboratory will emphasize on acquisition of practical skills and application of recombinant DNA technology. The laboratory emphasize on acquisition of practical skills and application of recombinant DNA technology. Two lecture hours and one threehour laboratory per week. Prerequisite: BIOL 449.

#### BIOT 455 Biotechnology in Agriculture 3 Credits and Health

This course deals with the application of biotechnology in agriculture and health. Topics covered includes plant tissue culture, cryopreservation, plant transformation, genetically modified crops, molecular markers, in vitro production of secondary metabolites, animal cell culture, vaccines, diagnostic technology, biosensors, recombinant products for humans and human genome mapping. The laboratory will emphasize on plant tissue culture, cryopreservation, plant transformation, genetically modified crops, molecular markers, in vitro production of secondary metabolites, animal cell culture, vaccines, diagnostic technology, biosensors, and recombinant products for humans and human genome mapping. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOT 334 and BIOT 453.

#### **BOTN 320 Plant Anatomy**

#### **3 Credits**

**3 Credits** 

This course deals with the study of plant cells and tissue structure and organ development. Topics include plant cell organelles, xylem, phloem, root, and stem structure, structure and development of leaves and flowers and embryonic plant development. Laboratory work involves studies on various aspects of plant anatomy and morphology. Emphasis will be plant cell organelles, xylem, phloem, root, and stem structure, structure and development of leaves and flowers and embryonic plant development. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 156.

#### **BOTN 374** Systematic Botany

#### This course deals with the taxonomic study of vascular plants. Characteristics of the flowers, seeds, leaves, stems and roots of the common vascular plant families are studied. Laboratories deal with morphology and identification of the vascular plants. A collection of local plants is made by each student. Plants are identified using plant keys. Two lecture-hours and one threehour laboratory per week. Prerequisites: BIOL 156.

#### **BOTN 394** Plant Pathology

#### **3 Credits**

The concept of plant disease and significance of crop losses. History of plant pathology. Disease causal agents, fungi, bacteria, viruses, Mycoplasmas, nematodes, seed plants and adverse forecasting. Principles and practices of disease control, quarantines, cultural, biological, varietal resistance, physical and chemical methods. Diseases of important crops in Kenya. The symptoms, pathogens, transmission, disease cycle and control. Methods of assessing diseased crop losses. Techniques for diagnosing plant diseases. The laboratory will cover Diseases of important crops in Kenya. The symptoms, pathogens, transmission, disease cycle and control. Methods of assessing diseased crop losses. Techniques for diagnosing plant diseases. Two lecture hours and one three- hour laboratory per week. Prerequisite: BIOL 276.

#### **BOTN 432 Plant Physiology**

This course deals with the study of metabolism, photosynthesis, mineral nutrition, growth and development and hormonal control in plants. It also covers competitive plant responses and adaptations to the environment. The laboratory will cover metabolism, photosynthesis, mineral nutrition, growth and development and hormonal control in plants. It also covers competitive plant responses and adaptations to the environment. Two lecture hours and one three-hour laboratory per week. Prerequisite: BIOL 156.

#### CPSC 279 Crop Physiology

**3 Credits** 

**3 Credits** 

**3 Credits** 

A study of metabolism, seeds and germination, transport and partitioning, energy and photosynthesis, basis of crop production efficiency, water relations, mineral nutrition, growth and development and hormonal control in plants. Also covers: competitive plant responses and use of plant growth regulators in agricultural crops, adaptations to the environment. The laboratory give the students practical experience on the major concepts of the course e.g. seed germination rates and percentages, testing for seed viability etc. Two lecture hours and one three-hour laboratory per week. Prerequisite: BIOL 155.

#### CPSC 213 Introduction to Soils

This course introduces soil as a medium for plant growth. The physical, chemical, and biological properties of soil, as well as soil origins, formation, classification systems and reaction that influence nutrient availability. The laboratory studies the estimation of the various soil components and properties; soil sampling, preparation and analysis of major nutrients e.g. NPK, soil pH, field capacities of soil, soil fertility requirements, correction of soil pH, soil organic matter, electrical conductivity, hygrometer method of determining textual classes of soil. Prerequisites: CHEM 122 and AGRI 101.

#### CPSC 311 Soil Fertility and Fertilizers 3 Credits

This course covers soil factors, which alter the supply and availability of micro and macronutrients to plants are studied in relation to crop productivity. Soils and the habitat. Soil tests will be carried out. The laboratory studies the Identification of various fertilizers used as soil amendiments, soil pH, liming and its characteristics, soil analysis etc. Two lecture hours and one three-hour laboratory per week. Prerequisite: CPSC 213.



#### CPSC 313 Agricultural Chemistry

**3 Credits** 

The course covers bimolecular, amino acids, lipids, carbohydrates, nucleic acids and nucleotide, giving emphasis mainly to structural properties and classifications. Kinetics of enzyme-catalyzed reactions giving a relationship to kinetics of chemical reactions and the factors involved, properties of aqueous solutions mentioning the electrolyte balance in animal and plant systems. Soil and plant analysis preparation of samples, digestion and excretion, procedures as well as analysis involving colorimetric, atomic absorption procedures, as well as, analysis involving colorimetric, atomic absorption spectrophometry and flame photometry. The laboratory covers the nomenclature of biochemicals used in agriculture, soil analysis, plant tissue analysis procedures as well as analysis involving calorimeter, atomic absorption, use of spectrophotometer etc. Two lecture hours and one three-hour laboratory each week Prerequisite: CHEM 122.

#### **CPSC 314** Crop Production I

**3 Credits** 

**3 Credits** 

The emphasis of this course will be given to the role of biotechnology in crop production of selected cereals, grains and fiber of economic importance covered in the light of their ecology, origin, characteristics, distribution, economic importance and agronomy. The laboratory covers planting. maintaining and harvesting some annual crops like beans. maize, wheat etc. display various seed types of different crops. Two lecture hours and one three-hour laboratory per week.

#### **CPSC 321 Weed Science**

The course covers: Classification, identification, ecology, biology, morphology, distribution and economic importance of weeds. The course also focuses on: Methods of weed control, the effect of environmental pollution on evolution of new weeds, weed resistance, weed population shifts and hybridization. Consequences of the indiscriminate use of chemical herbicides, the use of bio- control agents, bio-herbicides and crop-weed interactions, shall be considered. Laboratories shall involve calculations on rates of herbicides, mechanisms of weed dispersal in space and time, calibration, maintenance and repair of sprayers and the collection of a herbarium of common weeds. The laboratory will have students identify some 30 common weeds of crops, experiments on weed seed bank of the soil, determine weed density, present a herbarium of the most common weds in the area. Prerequisite: CHEM 122.

#### CPSC 324 Plant Breeding

A study of the principles of plant genetics and their practical application to the improvement of crops. Two lectures each week. The laboratory consists of identification of different types of plants, measures of calculating breeding values in plants. Prerequisite: BIOL 449.

#### CPSC 325 Crop Production II

#### **3 Credits**

**3 Credits** 

This course is a continuation of CPSC 314, however emphasis is laid on the History, agronomy, distribution, economic importance and processing annual and perennial crops of industrial value selected from beverages, tubers, fiber, fruits, latex, nuts, tannin, pyrethroids and oil producers. In the laboratory students will maintain industrial crops plots- coffee, tea, and bananas, plant an orchard, propagate fruit trees, grafting, and construct shade for grafting and fruit tree propagation. Two lecture hours and one three-hour laboratory per week. Prerequisite: CPSC 314.

#### CPSC 326 Seed Production Technology

**3 Credits** 

Production, distribution and use of seed crops, seed testing, inspection, certification and legislation pertaining to these important aspects of seed production. The laboratory consists of an album of most common seeds seed analysis, seed germination, methods of seed treatment and seed testing etc. Two lecture hours and one three-hour laboratory per week. Prerequisite: CPSC 314.

#### **CPSC 330** Plant Tissue Culture

2 Credits

The course deals with principles, techniques and applications of tissue culture. Lectures and hands-on laboratories including aseptic techniques, culture methodology, laboratory equipment, micro propagation, callus and embryogenesis. Two lectures each week. Laboratory to be arranged as necessary.

#### CPSC 333 Pasture and Forage Production 3 Credits

A study of grasses and legumes that is productive in the tropics. Identification of species, planting practices, grazing management, fertilizer needs, and the feasibility of various grass legume mixtures are studied. The laboratory covers production of various types of pasture, watering and general management, harvesting techniques, and methods of pasture conservation. An album of the various types of pasture in the area.

#### CPSC 345 Crops Practicum

1 Credit

This course is designed to provide the student with an opportunity to gain crop production skills. The specific practical activities may be in such areas as, seedbed preparation, planting, disease control, fertilizer application, pest control, harvesting, storage and processing. The student must do these proactively. A plot of land will be designed to the student who will be responsible for all the operations therein. The student will work with one or more crops at a time as directed by the instructor. The crops are to be selected from the following groups: field crops, forage crops and pasture grasses. Requires three clock hours per week.

#### CPSC 373 Soil and Water Conservation 2 Credits

This course covers: Surveying and surveying equipment's, agents of soil erosion processes, problems and control strategies and the application of Universal Soil Loss Equation (USLE). Land capability classes, methods of soil and water conservation such as biological and the construction of physical structures will be considered. A student project will be required. Fieldwork and visits as necessary. Prerequisite: CPSC 311.

#### **CPSC 378** Sustainable and Conservation 2 Credits **Agriculture**

This course is designed to provide the student with theories, principles and techniques to sustainable agriculture in order to meet current needs in farming by producing high crop yields while reducing production costs, maintaining soil fertility and conserving water. Principles of conservation and sustainable agriculture such as no till, soil cover, mixing of crops and any method which is aimed at helping the world move towards the preservation of our natural resources and the maintenance of the delicate balance of our ecosystem will be considered. Two lectures and laboratory to be arranged.

#### **CPSC 411 Soil Management**

**3 Credits** 

This course covers: Soils of the Tropics and their Management Systems. It deals with fertility to increase crop yields and also factors responsible for plant food lost from the soil. Students will be required to undertake a project on which they will submit a term paper. The laboratory covers soil analysis for macro as well as micronutrients, fertilizers and their effect on the soil, soil pH and liming. Two lecture hours and one threehour laboratory per week. Prerequisite: CPSC 311.

#### **CPSC 412** Crop Protection

**3 Credits** 

A course dealing with identification of various crop diseases and their control, the growth, reproduction, identification, isolation of plant pathogenic bacteria and fungi. Pest of major Agricultural importance and their control will also be covered. The laboratory covers crop diseases and pests identification, extraction of nematodes from the soil, pest control methods, disease control methods, crop protection techniques, identify mode of action and efficacy of the various pesticides. Two lecture hours and one three-hour laboratory per week.

#### CPSC 422 Crop Harvesting, Processing, 3 Credits Storage and Marketing

The course covers handling of crops harvesting to production of saleable products. The laboratory covers harvesting techniques of various crops, methods of storage, packaging etc. Two lecture hours and one three-hour laboratory per week.

#### HORT 113 Fundamentals of Horticulture 3 Credits

This is an introductory course designed to familiarize the student with terminology and principles of horticultural production and science. This will include learning scientific names of horticultural plants, calculations, answering questions that require reasoning based on horticultural principles and learning basic terminology. Practical exercises will also be utilized as necessary.

#### HORT 210 Greenhouse Crop Management 3 Credits

Students are introduced to greenhouse management and production. Variable physical conditions such as heating, lighting, plant nutrition found in green house conditions and how they relate to plant growth and development are emphasized. The production practices of selected greenhouse crops will be demonstrated. Principles of greenhouse construction and operations are also covered. The laboratory covers greenhouse construction, soil and media preparation, seed procurement, nursery management, pests, and disease control, fertilization, planting, trellising, crop harvesting, storage, marketing and record keeping. The course covers practical demonstrations/ establishment of selected greenhouse crops, taking observations and reporting appropriately. Two lecture hours and one three-hour laboratory per week.

#### HORT 212 Propagation of Horticulture 3 Credits Plants

The course deals with the principles of plant propagation by seed, cuttings, layering, grafting, scion, and stalk relationships; stalks for fruit and ornamental plants. Practices employed by greenhouses and nursery operations in propagation of plants. The laboratory covers land preparation, procurement of materials, and production from seed, asexual reproduction, and cuttings, grafting techniques. Two lecture hours and one threehour laboratory per week.

#### HORT 223 Ornamental and Landscape 3 Credits Horticulture

The study of plants that are prized for their beauty. The use of these plants along with other objects to produce pleasing landscapes and plantscapes. The propagation, culture, growth, judging, and marketing of flowers and shrubs will also be covered. Laboratory exercises cover landscaping, indoor decorations, propagation of plant materials and plant terrariums, propagation of ornamental plants, album/ herbarium of ornamental plants, a simple landscape design of a specific area, identification of ornamental plants, indoor and outdoor decoration, flower arrangement in a designed place, establish a prayer garden. Two lecture hours and one threehour laboratory per week.

#### HORT 235 Horticulture Practicum 1 Credit

This course provides an opportunity for students to get involved in practical work in the establishment, management and production of horticultural crops. The student will work with one or more crops as agreed with the instructor. Requires two clock hours per week per credit. Prerequisite: Department Approval.

#### HORT 245 Vegetable Production Practicum 1 Credit

The course is designed for the student to work with and develop skills in the production of vegetables. Practical work will be conducted either in the vegetable garden or on a special plot assigned for this purpose. The students will work with one or more common East African vegetables that are produced in the University vegetable garden.

#### HORT 312 Olericulture

**3 Credits** 

**3 Credits** 

This course covers the production of cool and warm season indigenous and exotic vegetables. Topics will cover garden planning, cropping pattern, cultural practices, appropriate technology and biotechnological practices applicable to the production of such vegetables as Brassicas, Solanaceous, leaf, cucurbit, bulb, legume, root/tuber, and other miscellaneous vegetables. Students will be assigned a plot for a vegetable growing project to produce two or more special vegetable crops from which a technical report will be presented. Field trips will be arranged as necessary. The laboratory covers Production of various types of vegetables, harvesting, storage and marketing of vegetables, intensive vegetable production techniques etc. Two lecture hours and one three-hour laboratory per week. Prerequisite: Junior standing.

#### HORT 318 Floriculture

This course provide students with the theory and practice of floriculture with special emphasis on cut flowers e.g. roses, carnations production, handling, arranging, breeding and marketing of the flowers is given in this introduction to the art and science of using and growing cut flowers. Field trip to commercial floriculture production facilities will be made. The laboratory will cover greenhouse flower management, watering, pest and disease control, harvesting, grading and dispatch to the market. Two lecture hours and one three-hour laboratory per week.

## HORT 323 Fruits, Nuts and Spices (Pomology)

The course covers production of fruits, nuts and spices under East African conditions. The laboratory covers actual production of fruits, nuts, spices, crop husbandry practices, land preparation, harvesting, handling, storage and marketing. Practical exercises in the orchard. Field trips are necessary.

**3 Credits** 

### HORT 409 Field Trips

1 Credit This course is concerned with organizing field study visits to places of horticultural interest and to appropriate industries. Duration and places will be determined each year. Students are expected to pay for the cost of the trips.

#### HORT 411 Handling and Storage of **3 Credits** Horticulture Crops

The course deals with the principles and practices of distributing, storing and marketing fresh fruits, vegetables, flowers, and live ornamental plants. The laboratory covers practicals in handling, processing, storage and marketing of various horticultural products. Two lecture hours and one three-hour lab each week.

## ZOOL 310 Comparative Vertebrate Anatomy 3 Credits

Comparative anatomy of the chief organ systems of the major classes of vertebrates from cephalochordates to mammals. Organ systems compared will include skeletal, muscular, nervous, respiratory, cardiovascular, digestive, and reproductive systems. The laboratory sessions will compare organ systems of the major classes of vertebrates, these organs will include skeletal, muscular, nervous, respiratory, cardiovascular, digestive, and reproductive systems. Two lecture hours and one three-hour laboratory per week.

## ZOOL 322 Invertebrate Zoology

This course deals with the study of Invertebrates and its classification, the functional significance of their structural features and the relation of the invertebrates to the environment. The laboratory will emphasize on classification, functional significance of their structural features and the relation of the invertebrates to the environment. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

## ZOOL 325 Parasitology

This course deals with the biology of parasitism including functional morphology and essentials of classification and distribution. It covers principles and concepts of parasitology, immunology and pathogenesis related to parasitism, a survey of parasitic protozoans, helminths and arthropods, physiology, life cycles and classification of parasites, host-parasite relationships and parasitic diseases. Emphasis is on the better known parasites of humans and animals. The laboratory emphasizes the identification of parasites. Two lecture hours and one three hour laboratory each week. Prerequisites: BIOL 153/BIOL 156.

## ZOOL 333 Ichthyology

#### **3 Credits**

**3 Credits** 

**3 Credits** 

This course is a study of the biology of fish. Topics covered include the classification, anatomy, reproduction, feeding, growth, behavior and distribution of fish. Aquaculture methods and the Kenyan fishing industry will be discussed. The laboratory will cover the classification, anatomy, reproduction, feeding, growth, behavior and distribution of fish. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

### ZOOL 334 Herpetology

This course deals with the study of the Biology of amphibians and reptiles. Topics include the morphology, taxonomy, life history, distribution, ecology and behavior of the amphibians and reptiles. Field and laboratory work involve the collection, identification, and preservation of amphibian and reptile specimens. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

## ZOOL 336 Ornithology

This course deals with the study of the Biology of birds. Topics include the morphology, taxonomy, life history, distribution, ecology, behavior and economic importance of birds. Field and laboratory work include the observation and identification of birds. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

#### ZOOL 338 Mammalogy

This course is a study of the biology of mammals. Topics include the morphology, taxonomy, life history, distribution, ecology and behavior of mammals. Field and laboratory work include the observation, collection and identification of mammals. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

### ZOOL 342 Entomology

This course is an introductory study of the fundamental aspects of insect Biology including the morphology, anatomy, physiology, development, behavior and systematics of major insect orders. The ecological factors that influence insect distribution, the value of insects in scientific research as well as their importance in agriculture and medicine are emphasized. Field and laboratory work involve the collection and identification of insects to the family level. Two lecture hours and one threehour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

### ZOOL 365 Histology

This course deals with the study of microscopic anatomy, cytology and ultrastructure of tissues and organ systems are correlated with function. Emphasis is on normal tissue of vertebrates. Laboratories emphasize the identification of different cell and tissue types. Two lecture hours and one threehour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

### ZOOL 384 Animal Behavior

This course designed to introduce students to the mechanisms, development and survival value of behavior in animals. The interaction between physiological and ecological factors in shaping behavior are emphasized. Topics covered include the history of the study of animal behavior, genetic analysis of behavior, natural selection and ecological analysis of behavior, learning, nerve cells and behavior, neuroendocrine systems, development of behavior, orientation in space, foraging behavior, reproduction and sexual selection, parental care systems, communication in animals, sociality and dispersion. Each student is required to undertake an individual project. 3 lecture hours each week. Prerequisites: BIOL 153/BIOL 156.

#### **3 Credits**

**3 Credits** 

**3 Credits** 

**3 Credits** 

**3 Credits** 

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#### ZOOL 396 Mammalian Anatomy

**3 Credits** 

This course is an advanced anatomy course that deals with mammalian anatomy with emphasis on human anatomy. All organ systems will be covered. The laboratory will emphasize on the anatomy of all organ systems in the human body. Two lecture hours and one three-hour laboratory each week. Prerequisites: BIOL 153/BIOL 156.

#### ZOOL 360 Parasitology and Immunology 3 Credits

Introduction to parasitism and related phenomena, adaptation to parasitic modes of life and host-parasitic relationships. The classification, morphology and life cycles of protozoan, helminth and arthropod parasites of medical and veterinary importance. Physiology and biochemistry of parasites, methods of transmission and major arthropod vectors and intermediate hosts of parasites. Epidemiology, diagnosis, treatment and control of parasitic infections, immunology of infections. Allergy/Hypersensitivity, types of hypersensitivity reactions, autoimmunity and origins of autoimmune diseases. Non-parasitic disease causing organisms such as bacteria, fungi and viruses. Laboratory topics will include, laboratory identification and classification of common human and animal parasites. Two lecture hours and one three-hour laboratory per week. Prerequisites: BIOL 153/BIOL 156.

#### ZOOL 448 Developmental Biology

**3 Credits** 

This course explores the study of descriptive and experimental animal embryology, and molecular aspects of development. Topics covered include gametogenesis, fertilization, cleavage, gastrulation, organogenesis, differentiation, molecular control of developmental processes, and aspects of experimental embryology. The laboratory deals with gametogenesis, cleavage, gastrulation and organogenesis with special emphasis on chick development. Two lecture hours and one three hour laboratory per week. Prerequisites: BIOL 447 and BIOL 449.

#### ZOOL 464 Systems Physiology

**4 Credits** 

This course explores the functional processes used by animals in adjusting to their external environment and controlling their internal environment. Emphasis is placed on major organ systems and their functional interactions. Specific topics include respiratory physiology, blood circulation, thermoregulation, water and ion balance, excretion, muscle physiology and nervous system function. The laboratory gives practical experience with the techniques and apparatus used in physiological studies. Three lecture hours and one three hour laboratory per week. Prerequisites: BIOL 447 and PHYS 165 recommended.

## **DEPARTMENT OF FOODS, NUTRITION AND DIETETICS**

#### FACULTY

Boor, F., MSc., (Acting Head of Department) Maiyo, G., MSc. Mkandawire, P., MSc. Muchee, T., PhD. Muga, M., PhD. Ndiku, M., DrPH. Onyango, D, PhD. Ruto, J., BSc. Wakoli, A., MPH.

#### **Teaching Assistants**

Maweu P., BSc. Mbithi, G., BSc. Mutanu, P. BSc. Omware, J., BSc. Otore, N., BSc. Ruto, J., BSc.

#### **PHILOSOPHY**

The Department of Foods, Nutrition and Dietetics operates on the UEAB worldview, which holds that God is the creator and sustainer of the universe and life and is the source of true knowledge. The entrance of sin caused man's alienation from God; therefore, the educative process in the Department of Foods, Nutrition and Dietetics seeks to restore man's relationship with God through the promotion of healthy lifestyle in terms of nutrition and fashion to promote human dignity as guided by three core Christian values of love, compassion and forgiveness. This approach leads learners into selfactualization and to discover and understand the truth through critical thinking and positive living.

#### MISSION

The mission of the Department of Foods, Nutrition and Dietetics is to provide and advance wholistic quality Christian education which develops men and women to be earnest seekers of truth and equip them with appropriate theoretical, technical, practical and scientific knowledge and skills for service to God and humanity.

#### VISION

The Department of Foods, Nutrition and Dietetics envisions being a center of excellence in higher education and research producing world class nutritionists/dieticians, nutrition/ dietician technologists, nutrition/dietician technicians, fashion and textile designers and hotel managers equipped with moral values towards global competitiveness.

#### **DEGREES OFFERED BY THE DEPARTMENT**

- 1. Bachelor of Science in Fashion and Textile Design
- 2. Bachelor of Science in Foods, Nutrition And Dietetics
- 3. Bachelor of Science in Hotel and Hospitality Management
- 4. Minor in Fashion and Textile Design
- 5. Minor in Foods, Nutrition and Dietetics
- 6. Minor in Hotel and Hospitality Management

# EXPECTED LEARNING OUTCOMES FOR FASHION AND TEXTILE DESIGN

At the end of the degree program in Fashion and Textile Design, the student should be able to:

 Describe the necessary skills in Fashion and Textile Design that are applicable in modern world of people who are striving to be fashionable;

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- 2. Apply the knowledge, skills and attitudes to design trendy and acceptable fashions:
- 3. Discuss the necessary entrepreneurial skills that can enable them to be self-employed upon graduation:
- 4. Demonstrate skills to practice in an ethical and professional manner in a changing work environment:
- 5. Demonstrate appropriate research skills methods and aptitude for postgraduate studies and professional growth.

### EXPECTED LEARNING OUTCOMES FOR FOODS, NUTRITION AND DIETETICS

At the end of the degree program in Nutrition and Dietetics, the student should be able to:

- Apply the knowledge, skills and attitudes to undertake quality nutrition and dietetic practice in a range of settings including disasters and emergencies.
- Apply independent learning and reflective thinking, practice skills to allow capacity for self-evaluation and management.
- 3. Demonstrate skills to practice in an ethical and professional manner in a changing work environment.
- Demonstrate the ability to apply interdisciplinary approaches to the prevention, promotion of well-being and management of nutritional problems.
- Demonstrate commitment to the nutrition and dietetic discipline including individual and collective professional development.
- 6. Provide leadership in solving problems related to nutrition and dietetics.
- 7. Serve as nutritionist/dietician, counselors, educators and researchers at county and national levels.
- 8. Apply Biblical principles in dealing with clients and administering nutritional services.
- 9. Pursue higher degrees in nutrition/dietetics profession.

#### EXPECTED LEARNING OUTCOMES FOR HOTEL AND HOSPITALITY MANAGEMENT

At the end of the degree program in Hotel and Hospitality Management, the student should be able to:

- 1. Discuss the necessary entrepreneurial skills that can enable them to be self-employed upon graduation.
- Demonstrate appropriate research skills methods in and aptitude for postgraduate studies and professional growth.
- 3. Describe the necessary skills for managers in the hospitality industry
- Apply appropriate skills in the successful management of hospitality industry.
- 5. Explain the trends affecting the growth of hospitality industry.
- 6. Demonstrate skills to practice in an ethical and professional manner in a changing work environment.
- 7. Apply the knowledge, skills, and attitudes to provide quality hospitality services.

### **ENTRANCE REQUIREMENTS**

# Direct entry into BSc in Fashion and Textile Design and BSc in Hotel Management

In addition to meeting the minimum university requirements of an overall grade of C+ in the Kenya Certificate of Secondary Education (KCSE) or its equivalent, students seeking admission into Hotel Management and Fashion and Textile Design shall meet the following requirements:

- The candidate should also have a KCSE grade (or its equivalent) of C+ or better in any two of the following subjects: chemistry, biology, home science, business, agriculture, mathematics, computer science and geography.
- 2. Someone who has finished a diploma in related areas from a reputable institution can be admitted into the program.

# Direct entry into BSc in Foods, Nutrition and Dietetics program

In addition to meeting the minimum university requirements of an overall grade of C+ in the Kenya Certificate of Secondary Education (KCSE) or its equivalent, students seeking admission into Foods, Nutrition and Dietetics must have passed with a minimum of grade C+ in the following subject cluster: Biology/Biological sciences, Chemistry/physical sciences, Mathematics/Physics and English/Kiswahili.

#### Interdepartmental Transfer

If a student wishes to transfer to the department of Foods, Nutrition and Dietetics to do Foods, Nutrition and Dietetics, he/ she must have passed with an overall grade of C+ in the Kenya Certificate of Secondary Education (KCSE) or its equivalent. In addition, he/she must have passed with a minimum of grade C+ in the following subject cluster: Biology/Biological sciences, Chemistry/physical sciences, Mathematics/Physics and English/Kiswahili.

## **UPGRADING STUDENTS**

#### BSc in Fashion and Textile Design

Applicants must meet the following requirements.

- 1. A form four certificate or its equivalent
- 2. A diploma in Fashion, Design and Craft, Clothing and Textiles, Clothing and Technology, Fashion and Textiles, and Textiles from a recognized institution approved by the relevant ministries of Education.
- Provide academic transcript, updated curriculum vitae (CV) and course syllabus from the diploma program in which the qualification was obtained to facilitate evaluation and credit transfer.

### **BSc in Foods, Nutrition, and Dietetics**

This program is tailored to meet the needs of health professionals who hold diploma qualifications in nutrition and dietetics related areas and who wish to upgrade to degree level while continuing in employment. The upgrading program is expected to take about  $2\frac{1}{2}$ -3 years to complete.

Applicants must be holding a Diploma in Nutrition and Dietetics or Nutrition and Food Sciences from recognized institutions also qualify for admission.

### **BSc in Hotel and Hospitality Management**

Applicants must meet the following requirements.

- 1. A form four certificate or its equivalent
- A diploma in Foods and Nutrition, Tourism Management, Hotel and Tourism Management, Catering, Housekeeping, Food and Beverage Production and any other hospitality related diploma from a recognized institution approved by the relevant ministries of Education.



 Provide academic transcript, updated curriculum vitae (CV) and course syllabus from the diploma program in which the qualification was obtained to facilitate evaluation and credit transfers

#### **CREDIT EXEMPTION**

A student hoping to be exempted from doing some courses offered at the University of Eastern Africa, Baraton should submit an application for same to the department chairperson. The application must be accompanied by a CV, transcripts showing all the courses, grades from previous training, and course syllabi/outlines to facilitate the exemption. A minimum of 17 and a maximum of 45 credits may be exempted. The student must have a minimum grade of C+ or its equivalent in the course he/she is seeking exemption.

#### **GRADUATION REQUIREMENTS**

#### **Bachelor of Science in Fashion and Textile Design**

- 1. A student must complete a minimum of 135 credits with a GPA of 2.00 and above
- 2. A GPA of 2.25 and above for the core requirements and with no grade below C.
- A GPA of 2.00 and above for the cognates and no grade below C

### Bachelor of Science in Foods, Nutrition and Dietetics

- 1. A student must complete a minimum of 143 credits with a GPA of 2.00 and above
- 2. A GPA of 2.33 and above for the core requirements with no grade below C+.
- A GPA of 2.33 and above for the cognates and no grade below C+.

## Bachelor of Science in Hotel and Hospitality Management

- 1. A student must complete a minimum of 134 credits with a GPA of 2.00 and above
- A GPA of 2.25 and above for the core requirements with no grade below C.
- 3. A GPA of 2.00 and above for the cognates and no grade below C

#### Minor in Fashion and Textile Design

A student must complete 29 credits with a GPA of 2.25 and above with no grade below C.

#### Minor in Foods, Nutrition and Dietetics

A student must complete 40 credits with a GPA of 2.33 and above with no grade below C+  $\,$ 

#### Minor in Hotel Management

A student must complete 28 credits with a GPA of 2.25 and above and with no grade below C.

# **Course Listing**

## BACHELOR OF SCIENCE IN FASHION AND TEXTILE DESIGN

#### SUMMARY

General Education Requirements	29
Core Courses	66
Cognate Courses	34
Elective Courses	6
Total	135 Credits

Students taking Fashion and Textile Design are exempt from the following General Education Requirements

MATH 101	Pre-Calculus	3
BIOL 105	Human Biology	2
MGMT 103	Basic Management Entrepreneurial Skills	2
AGRI 105	Principles of Agricultural Technology	2
TCED 231	Safety Education	2

The following General Education Requirement is taken as a core requirement

Vocational Skills

GENERAL	EDUCATION REQUIREMENTS 29 Credit	s
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
PHYS 100	Concepts of Physical Sciences	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

#### Two courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

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CORE COL	JRSES 66 Credit	ts
FTXD 107	Quilting laboratory	1
FTXD 108	Weaving laboratory	1
FTXD 121	Creative Fashion crafts laboratory	1
FTXD 150	Fundamentals of Apparel Construction and Fashion	3
FTXD 151	Fundamentals of Apparel Construction and Fashion lab	1
FTXD 200	History of Costume Theory	3
FTXD 201	Fashion Illustration Theory	3
FTXD 210	Fashion and Textile Design Career	3
FTXD 217	Interior and Upholstery Design	3
FTXD 216	Textile Analysis	3
FTXD 218	Wardrobe Selection Management	3
FTXD 219	Wardrobe Selection management Lab	1
FTXD 230	Flat pattern Design I laboratory	3
FTXD 260	Principles of Fashion Design	3
FTXD 315	Clothing Recycling	3
FTXD 325	Tailoring, Apparel Construction I	3
FTXD 326	Tailoring, Apparel Construction II	3
FTXD 330	Flat Pattern Design II Laboratory	3
FTXD 360	Mass Apparel manufacturing laboratory	1
FTXD 370	Creative Fashion Design	3
FTXD 390	Fashion Forecasting and Presentation	3
FTXD 403	Research Methods I	3
FTXD 404	Research Methods II (senior project)	1
FTXD 409	Fashion Industry	3
FTXD 410	Advanced Textile Analysis and Design	3
FTXD 460	Fashion Marketing and Merchandising	3
FTXD 470	Fashion and Textile Design attachment	4

COGNATE	COGNATE COURSES 34 Credit		
BIOL 111	Human Anatomy and Physiology		4
BIOL 285	Biostatistics		3
CHEM 111	Introductory General Chemistry		4
CHEM 114	Textile Chemistry		4
ECON 210	Principles of Microeconomics		3
MATH 113	Business Mathematics I		3
MECT 131	Technical Drawing		2
MGMT 130	Fundamentals of Management		3
MGMT 231	Human Resource Management		3
MKTG 115	Principles of Marketing		3
TCED 230	Industrial Safety		2

ELECTIVE COURSES 6 Credits		
FDNT 135	Food Hygiene and Safety	3
SWCD 254	Child Development	3
SWFC 250	Family cultural Perspective	3
SWMD 275	Marriage Dynamics and Growth	3
SWPC 410	Parent Child Relationship	3

FDNT 135	Food Hygiene and Safety	3
SWCD 254	Child Development	3
SWFC 250	Family cultural Perspective	3
SWMD 275	Marriage Dynamics and Growth	3
SWPC 410	Parent Child Relationship	3

## BACHELOR OF SCIENCE IN FASHION AND TEXTILE DESIGN FOR UPGRADING STUDENTS

This program is adapted to meet the needs of fashion and design professionals who hold diploma qualifications in Fashion, Design and Craft, Clothing and Textiles, Clothing and Technology, Fashion and Textiles, and who wish to upgrade to degree level while continuing in employment. The upgrading program is expected to take about 2 1/2 -3 years to complete.

Recommended core courses for credit transfer for students pursuing Fashion and Textile Design Degree

FTXD 150	Fundamentals of Apparel Construction	3	
FTXD 151	Fundamentals of Apparel Construction Lab	1	
FTXD 216	Textile analysis	3	
FTXD 260	Principles of Fashion Design	3	
MGMT 130	Fundamentals of Management	3	
MKTG 115	Principles of Marketing	3	
Total 16 Credits			

Recommended courses for challenge exam for students Fashion and Textile Design degree

A total of 10 credits can be taken by Challenge Exam

FTXD 200	History of Costume	3
FTXD 217	Interior and Upholstery Design	3
FTXD 218	Wardrobe Selection	3
FTXD 330	Flat Pattern Design I	3

Upgrading students in Fashion and Textile Design should follow the degree requirements as listed above.



#### SUMMARY

Total	140 Credits
Cognates	42
Core Requirements	82
General Education Requirements	17

Students taking Foods, Nutritions, and Dietetics are exempted from the following General Education Requirements:

	Total 8 Credits	
ENVI 227	Environment and Society	2
PHYS 100	Concepts of Physical Sciences	2
BIOL 105	Human Biology	2
HLED 110	Health Principles	1
PEAC 107	Physical and Recreational Activities	1

The following courses are taken as cognates instead of as General Education Requirements

	Total 16 Credits	s
NUTR 110	First Aid	1
MGMT 103	Basic Management and Entrepreneurial Skills	2
MATH 101	Pre-Calculus	3
SOCI 121	Sociology	2
PSYC 10	Introduction to Psychology	2
INSY 108	Information Technology for Health Professioinals	2
ENGL 106	Speech Communication	1
ENGL 105	Writing Skills	3

GENERAL	EDUCATION REQUIREMENTS 17 Credit	S
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2
RELB 220	Life and Teachings of Jesus	2
EDUC 215	Introduction to Philosophy of Christian	2
	Education	
GCAS 107/	Music Appreciation/	2
LITE 151	Introduction to Literary Appreciation	
AGRI 105	Principles of Agricultural Technology	2

CORE REQUIREMENTS 82 Credits		S
DTCS 100	Introduction to Nutrition and Dietetics	3
DTCS 334	Nutrition Care Process	3
DTCS 336	Therapeutic Dietetics	3
DTCS 338	Nutrition in Disease Management	3
DTCS 340	Dietetics	3

DTCS 360	Nutrition Education and Counseling	3
DTCS 366	Exercise Physiology and Sports Nutrition	2
DTCS 443	Leadership in Nutrition and Dietetics	3
DTCS 470	Clinical Attachment	5
DTCS 475	Community Practicum	5
FDNT 135	Food Hygiene and Safety	3
FDNT 140	Food Preparation Laboratory	1
FDNT 200	Food Biotechnology	3
FDNT 217	Food Preservation and Processing	3
FDNT 300	Meal Planning, Management and Service	3
NUTR 130	Life Skills	3
NUTR 110	First Aid	1
NUTR 200	Nutrition Pharmacology	3
NUTR 234	Human Nutrition	3
NUTR 255	Nutrition in the Life Cycle	2
NUTR 290	Nutrition in Emergency	3
NUTR 303	Research Methods I	3
NUTR 304	Research Methods II	2
NUTR 322	Primary Health care	3
NUTR 342	Nutrition in HIV and AIDS	2
NUTR 365	Nutrition Assessment and Surveillance	3
NUTR 369	Nutrition Anthropology	3
NUTR 403	Macronutrients	3
NUTR 404	Micronutrients	3
NUTR 417	Nutrition and Behavior	3
NUTR 461	Nutrition Epidemiology	3

COGNATES 42 Credits		S
BIOL 111	Human Anatomy and Physiology I	4
BIOL 112	Human Anatomy and Physiology II	4
BIOL 245	Basic Medical Microbiology	4
CHEM 111	Introductory General Chemistry	4
CHEM 113	Principles of Organic and Biochemistry	4
CLSC 105	Medical Terminology	1
CLSC 254	Food, Microbiology and Parasitology	3
PHNL 202	Biostatistics in Public Health	3
PSYC 101	Introduction to Psychology	2
OFTE 120	Keyboarding	0
SOCI 121	Introduction to Sociology	2
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
INSY 108	Information Technology for Health Professionals	2
MATH 101	Pre-calculus	3
MGMT 103	Basic Management and Entrepreneurial Skills	2

Note that a one year internship shall be a requirement upon successfully completing the BSc. Degree program prior to registration by the Kenya Nutritionists and Dieticians Institute (KNDI)

# SCHOOL OF SCIENCE AND TECHNOLOGY



## BACHELOR OF SCIENCE IN FOODS, NUTRITION AND DIETETICS FOR DIPLOMA HOLDERS

This program is tailored to meet the needs of health professionals who hold diploma qualifications in nutrition and dietetics related areas and who wish to upgrade to degree level while continuing in employment. The upgrading program is expected to take about  $2\frac{1}{2}$  - 3 years to complete.

### SUMMARY

Total	124 Credits
Cognates	38
Core Requirements	69
General Education Requirements	17

#### **Core Courses Exemptions**

	Total 21 Credit	S
DTCS 475	Community Practicum	5
NUTR 290	Nutrition in Emergency	3
NUTR 255	Nutrition in the Life Cycle	2
NUTR 130	Life Skills	3
NUTR 110	First Aid	1
FDNT 140	Food Preparation Laboratory	1
FDNT 135	Food Hygiene and Safety	3
DTCS 100	Introduction to Nutrition and Dietetics	3

#### **Cognate Courses Exemptions**

	Total 6 Credits	5
PYSC 101	Introduction to Psychology	2
SOCI 121	Principles of Sociology	2
OFTE 120	Introduction to Keyboarding	0
MGMT 103	Basic Management Entrepreneurial Skills	2

#### Recommended core courses for challenge exam

	Total 9 Credits	5
NUTR 269	Nutrition Anthropology	3
NUTR 322	Primary Health Care	3
DTCS 340	Dietetics	3

#### **GENERAL EDUCATION REQUIREMENTS** 17 Credits KISW 114 Language Use in Kiswahili Or 2 FREN 103 Beginning French II RELH 155 Adventist Heritage 2 **RELT 207** Christian Beliefs 3 RELT 255 Introduction to Christian Ethics 2 RELB 220 Life and Teachings of Jesus 2 EDUC 215 Introduction to Philosophy of Christian 2 Education

CORE REC	QUIREMENTS 69 Credit	S
DTCS 334	Nutrition Care Process	3
DTCS 340	Dietetics	3
DTCS 336	Therapeutic Dietetics	3
DTCS 338	Nutrition in Disease Management	3
DTCS 360	Nutrition Education and Counseling	3
DTCS 366	Exercise Physiology and Sports Nutrition	2
DTCS 443	Leadership in Nutrition and Dietetics	3
DTCS 444	Food Service Management	2
DTCS 470	Clinical Attachment	5
FDNT 200	Food Biotechnology	3
FDNT 217	Food Preservation and Processing	3
FDNT 300	Meal Planning, Management and Service	3
NUTR 200	Nutrition Pharmacology	3
NUTR 234	Human Nutrition	3
NUTR 303	Research Methods I	3
NUTR 304	Research Methods II	1
NUTR 322	Primary Health Care	3
NUTR 342	Nutrition in HIV and AIDS	2
NUTR 365	Nutrition Assessment and Surveillance	3
NUTR 369	Nutrition Anthropology	3
NUTR 403	Macronutrients	3
NUTR 404	Micronutrients	3
NUTR 417	Nutrition and Behavior	3
NUTR 461	Nutrition Epidemiology	3

COGNATES 38 Credits		S
BIOL 111	Human Anatomy and Physiology I	4
BIOL 112	Human Anatomy and Physiology II	4
BIOL 245	Basic Medical Microbiology	4
CHEM 111	Introductory General Chemistry	4
CHEM 113	Principles of Organic and Biochemistry	4
CLSC 105	Medical Terminology	1
CLSC 254	Food, Microbiology and Parasitology	3
PHNL 202	Biostatistics in Public Health	3
PHEP 100	Principles of Epidemiology	2
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
INSY 108	Information Technology for Health Professionals	2
MATH 101	Pre-calculus	3



## BACHELOR OF SCIENCE IN HOTEL AND HOSPITALITY MANAGEMENT

#### SUMMARY

General Education Requirements	31
Core Requirements	64
Cognates	36
Electives	3
Total	134 Credits

Students taking Hotel and Hospitality Management are exempted from the following General Education Requirements

MGMT 103	Basic Management and Entrepreneurial Skills	2
HLED 110	Health Principles	1
MATH 101	Pre-Calculus	3
TCED 231	Safety Education	2

The following course is taken as a cognate and not as a General Education Requirement

FREN 103	Beginning French II	2	

GENERAL	EDUCATION REQUIREMENTS 31 Credit	s
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
0FTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
PHYS 100	Concepts of Physical Sciences	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

## Two of the following courses (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE REC	QUIREMENTS 64 Credit	s
HTMG 101	Introduction to hotel and hospitality operations and management	3
HTMG 122	Introduction to Tourism Operations	3
HTMG 143	Introduction to Hotel Economics	3
HTMG 232	Food and Beverage Production	4
HTMG 233	Food and Beverage Service	4
HTMG 252	Front Office Operations Management	4
HTMG 253	House-keeping Operations and Management	4
HTMG 300	Industrial Attachment I	4
HTMG 301	Hospitality Service and Operations Management	3
HTMG 303	Research Methods in Tourism and Hospitality Industry	3
HTMG 304	Senior Project	3
HTMG 311	Consumer Behavior and Service Marketing	3
HTMG 322	Facility and Property Management	3
HTMG 332	Marketing Hotels and Catering Services	3
HTMG 343	International Foods Laboratory	2
HTMG 353	Human Resource Management for Tourism and Hospitality Industry	3
HTMG 360	Events and Conventions Management	3
HTMG 400	Industrial Attachment II	4
HTMG 451	Seminars and Contemporary Issues in Hospitality Industry	2
HTMG 472	Hospitality Law	3

COGNATES 36 Credits		S
CLSC 252	Principles of Food and Water Microbiology	3
CNST 140	Home Maintenance	2
FDNT 135	Food Hygiene and Safety	3
FREN 103	Beginning French II	2
FREN 104	Introduction to French Language	3
FTXD 217	Interior and Upholstery Design	3
GEOG 226	The Geography of Tourism and Leisure	3
MATH 113	Business Mathematics I	3
MGMT 130	Fundamentals of Management	3



ELECTIVE COURSES 3		3 Credit	S
FTXD 218	Wardrobe Selection/Management		3
SWCD 254	Child Development		3
SWPC 410	Parent Child Relationship		3

### BACHELOR OF SCIENCE IN HOTEL AND HOSPITALITY MANAGEMENT FOR UPGRADERS

This program is intended to meet the needs of hospitality professionals who hold diploma qualifications in Foods and Nutrition, Tourism and Management, Hotel and Tourism Management, Catering, Housekeeping, Food and Beverage Production and any other hospitality related diploma recognized by relevant ministries of education who wish to upgrade to degree level while continuing in employment. The upgrading program is expected to take about  $2\frac{1}{2}$  - 3 years to complete.

#### SUMMARY

General Education Requirement	21
Core	60
Cognates	36
Electives	3
Total	120 Credits

Recommended core courses for credit transfer for students pursuing BSc in Hotel and Hospitality Management

FDNT 135	Food Hygiene and Safety	3
HTMG 101	Introduction to hotel and hospitality operations and management	3
HTMG 232	Food and Beverage Production	4
HTMG 233	Food and Beverage Service	4
HTMG 252	Front Office Management	4
HMTG 253	House Keeping Operations & Management	4
MGMT 130	Fundamentals of Management	3
MKTG 115	Principles of Marketing	3
	Total 28 Credits	

Recommended courses for challenge exam for students pursuing BSc in Hotel and Hospitality Management for a maximum of 10 credits

NUTR 234	Nutrition	3
HTMG 301	Hospitality Service and Operations	3
	Management	
HTMG 322	Facility and Property Management	3
HTMG 332	Marketing Hotels and Catering Services	3

Upgrading students for the Bachelor of Science in Hotel and Hospitality Management are exempt from the follow General Education Requirements:

AGRI 105	Principles of Agricultural Technology	2
ENVI 227	Environment and society	2
HIST 111	Concepts of World Civilization	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Introduction to Keyboarding	0
PEAC 107	Physical and Recreational Activities	1
PSYC 101	Introduction to Psychology	2
	Vocational Skills	1
MGMT 103	Basic Management and Entrepreneurial Skills	2
HLED 110	Health Principles	1
MATH 101	Pre-Calculus	3
Total 18 Credits		

The following course is taken as a cognate and not as a General Education Requirement

FREN 103	Beginning French II	2
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Core Courses for Exemption for Upgraders in Hotel and Hospitality Management

4

HTMG 300 Industrial Attachment I

GENERAL	EDUCATION REQUIREMENTS 21 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
EDUC 215	Introduction to Philosophy of Christian Education	2
BIOL 105	Human Biology	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
PHYS 100	Concepts of Physical Sciences	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

#### **CORE REOUIREMENTS** 60 Credits HTMG 101 Introduction to hotel and hospitality 3 operations and management HTMG 122 Introduction to Tourism Operations 3 3 HTMG 143 Introduction to Hotel Economics 4 HTMG 232 Food and Beverage Production HTMG 233 Food and Beverage Service 4 4 HTMG 252 Front Office Operations Management HTMG 253 House-keeping Operations and Management 4 HTMG 301 Hospitality Service and Operations 3 Management HTMG 303 Research Methods in Tourism and Hospitality 3 Industry



Senior Project	3
Consumer Behavior and Service Marketing	3
Facility and Property Management	3
Marketing Hotels and Catering Services	3
International Foods Laboratory	2
Human Resource Management for Tourism	3
and Hospitality Industry	
Events and Conventions Management	3
Industrial Attachment II	4
Seminars and contemporary issues	2
in Hospitality industry	
Hospitality Law	3
	Consumer Behavior and Service MarketingFacility and Property ManagementMarketing Hotels and Catering ServicesInternational Foods LaboratoryHuman Resource Management for Tourism and Hospitality IndustryEvents and Conventions ManagementIndustrial Attachment IISeminars and contemporary issues in Hospitality industry

COGNATES 36 Credits		ts
CLSC 252	Principles of Food and Water Microbiology	3
CNST 140	Home Maintenance	2
FDNT 135	Food Hygiene and Safety	3
FREN 103	Beginning French II	2
FREN 104	Introduction to French Language	3
FTXD 217	Interior and Upholstery Design	3
GEOG 226	The Geography of Tourism and Leisure	3
MATH 113	Business Mathematics I	3
MGMT 130	Fundamentals of Management	3
MKTG 115	Principles of Marketing	3
NUTR 234	Human Nutrition	3
STAT 150	Introduction to Probability and Statistics	3
TCED 230	Industrial Safety	2

ELECTIVES	S 3 Credi	3 Credits	
FTXD 218	Wardrobe Selection/Management	3	
SWCD 254	Child Development	3	
SWPC 410	Parent Child Relationship	3	

### MINOR IN FASHION AND TEXTILE DESIGN

#### SUMMARY

Core Course Total	30 30 Credits	
CORE COL	JRSES 30 Credit	S
FTXD 150	Fundamentals of Apparel Construction and Fashion	3
FTXD 151	Fundamentals of Apparel Construction and Fashion Lab I	
FTXD 200	History of Costume	3
FTXD 201	Fashion Illustrator with Lab	3
FTXD 210	Fashion and Textile Design Career	2
FTXD 217	Interior and Upholstery Design	3
FTXD 218	Wardrobe Selection with Lab	3
FTXD 230	Flat Pattern Design I Laboratory	3
FTXD 260	Principles of Fashion Design	3
FTXD 330	Flat Pattern Design II Laboratory	3
FTXD 370	Creative Fashion Design with Lab	3

### **MINOR IN FOODS, NUTRITION AND DIETETICS**

### SUMMARY

Core Courses	24
Cognates	16
Total	40 Credits

CORE CO	URSES 30 Credit	S
DTCS 334	Dietetics	2
DTCS 335	Dietetics Practicum	1
DTCS 336	Nutrition Care Process	2
DTCS 337	Nutrition Care Process Practicum	1
DTCS 338	Therapeutic Dietetics	2
DTCS 339	Therapeutic Dietetics Practicum	1
DTCS 340	Nutrition in Disease Management	2
DTCS 341	Nutrition in Disease Management Practicum	1
FDNT 140	Food Preparation Laboratory	1
FDNT 322	Meal Planning, Management and Service	2
FDNT 323	Meal Planning, Management and Service Laboratory	1
NUTR 234	Human Nutrition	3
NUTR 255	Nutrition in the Life Cycle	2
NUTR 365	Nutrition Assessment and Surveillance	2
NUTR 366	Nutrition Assessment and Surveillance Laboratory	1

COGNATES	5 16 Credit	S
BIOL 111	Human Anatomy and Physiology I	4
BIOL 112	Human Anatomy and Physiology II	4
CHEM 111	Introductory General Chemistry	4
CHEM 113	Principles of Organic and Biochemistry	4

### MINOR IN HOTEL AND HOSPITALITY MANAGEMENT

### SUMMARY

Core Requir <b>Total</b>	rements 25 <b>25 Credits</b>	
CORE COL	JRSES 30 Credit	S
HTMG 101	Introduction to hotel and hospitality	3
	Operations and Management	
HTMG 232	Food and Beverage Production	4
HTMG 233	Food and Beverage Service	4
HTMG 252	Front Office Operations Management	4
HTMG 253	House-keeping Operations and Management	4
HTMG 322	Facility and Property Management	3
FTXD 217	Interior and Upholstery Design	3



### **BACHELOR OF SCIENCE IN FASHION AND TEXTILE DESIGN** Four-Year Course Plan and Checklist

YEAR	F	IRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	ENGL 105	Writing skills	3			1	FTXD 216	Textile Analysis (with lab)	2	1	3
1st	LITE 151/ GCAS 107	Introduction to Literature Appreciation/Music Appreciation	2				MECT 131	Technical Drawing	2		2
	FTXD 150	Fundamentals of Apparel Construction	3				ENGL 106	Speech Communication	1		1
	FTXD 151	Fundamentals of Apparel Construction Lab	1				RELT 207	Christian Beliefs	3		3
-	RELH 155	Adventist Heritage	2				INSY 107	Information Technology Today	2		2
	SOCI 121/ PSYC 101/ SWFI 207	Principles of Sociology/ Introduction to Psychology/ Family Issues	2				HLED 110	Health Principles	1		1
-	MATH 113	Business Mathematics I	3				PHYS 100	Concepts of Physical Sciences	2		2
	0FTE 120	Keyboarding	0					Total	13	1	14
	PEAC 107	Physical and Recreational Activities	1								
	FTXC 107	Quilting	1								
		Total	18								
2nd	CHEM 111	Introduction to General Chemistry	3	1	4		EDUC 215	Intro. to Philosophy of Christian Education	2		2
2.114	HIST111/ HIST119	Concept of World Civilization/ Issues in Development Studies	2		2		FTXD 217	Interior and Upholstery Design	2	1	3
	FTXD 200	History of Costume (with Lab)	2	1	3		FTXD 201	Fashion Illustrator (with Lab)	2	1	3
_	FTXD 218	Wardrobe Selection Management	3		3		FTXD 121	Creative Fashion Craft Laboratory	1		
-	FTXD 219	Wardrobe Selection Lab	1		1		CHEM 114	Textile Chemistry	3	1	4
	RELB 220	Life and Teaching of Jesus	2		2		BIOL 285	Biostatistics	3		3
-	KISW114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2		2		RELT 255	Christian Ethics	2		2
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/ Environmental Science/ Safety Education	2		2		MKTG 115	Principles of Marketing	3		3
		Total	17	2	19			Total	18	3	21
	FTXD 230	Flat Pattern Design I	3		3		MGMT 231	Human Resource Management	3		3
3rd	TCED 230	Industrial Safety	2		2		FTXD 330	Flat pattern Design II Laboratory	1		1
	FTXD 403	Research Method I	3		3		FTXD 326	Tailoring: Apparel Construction II	2	1	3
-	FTXD 260	Principles of Fashion Design	3		3		FTXD 210	Fashion and Textile Design Career	2		2
-	FTXD 325	Tailoring: Apparel Construction I (with Lab)	2	1	3		FTXD 390	Fashion Forecasting and Presentation	3		3
-	FTXD 108	Weaving	1		1		FTXD 404	Research Method II	1		1
-	MGMT 130	Fundamentals of Management	3		3		ECON 210	Principles of Economics	3		3
-	BIOL 111	Human Anatomy and Physiology	3	1	4			Elective	3		3
-	Total		20	2	22			Total	18	1	19
4th	FTXD 315	Clothing Recycling	2	1	3		FTXD 470	Fashion and Textile Design Attachment	4		
	FTXD 370	Creative Fashion Design	2	1	3	1		Total	4		$\square$
	FTXD 410	Advanced Textile Analysis	2	1	3	1					
	FTXD 360	Mass Apparel Construction Laboratory	3		3						
	FTXD 460	Fashion Marketing and Merchandising	3		3						
		Elective	3		3						
		Total	15	3	18						

### **BACHELOR OF SCIENCE IN FOODS, NUTRITION AND DIETETICS** Four-Year Course Plan and Checklist

YEAR		FIRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	BIOL 111	Human Anatomy and Physiology I	4	BIOL 112	Human Anatomy and Physiology II	4
1st	DTCS 100	Introduction to Nutrition and Dietetics	3	CLSC 105	Medical Terminology	1
	MATH 101	Pre-calculus	3	ENGL 106	Speech Communication	1
	ENGL 105	Writing Skills	3	FDNT 135	Food Hygiene & Safety	3
	PSYC 101	Introduction to Psychology	2	INSY 108	Information Technology for the Health Professionals	2
	RELH 155	Adventist Heritage	2	NUTR 110	First Aid	1
	SOCI 121	Introduction to Sociology	2	NUTR 130	Life Skills	3
	0FTE 120	Keyboarding	0	RELT 207	Christian Beliefs	3
		Total	19		Total	18
	BIOL 245	Basic Medical Microbiology	4	CHEM 113	Principles of Organic & Biochemistry	4
2nd	CHEM 111	Introductory General Chemistry	4	CLSC 254	Food, Microbiology and Parasitology	3
	FDNT 140	Food Preparation Laboratory	1	EDUC 215	Philosophy of Christian Education	2
	FDNT 200	Food Biotechnology	3	FDNT 217	Food Preservation and Processing	3
	KISW 114/ FREN 103	Language Use in Kiswahili or Beginning French II	2	MGMT 103	Basic Management and Entrepreneurial Skills	2
	NUTR 234	Human Nutrition	3	NUTR 255	Nutrition in the Life Cycle	2
	RELB 220	Life and Teachings of Jesus	2	PHNL 202	Biostatistics in Public Health	3
		Total	19	RELT 255	Christian Ethics	2
					Total	21
	DTCS 334	Nutrition Care Process	3	DTCS 338	Nutrition in Disease Management	3
3rd	DTCS 336	Therapeutic Dietetics	3	DTCS 340	Dietetics	3
	FDNT 300	Meal Planning Management and Service	3	DTCS 360	Nutrition Education and Counseling	3
	NUTR 200	Nutrition Pharmacology	3	NUTR 290	Nutrition in emergency	3
	NUTR 303	Research Methods I	3	NUTR 304	Research Methods II (Senior Project)	2
	NUTR 365	Nutrition Assessment and Surveillance	3	NUTR 342	Nutrition in HIV & AIDS	2
				NUTR 403	Macronutrients	3
		Total	18		Total	19
		INTERSEMESTER		NUTR 403	Clinical Practicum	5
4th	DTCS 366	Exercise Physiology and Sports Nutrition	2	DTCS 475	Community Practicum	5
401	DTCS 433	Leadership in Nutrition and Dietetics	3		Total	5
	NUTR 322	Primary Health Care	3			
	NUTR 369	Nutrition Anthropology	3			
	NUTR 404	Micronutrients	3			
	NUTR 417	Nutrition and Behaviour	3			
	NUTR 461	Nutrition Epidemiology	3			
		Total	20			



### BACHELOR OF SCIENCE IN HOTEL AND HOSPITALITY MANAGEMENT Four-Year Course Plan and Checklist

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
1.4	HTMG 101	Introduction to hotel and hospitality operations and management	3		3		HTMG 143	Introduction to Hotel Economics	3		3
1st	HTMG 122	Introduction to Tourism Operations	3		3	1	FDNT 136	Food Hygiene and Safety	2		2
	CNST 140	Home Maintenance	1	1	2	1	FDNT 137	Food Hygiene and Safety laboratory	1		1
	MKTG 115	Principles of Marketing	3		3	1	ENGL 106	Speech Communication	1		1
	0FTE 120	Keyboarding	0		0	1	RELT 207	Christian Beliefs	3		3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction to Psychology/ Sociology/ Family Issues	2		2			Vocational Skills	1		1
	RELH 155	Adventist Heritage	2		2		MATH 113	Business Mathematics I	3		3
	ENGL 105	Writing Skills	3		3		INSY 107	Information Technology Today	2		2
	GCAS 107/ LITE 151	Music Appreciation/Introduction to Literary Appreciation	2		2		PHYS 100	Concepts of Physical Sciences	2		2
	PEAC 107	Physical and Recreational Activities Total	1 20	1	1 21			Total	18		18
		IUCAI	20		21				10		10
2nd	HTMG 232	Food and Beverage Production	3	1	4	-	HTMG 252	Front Office Operations Management	3	1	4
	HTMG 233	Food and Beverage Service	3	1	4	-	HTMG 253	House-keeping Operations and Management	3	1	4
	AGRI 105	Principles of Agriculture	1	1	2		FREN 104	Introduction to French Language	3		3
	NUTR 234	Human Nutrition	3		3	-	BIOL 105	Human Biology	2		2
	FREN 103	Beginning French II	2		2		RELT 255	Introduction to Christian Ethics	2		2
	HIST 111/ HIST 119	Concepts of World Civilizations/ Issues in Development Studies	2		2	-	EDUC 215	Philosophy of Christian Education	2	•	2
	RELB 220	Life and Teachings of Jesus	2		2	-		Total	15	2	17
	ENVI 227/ CHEM 200/ TCED 231	Environment and Society/ Environmental Science/ Safety Education	2		2						
		Total	18	3	21						1
کسر	HTMG 301	Hospitality Service and Operations Management	3		3		HTMG 332	Marketing Hotels and Catering Services	3		3
3rd	HTMG 311	Consumer Behavior and Service Marketing	3		3	-	HTMG 353	Human Resource Management for Tourism and Hospitality Industry	3		3
	HTMG 322	Facility and Property Management	3		3		HTMG 343		2		2
	MGMT 130	Fundamentals of Management	3		3		TCED 230	Industrial Safety	2		2
	STAT 150	Introduction to Probability and Statistics	3		3	-	FTXD 217	Interior and Upholstery Design	2	1	3
		Total	15			-	HTMG 303	Research Methods in Tourism and Hospitality Industry	3		3
							CLSC 252	Principles of Food and Water Microbiology	2	1	3
					_			Total	17	2	19
4.1	HTMG 304	Senior Project	3		3		HTMG 400	Industrial Attachment II	4		4
4th	HTMG 360	Events and Conventions Management	3		3			Total	4		4
	GEOG 226	The Geography of Tourism and Leisure	3		3						
		Elective	3		3						
	HTMG 472	Hospitality Law	3		3						
	HTMG 451	Seminars and contemporary issues in Hospitality industry	2		2						
		Total	17								

# **Course Descriptions**

#### DTCS 100 Introduction to Nutrition and Dietetics

**3 Credits** 

An introduction to dietetics as a profession: educational requirements and career opportunities; orientation to the field of dietetics; role, responsibilities and relationships within the professions; and interrelations with other health professionals; standards and ethics of professional conduct among dietitians; the history of dietetics; modern dietetic practice; skills and competencies in modern dietetics; opportunities for interaction with dietetics practitioners will be offered.

#### DTCS 334 Nutrition Care Process

**3 Credits** 

Introduction to nutrition therapy; role of dietitians and other health professionals in the therapeutic process; application of the principles of dietetics: the nutrition care algorithm, critical thinking, steps in the nutrition care process: nutrition assessment, nutrition diagnosis, nutrition intervention, nutrition monitoring and evaluation. Design and implementation of nutrition care strategies; evaluation of client response and progress. The practicum provides practice on nutrition care processes in a hospital setting. Students will have an opportunity to utilize Triage principles, techniques, relevant technology and resources to develop skills in caring for patients. This course provides three hours of theory and six-hour practicum (this is equivalent to 1 credit). Prerequisites: NUTR 234, CLSC 105, NUTR 200.

#### **DTCS 336** Therapeutic Dietetics

**3 Credits** 

Examining the interrelationships of physiology, biochemistry, and nutrition as related to medical nutrition therapy (MNT). Emphasizes general nutritional status assessment and the role of nutrition in preventing and treating diseases/disorders: malnutrition, obesity disordered eating, anemia, chemical dependency, psychiatric disorders, drug-nutrient interactions. Addresses, upper and lower gastrointestinal (GI) disorders, exocrine pancreas, pulmonary disease, metabolic stress, rheumatic disorders, transplantation, parenteral and enteral nutrition. The practicum provides students with opportunity to practically prepare therapeutic diets for different nutrition related conditions in a hospital setting. Students will also obtain hands-on clinical experiences assessing, diagnosing and planning medical nutrition therapy for patients. This course provides three hours of theory and a six-hour practicum (this is equivalent to 1 credit).

#### DTCS 338 Nutrition in Disease Management

#### **3 Credits**

Nutrition support for various disease conditions: diabetes mellitus; disease of the heart and blood vessels; renal diseases; cancer; HIV and AIDS, and other infectious diseases; medical stress due to infections, surgery and burns; nutrition assessment in specific disease states: planning and preparing appropriate diets for specific disease states; case studies. The course will also include practicum sessions where the students enabled to provide nutrition care for patients with different nutrition related diseases in a hospital setting. This course provides three hours of theory and a six-hour practicum (this is equivalent to 1 credit). Prerequisite: DTCS 334, DTCS 336.

#### **DTCS 340** Dietetics

#### **3 Credits**

Basic terminologies, enteral and parenteral nutrition addressed; supervised experience in patient care areas of designated health care facilities; assigned experiences are designed to complement and reinforce the knowledge gained in advance nutritional care: emphasis on staff performance with students functioning as staff members in patient care and nutrition education corresponding with community nutrition; role of nutrition education in patient care; methodologies and approaches in nutrition education; communication in education; development of educational tools and materials; behaviors change concept; application of behavioral theories in behavior communication; discussions on the care process challenging cases using practical examples. The practicum provides students with a practical experience in a general hospital setting. Students rotate in patient care areas of the hospital. This course provides three hours of theory and a sixhour practicum (this is equivalent to 1 credit). Prerequisites: DTCS 334, DTCS 336.

#### DTCS 360 Nutrition Education and 3 Credits Counseling

Counseling skills, specifically counseling one-on-one and groups, in order to facilitate changes in nutrition status. Teaching/ learning styles, development of therapeutic relationships with patients/clients, and development of listening skills. Casestudy evaluation, nutrition counseling guides and development of group education plans. The course provides 2 hours of theory and six hours of practicum (equivalent to 1 credit hour). Prerequisites: The student must have a thorough understanding of basic nutrition principles, an orientation to the concepts of medical nutrition therapy, and a working knowledge of dietary modification.

#### DTCS 366 Exercise Physiology and 2 Credits Sports Nutrition

This course provides a basic preparation for students' leadership in exercise programs. It is hinged on the growing evidence on the role physical activity and nutrition may play in the prevention and management of chronic diseases. Prerequisite: NUTR 234.

#### DTCS 443 Leadership in Nutrition 3 Credits and Dietetics

Leadership skills and styles and types leadership; philosophy and ethics related to leadership and professional practice; leadership traits; effective leadership: competencies and qualities of effective leaders; functions of a leader; behavioral and situational approaches to leadership; management and leadership; alternative leadership styles; action-centered leadership; vision and work life of leaders; leaders and decision making. Professional competencies needed for career entry and advancement in nutrition and dietetics; an overview of appropriate means of delivery of professional services for a variety of needs; professional behavior: ethics, academic integrity and principles of professional practice, successful professionals, qualities and characteristics. Prerequisite: DTCS 334.

#### DTCS 444 Food Service Management 2 Credits

This course explores techniques and tools of food production and management as practiced in large food systems. It teaches skills on work distribution on how to manage

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various components in a food service facility such as kitchen department, the front of the house department, the back of the house department, the banquet department, and the advertising and marketing department. The course goes further in showing how to enhance profits, train employees, conduct interviews, analyze financial statements, clarify marketing strategies, acquire equipments, and handling of staff meetings. Students are exposed to real life experiences of management of various components. A field trip to relevant food service facilities to have a hands-on experience. Prerequisite: DTCS 443.

#### **DTCS 470** Clinical Attachment

#### 5 Credits

Supervised experience in a clinical facility employing nutritionists and dietitians (e.g. hospital); students will be placed for 12 weeks (three months) in various institutions with clinical nutrition component in the country; students will be assigned specific tasks or duties by the host institution; students maintain a diary of their daily activities; final reports compiled based on attachment experience; students report their experience through seminar. One credit hour is equivalent to 480 hours which translate to 12 weeks in host institution. Prerequisites: DTCS 340, DTCS 360, FDNT 322, NUTR 255.

#### DTCS 475 Community Practicum

#### **5 Credits**

Students will be involved in professional practice in the community at nutritional settings. The community affiliation includes projects, presentation to the community, research, screening events, associated with clinical instructors, community nutrition events for a period of 12 weeks (three months). While at the field, students will be evaluated by the immediate supervisor using guidelines supplied by the department. The instructor will visit the student while at the field. After the field work, the student will write a report on all activities engaged in with the necessary analyzes and do oral presentation to departmental faculty, senior students and invited guests. One credit hour is equivalent to 480 hours which translate to 12 weeks. Prerequisites: DTCS 470, NUTR 290, NUTR 365, NUTR 461.

#### FDNT 115 Cooking

#### 1 Credit

This course is designed to meet the needs of students in other disciplines other than Foods and Nutrition. It offers the basic skills in food preparation, stresses the observation of sanitation in the kitchen environment and acquaints students with the equipment and terminologies used in food preparation. It also furnishes students with entrepreneurial skills appropriate for home-based business (This is a three-hour laboratory).

#### FDNT 120 Basic Cake Preparation and 1 Credit Cake Decoration

This course is designed to meet the needs of students in Foods, Nutrition and Dietetics and also from other disciplines. The purpose of this course is to offer basic skills in cake preparation and decoration for different occasions. The students are equipped with the major essentials of cake decoration, which includes: icing consistency, correct bag position, and pressure control. Various decorating tips and techniques are learned such as: making shapes, figure piping, and flower making. In addition, the course also consists of entrepreneurial skills appropriate for home-based business (This is a three-hour laboratory).

#### FDNT 135 Food Hygiene and Safety

#### **3 Credits**

Principles of industrial food production, types of food hazards and potential hazards along the food supply chain, hazard analysis (HACCP, SSOP), international and national food standards (FDA,CODEX alimentarius, EUREPGAP and ISO 9000 series, ISO 22000: ISO 8000 (OHSAS) and ISO 14000), public health, legislation in relation to the consumer and food industries, emphasis on food hygiene at institutional level and Public Health Act, foods, drugs and chemical substances Act. The practical application of HACCP food safety and sanitation program, wide range of key food safety issues, three main types of food safety hazard, sources and methods of control, legislation: International and National Food Standards, food safety and hygiene hazards, temperature control, refrigeration, chilling and cold holding, cooking, hot holding and reheating, food handling, principles of safe food storage, cleaning and contamination, visit different food processing industries. The course provides two hours of theory and three hours of laboratory.

#### FDNT 140 Food Preparation Laboratory 1 Credit

This practical course is designed to equip students with the knowledge and skills required in the selection and preparation of different foods so as to ensure nutrient retention and quality. It offers basic skills in food preparation, measuring techniques, cutting techniques, cooking techniques cooking terminologies and garnishing techniques. Students will also be introduced to abbreviations that are used in cooking and how to read and interpret different styles of recipes. Emphasis is on appropriate ways of safe food handling practices during preparation and storage. This is a three-hour laboratory.

#### FDNT 200 Food Biotechnology

**3 Credits** 

Definitions; biotechnology and traditional fermented foods, contribution of modern biotechnology to the improvement on traditional fermented foods; enzymes in food processing and new products development, impact of biotechnology on food flavor and color industry; plant biotechnology and genetically modified foods; meat quality improvement through biotechnology applications; biotechnology and food safety; public perception of genetically modified foods. This course also includes a food biotechnology laboratory. Here different kinds of experiments involving food biotechnology methods may be done. It may also include a field trip to any food biotechnology industry. This course provides two hours of theory and three hours of laboratory. Prerequisite: NUTR 234.

#### FDNT 215 Food Preservation and Processing

#### **3 Credits**

An over view of food processing & food preservation, and associated food processing unit operations; Principles of food preservation methods such as temperature and water activity control, and effects of preservation methods on food quality of foods detailed; Pasteurization and the canning industry; Refrigeration and freezing - Refrigerants & compressors; Effects of chilling & freezing on food; Drying and Evaporation; Acidification and Fermentation; Extrusion technology; Chemical preservation; Food additives; Irradiation; aseptic processing. This course will also include Food preservation and processing laboratory where pilot plant processing is conducted. It may also include visiting of different food processing industries. Prerequisites: FDNT 135, CLSC 254

# FDNT 300 Meal Planning, Management 3 Credits and Service

This course explores techniques and tools of meal planning, production and management for the family as well as large food systems, considering goals, values and resources. The course emphasizes food service: table appointments, table setting, styles of food service, table etiquette, food costing and food buying practices as well as time management. It teachers management processes, as well as managing various components in a food service facility. The course goes further in showing how to enhance profit, train employees, conduct interviews, analyze financial statements, clarify marketing strategies, acquire equipment's and handing of staff meetings. The course provides two hours of theory and three hours of laboratory. Prerequisites: FDNT 135, FDNT 140, BIOL 245.

#### FTXD 107 Quilting Laboratory

#### 1 Credit

This course is a vocational skill designed for students majoring in Fashion and Textile Design as well as students majoring in other areas. It is mainly a practicum course designed to expose students to methods of selecting and fitting fabric pieces in different colors and designs to produce an appealing quilt. Students learn the skills of hand stitch as well as machine stitch to be able to produce a desirable quilt. The course furnishes students with entrepreneurial skills appropriate for business.

#### FTXD 108 Weaving laboratory

1 Credit

This is a basic course which can be taken by students majoring in Fashion and Textile Design as well as students majoring in other fields of study. The students are exposed to the different types of cloth weaving methods of ancient and modern textile construction and its technology. Items produced include door mats, table cloths, home decorations etc. Entrepreneurial skills appropriate for business are also learned.

### FTXD 121 Creative Fashion Crafts 1 Credit Laboratory

This course exposes students to reading and understanding knitting and crocheting patterns as pertaining to ancient and modern methods of textile construction.

#### FTXD 150 Fundamentals of Apparel 3 Credits Construction

This is a beginning course utilizing basic principles and concepts on the elements of garment construction methods and techniques. Emphasis is on skills and techniques, pattern making or analysis, selection of fabrics and construction processes. Students are also introduced to the terminology and fundamentals of fashion. Emphasis will be on clothing theories as applied to emerging of different fashions.

#### FTXD 151 Fundamentals of Apparel 1 Credit Construction Lab

Students practice skills learned in FTXD 150 class. This lab should be taken concurrently with FTXD 150. There will be three hours of laboratory per week. Students may construct 2-3 garments.

### FTXD 200 History of Costume

#### **3 Credits**

This course is a chronological study of costumes in selected societies including technology aesthetics, social organizations, ritual stability and change. Emphasis is on technological and

cultural factors affecting dress and conservation of textiles. In the laboratory the emphasis will be to make an attire like what people used to wear in the past. Any additional creativity is encouraged due to new technology as a way to improve the appearance of a garment made.

#### FTXD 201 Fashion Illustrator

**3 Credits** 

This course will entail understanding the human figure in relation to the principles and elements of design. Students will learn also some History of Fashion, various garment designs and styles and accessories. The emphasis is on drawing the fashion figure including working sketches and developing their personal portfolio. The laboratory will guide in illustrating the figure, eye, nose, face, legs, feet and hands. etc, garment designs, styles, and accessories such as bags, shoes, belts etc, drawing with different colors, and pencils of different types. The learners will develop figures of different ages and different occasions.

#### FTXD 210 Fashions and Textile Design 2 Credits Career

This course is an overview of career opportunity within the fashion industry, with specific guidelines to assist students who are looking for ways to direct their interests and talents. There is emphasis on the growth and development of Fashion and Textile Design as a profession. Students are exposed to professionalism, accountability, and the responsibility for lifelong learning. Field trip is required.

#### FTXD 217 Interior and Upholstery Design 3 Credits

This course is planned to develop an understanding of the guidelines for an aesthetic appreciation of everyday life. Emphasis is on the home environment and office environment both inside and outside. The course includes the study of the facility and environmental atmosphere for churches, offices, homes, hotels and schools. The students are able to read and understand patterns and directions. The laboratory will help learners understand the history of design Interior textiles and upholstery. Students will learn different materials that are fit for upholstery, various rooms, furniture curtains, bedcovers etc. They will also cover flower arrangement as part of decoration in the room. Two lecture hours and one three-hour laboratory per week.

#### FTXD 216 Textile Analysis

**3 Credits** 

This course is an analysis of natural and man-made fibers, yarns and fabric construction; and characteristics that determine use, performance and care of different fabrics. The emphasis is on innovations in the textile field, dyes, printing processes and fabric tests. Field trip is required. In the laboratory, students will examine different fibers, fabric their behavior and characteristics as they respond to different detergents, dyes or pressures.

#### FTXD 218 Wardrobe Selection/Management 3 Credits

This course exposes students to aesthetic, economic and psychological aspects of clothing design and wardrobe selection for men and women. Emphasis is placed on the successful use of matching of colors, the selection of the most pleasing styles, the choice of dressing according to the occasion, proper care of attires and modesty in dressing. Students are expected to coordinate and participate in a wardrobe selection seminar or workshop.

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#### FTXD 219 Wardrobe Selection Management Laboratory

The laboratory is structured to teach students the successful use of color, selection and application of styles of dress in different lifestyles. Students are expected to participate in a wardrobe selection seminar or workshop and demonstrate how to dress well, how to mix and match colors and how to tie scarves and ties.

#### FTXD 230 Flat Pattern Design I Laboratory 3 Credit

This course examines basic design principles as they apply to clothing for men, women and children. Emphasis includes design modifications as required by fabric and figure characteristics. It relates design problems to current aesthetic trends and use of garments.

#### FTXD 260 Principles of Fashion Design

Basic design principles are examined in this class as they apply to clothing for men, women and children. Emphasis includes design modifications as required by fabric and figure characteristics. It relates design problems to current aesthetic trends and use of garments.

#### FTXD 315 Clothing Recycling

#### **3 Credits**

**3 Credits** 

1 Credit

This course helps students to learn the proper way of renovating or repairing their clothes. This will include the repair of socks, sweaters, collars, skirts, dresses, pants, and / or alteration of any of the above clothing items, to something new and different for adults and children's clothes. In the laboratory, students will make use of remnant fabrics into usable items such quilts, table coverings using applique. Emphasis is placed on clothing conservation and creative needlework skills. Prerequisite FTXD 151.

#### FTXD 325 Tailoring: Apparel Construction I 3 Credits

The students who take this course will learn specialized skills needed to design and create tailored and structured garments using traditional hand methods and industry shortcuts. This course includes elements of a well-designed tailored garment, choosing appropriate materials as well as creating shape with tailoring techniques. In the laboratory students will construct female's suits following all the instructions as they have learned in theory class. The emphasis will be on observing all the steps in making suits for women. Two lecture hours and one threehour laboratory per week.

#### FTXD 326 Tailoring: Apparel Construction II 3 Credits

Students in this course will continue to learn specialized skills needed to design and create tailored and structured garments using traditional hand method and industry shortcuts. The laboratory includes elements of a well - designed tailored garment, choosing appropriate materials as well as creating shape with tailoring techniques. Students will make men's suits. Two lecture hours and one three-hour laboratory per week. Prerequisite FTXD 151

#### FTXD 330 Flat Pattern Design II Laboratory 1 Credit

This course is a continuation of Techniques for Pattern Development with an emphasis on industrial production skills. Techniques covered include the development of more complex designs, patterns for stretch fabrics and use of computer to create original patterns. Prerequisite: FTXD 230.

#### FTXD 360 Mass Apparel Production Laboratory

#### This class introduces the student to mass apparel production. It teaches the students on the importance of event sequencing and coordination of different stages. It also introduces the students to the equipment necessary for smooth running of the event sequences so as to produce a complete item. Field trip is required.

#### FTXD 370 Creative Fashion Design 3 Credits Laboratory

The students who take this class learn embroidery, cross stitches and other creative needle work skills. They also learn special sewing techniques for garments made from knitted fabrics such as T-shirts, active wear and swimwear. Students construct garments while learning how to work with knit fabric including ribbed finishes, elastic ending and special seam types. Two lecture hours and one 3-hour Laboratory per week.

#### FTXD 390 Fashion Forecasting 3 Credits and Presentation

This course explores fashion forecasting at all industry levels focusing on trend, identification, analysis and synthesis. Students are exposed to fashion terminologies, fashion timing and prediction, inspiration, cat-walks and research tools and techniques.

#### FTXD 403 Research Methods I

#### **3 Credits**

1 Credit

**3 Credits** 

This course introduces students to the principles, methods and tools of research in the area of Fashion and Textile Design. The emphasis is placed on practical applications of basic research techniques such as formulation of research problem and objectives, development of theoretical and conceptual framework, identification of appropriate methods to be used in data collection and analysis, making judgement on hypothesis and coming up with conclusions and recommendations. Students are required to develop a research proposal and data collection instrument at the end of the section. Prerequisites: ENGL 105 and BIOL 285.

#### FTXD 404 Research Methods II

This course provides students with an opportunity to put into practice what was learned in Research Methods I by actively engaging in scientific research. Each student is required to design a research project and perform the research independently, while under the guidance of a supervisor. The student is expected to report the findings and make an oral presentation to departmental faculty, senior students and any other invited guests. Prerequisite : FTXD 403.

#### FTXD 409 Fashion Industry

Fashion industry course is an overview of the fashion industry that prepares students to be on the cutting edge of what is happening in the industry. Emphasis is on economic, political, sociological, technological and psychological environment that affects changes in fashion. Field trip is required.

#### FTXD 410 Advanced Textile Analysis 3 Credits and Design

Advanced textiles analysis and design is the study of textile fibers, yarn structures and fabric construction. Emphasis is on

#### **3 Credits**

fabric finishes for appearance, hand feel, and performance and the applied designs on the fabrics. Two lecture hours and one 3-hour laboratory per week.

#### FTXD 460 Fashion Marketing and 3 Credits Merchandising

This course is a general survey of the major marketing institutions, fashions, strategies and practices examined from the viewpoint of their effects on the exchange process involved in moving goods from producer to ultimate consumer. The role of manufacturers, designers and retailers in the fashion business is also explored along with the elements of fashion marketing.

#### FTXD 470 Fashion and Textile Design 4 Credits Attachment

Fashion and Textile Design attachment is a carefully planned program, and supervised experience providing professional training and practice in textile industry. This is designed to expose students to managerial roles related to the textile industry. The Experience period is two weeks

#### HOSC 116 Creative Needle Work

The students will be introduced to specific skills like quilting, weaving, knitting, crocheting and other creative needle work skills. The course furnishes students with entrepreneurial skills appropriate for business. Three hour lab each week.

#### HOSC 120 Introduction to Food Preparation 3 Credits

A study of chemical and physical properties of food. Students are introduced to fundamentals of the practical preparation of foods. Emphasis is placed upon handling, preparation, preservation, and sanitation of food. Two lecture hours and one 3-hour laboratory per week.

#### HOSC 150 Clothing Construction I

The student will learn the theory behind the basic principles of clothing construction, fitting methods and fabric selection. The discussion will also cover basic sewing equipments and students will be required to make clothing samples and garments- apron and child's garment. Two lecture hours and one 3-hour laboratory per week.

#### HOSC 170 Resource Management in the Family

This course teaches principles of management as they relate to family ecosystems. Emphasis is placed on efficiency and effectiveness in the expenditure of time, money, energy and human resource.

#### HOSC 216 Clothing Construction II

Students will advance the skills learned in HOSC 150. They will be able to construct full adult garments. Emphasis is on skills and techniques, pattern making, selection of fabrics and construction processes. One three hour laboratory per week.

#### HOSC 230 Nutrition and Health

The course aims to equip the students with basic principles of human nutrition. The course covers the major nutrients including carbohydrates, proteins, fats, vitamins and minerals; their digestion, absorption and roles in the human body. Students will also learn the relationship between diet and health.

#### HOSC 235 Pattern Drafting

This course examines basic design principles as they apply to clothing for men, women and children. Emphasis includes design modifications as required by fabric and figure characteristics. It relates design problems to current aesthetic trends and use of garments.

### HOSC 250 Child Development and Growth 3 Credits

A study of the factors that affect the total development of the child from conception to school age. Emphasis is placed on understanding children's basic needs and parental responsibilities.

#### HOSC 303 Family Living

This is designed to teach the student to examine and clarify their own goals, attitudes and values in reference to the contemporary family and study the factors that lead to stable marriages, healthy family relationships and the growth of those relationships. Students will also be introduced to marriage dynamics and growth.

#### HOSC 318 Personal Hygiene and Good 3 Credits Grooming

This course exposes students to aesthetic, economic and psychological aspects of clothing design and wardrobe selection for men and women. Emphasis is placed on the successful use of matching of colors, the selection of the most pleasing styles, the choice of dressing according to the occasion, proper care of attires and modesty in dressing. Students are expected to coordinate and participate in a wardrobe selection seminar and workshop.

#### HOSC 319 Design for Living

This course is planned to develop an understanding of the guidelines for an aesthetic appreciation of everyday life. Emphasis is on the home environment and office environment both inside and outside. The course includes the study of the facility and environmental atmosphere for churches, offices, homes, hotels and schools. The students are able to read and understand patterns and directions.

#### HOSC 330 Meal Preparation and 3 Credits Management

This course is designed to teach students to be meal managers who can integrate the concepts of food, nutrition, economics, purchasing, art, and to prepare quality meals. Emphasis is on all food establishments. Two lecture hours and one 3 hour laboratory per week

#### HOSC 400 Public Health and 3 Credits Community Nutrition

This course covers nutritional aspects that have public health implications. It includes, but not limited to, an overview of public health nutrition; assessment of nutritional status of individuals and populations; public health aspects of under nutrition and over nutrition; public health strategies for intervention at the individual level; iron, iodine and vitamin A deficiencies; adverse

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1 Credit

**3 Credits** 

**3 Credits** 

### 3 Credits

**1 Credit** s like quilti

1 Credit

**3 Credits** 

**3 Credits** 

outcome of pregnancy; the role of foliate and related B vitamins; diabetes mellitus; cancer and diet and nutrition in emergency.

#### HOSC 415 Tailoring

#### **3 Credits**

The students who will take this course will learn specialized skills needed to design and create tailored and structured garments using traditional hand method and industry shortcuts. This course includes elements of a well designed tailored garment, choosing appropriate materials as well as creating shape with tailoring techniques. Two lecture hours and one 3-hour laboratory per week.

#### HOSC 453 Food Demonstration Skills

#### 2 Credits

This course is designed to teach students demonstration techniques appropriate for the classroom and for groups. The purpose is promotional and educational on food quality and preparation principles

#### HOSC 455 Quantity Food Management 3 Credits and Production

Class experiences structured to teach students techniques and tools of food service management as practiced in large food system. Laboratory experiences structured to teach students with techniques and tools of food service management as practiced in large food systems.

#### HTMG 101 Introduction to Hotel and 3 Credits Hospitality Operations and Management

This course explores the vast boundaries of various management techniques in running hotels. It mainly concentrates on: covering every facet of the hotel industry, from the breaking of the ground, to the opening, to the marketing, to the operating of all departments no matter how large or small, and, finally to the building of a proper framework for a professional management team.

#### HTMG 122 Introduction to Tourism 3 Credits Operations and Management

The course exposes students to the concepts, aspects and practices of the tourism industry, such as; The Tourism System: components and organization, Historical Dimensions of Tourism Travel in ancient time, middle age, renaissance, industrial age and modern mass tourism, Economic, social, cultural, environmental and political dimensions of tourism, International dimensions defining international tourism, the importance of international tourism, travel flows, and the international tourist-behaviour, Impacts of tourism, perception, environments as an attraction, and the greening of tourism.

#### HTMG 143 Introduction to Hotel Economic 3 Credits

The course is an introduction to the principles of economic analysis and decision making from the viewpoint of individuals consumer, workers and firm in general. The course will explore various economic aspects within the industry such as; Industry, service economy in hotel and catering industry, Demand and supply for hotel and catering, Introduction to the concept of elasticity, Market structure, Size of firm's market concentration, Conduct and performance: monopoly, oligopoly, perfect competition, costs, output in the hospitality sector, economies of scale in the hospitality industry.

#### HTMG 232 Food and Beverage Production 3 Credits

The course aims at developing basic awareness of the technical skills required in the production department. The course exposes students to: Food production systems, Elements of food preparation and production, Menu planning: types of menus, structure of menus, application of nutritional principles in menu planning, Chemical and Biological Properties of major Foods, Food microbiology and hygiene, Food production methods, Methods of preparing foods, Cooking techniques and respective suitable foods, Wines and drinks, weights and measures, compiling wine and drinks lists, as well as Mixing and serving drinks. The laboratory offers practical experiences for the purpose of acquiring techniques and large food production systems.

#### HTMG 233 Food and Beverage Service 3 Credits

The course equips students with the basics of food and beverage service. The course offers the application of management principles to the service of food in small and large food service systems. Emphases are placed on; Customer service vs. resource productivity, Managing service sequence, managing volume, Types of food service:-waiter/waitress, cafeteria, hatch and counter, snack- bar, buffet, takeaway, auto vending, Service styles: family service, silver service, counter service, carousel system, Echelon counter, vending, the carver etc. preparing the service area, types of place setting, serving skills, serving and clearing food and drink, Performance appraisal. The laboratory offers practical experiences for the purpose of acquiring skills in food and beverage service in small and large food production systems.

#### HTMG 252 Front Office Operations 3 Credits and Management

This course presents a systematic approach to front office procedures by detailing the flow of business through a hotel, from the reservations process to check-out and account settlement. The student is equipped with the necessary knowledge, skills and attitudes to enable them carry out procedural tasks throughout the guest cycle in a hotel front office. Students will be exposed to; Importance of Front Office operations, front office responsibilities, communication, telephone etiquette, complaint handling, guest services, guest relations, equipment and supplies of the front office, quest cycle, reservation, registration, accounting, internal control, checkout and settlement, departure procedure, night audit process, management functions of the front office, establishing room rates, forecasting room availability and room revenue, estimation expenses, budget plans, evaluating front office operations, hotel income statement, budget reports, yield management. The laboratory offers students praticial experience in front office management.

#### HTMG 253 Housekeeping Operations 4 Credits and Management

The course presents a systematic approach to managing housekeeping operations and provides a thorough overview from the big picture of maintaining quality staff, planning and organizing, to the technical details of cleaning each area. The course emphasizes on accommodation services within the hospitality industry which includes the importance of housekeeping in the hospitality industry, functions and responsibilities of housekeeping, types of surfaces, properties of surfaces and their maintenance, cleaning methods and materials, care of drainage and waste disposal systems, methods and procedures in laundering housekeeping articles, guest laundry services, care of household plants, heating, ventilation and illumination in hospitality establishment, Principles of water supplies, waste disposal and food plant sanitation. The laboratory offers practical experiences for the purpose of acquiring the necessary skills in housekeeping operations.

#### HTMG 300 Industrial Attachment I

#### 4 credits

Students are required to undertake a three [3] months (480 hours) Industrial attachment in various hospitality establishments (such as hotels, restaurants and airlines). Area of emphasis is on food production and service, front office and house keeping operations. This course is intended to give students a hands-on experience in the hospitality industry. Students are also required to write a report after the industrial attachment on a specific aspect of the hospitality industry. During the attachment period, the university lecturers visit the students for assessment. The report written should be between 4000-5000 words.

#### HTMG 301 Hospitality Service and 3 Credits Operations Management

The course equips students with supervisory and managerial skills of managing hospitality operations. The course exposes students to: The scope of operations management, operations management in the organization context, technology and operations management, planning and control, organizing and staffing for operations, quality and operations improvement, Hospitality products and markets; Hotel facilities and services as products, Hotel and accommodation markets, Product style and concepts; Product growth and development; Conception and development; The hotel as a total market concept; the hospitality cycle; The control cycle; The operations cycle; Productivity management; Forecasting and managing demand; Work coordination and control.

#### HTMG 303 Research Method in Tourism 3 Credits and Hospitality Industry

This course introduces students to principles, methods and tools of research. Emphasis is placed on practical applications of basic research techniques such as formulation of research problem and objectives, development of theoretical and conceptual framework, identification of appropriate methods to be used in data collection and analysis, making judgments on hypothesis, and coming up with conclusions and recommendations. Students are required to develop a research proposal and data collection instruments at the end of this section.

#### HTMG 304 Senior Project

#### **3 Credits**

This course provides students with an opportunity to put into practice what was learned in research 1 by actively engaging in scientific research. Each student is required to design a research project and perform the research independently. The student shall be under guidance of an advisor. The student is expected to report the finding and make an oral presentation to departmental faculty, senior students and any other invited guests.

#### HTMG 311 Consumer Behaviour and Service Marketing

This course will equip students with skills, attitudes and knowledge to enable them create customer satisfaction by building value-based relationships with customers, enabling them to gain market leadership by understanding consumer needs and finding solutions of superior value, guality, and service. Students will be exposed to such aspects such as; Determinants of consumer behaviour, Identification of psychological, social cultural, and environmental factors influencing the purchasing behavior, Consumer behaviour as a process in regard to decision making, information processing, production or service adoption, Consumer needs, consumer preference models, personality and consumer behaviour, Changing values and lifestyles. Emphasis is also placed on stages of the decision making process, Consumer attitudes, attitude of tourists and local people, identifying and meeting consumer needs in catering and lodging facilities, role of public relations in hospitality Enhancing communication, and appreciation, importance's of customer care to an organizations, techniques and tools used in customer care. Uniqueness of marketing services, intangibility, inseparability, variability and perish ability strategies of marketing services, Differentiation, service quality and productivity in relation to marketing, types of marketing in service industries, internal marketing, external marketing, interactive marketing, managing differentiation, managing service quality, marketing research and application in service provision.

**3 Credits** 

#### HTMG 322 Facility and Property 3 Credits Management

The course will impart students with knowledge and skills for good management responsibilities with regard to facility management and to utilize hospitality premises for maximum benefit without compromising on their care and maintenance. The course will expose students to; concepts and scope of facilities management, Factors that influence facilities management and customer perceptions, physical assets, planning, design and construction. Principles of interior design and décor; traditional and western as they apply to maintenance, Social functions and technical aspects of interior design and decor furnishing material choice, properties, and maintenance Identification of factors that influence design choices for hospitality facilities. Development of interior layouts of both questrooms, public and dining rooms with emphasis to color, materials, furniture selection, functional and space requirements, circulation, proximity, and variety. Development of renovations' plans, integrating specific design with operational.

### HTMG 332 Marketing Hotels and 3 Credits Catering Services

This course will enable the students identify customer needs and wants, determines which target markets the origination can serve best, and designs appropriate products, services, and programs to serve these markets. Students will acquire knowledge on; The marketing cycle; the catering cycle; cuisine, entertainment and events marketing, concept trends, software programs in hospitality marketing, managing marketing accounts, automatic vending and marketing, Role of media, Merchandising, administration, timing, quality and standards harmonization and Customer care and relationship marketing.

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#### HTMG 343 International Foods Laboratory 3 Credits

This course exposes students to various food preparations. cooking techniques, cooking equipment and recipes based upon cultural and geographic differences and acceptance. Students are supposed to acquire skills on preparations of various recipes which are based upon cultural and geographical differences and preferences so as to understand and appreciate other cultural feeding styles. The course requires students to visit different types of hotels. Two lecture hours and one three-hour laboratory per week.

#### HTMG 353 Human Resource Management 3 Credits for Tourism and Hospitality Industry

This course will equip students with skills and knowledge of management of people within service industries, such as hospitality and recognizes the critical role that managing people has in the effectiveness and efficiency of an organization. The course will touch on the various aspects of human resource management such as: Philosophy of human resource management and application of sound human resource management practices in the hospitality industry, Current issues affecting human resource management. Employment laws. Employee selection and recruitment: inter relating the various elements of job analysis, job description, job specifications, selection and testing. Human resource development and training, compensation, benefits, pay systems, incentives schemes, employee security and safety techniques various aspects of employee performance, Performance appraisal and interview techniques, professional ethics, Global trends.

#### HTMG 360 Events and Conventions Management

**3 Credits** 

The meetings and events management major encompasses conferences, conventions, tradeshows, special events, and entertainment. It is a specialized curriculum that includes everything from site selection and marketing to budgets and logistics. Our Meeting, Incentive, Convention and Exhibition (MICE) concentration is for students who want to manage largescale meetings. We provide a project management focus to the discipline of meeting management. Relevant topics include aligning goals and objectives, evaluation, event design, food and beverage arrangements, technology and other logistics. You will learn how to manage and design events such as meetings, trade shows, conventions, congresses, and incentive events for organizations, large and small.

#### HTMG 400 Industrial Attachment II

#### 4 Credits

Students are required to undertake a three (3) months (480 hours) industrial attachment in various hospitality establishments (such as hotels, restaurants and airlines). The area of emphasis is on management. This course is intended to give students a hands-on experience in the hospitality industry. Students are also required to write a report giving a critical analysis of a specific aspect of the hospitality industry and give recommendations and a critique. During the attachment period, the university lecturers visit the students for assessment. The written report should be between 6000-7500 words.

#### HTMG 441 International Marketing

#### **3 Credits**

The course equips students with skills, attitudes and knowledge in the International marketing. It exposes students to marketing on a worldwide basis sighting various examples how global organizations market their products despite various counteractive aspects such as language, culture and religions. Students will tackle issues such as: Involvement in international marketing, multinational involvement especially in hospitality industry, globalization versus customization of marketing strategies, environmental forces in international market, cultural forces, social forces, economic forces, political and legal force, technological forces, strategic of adaptation of marketing mixes, product promotion, distribution and pricing, developing organizational structures of international marketing. exporting, licensing, joint ventures, trading companies and direct ownership, regional economic integration and custom union.

#### HTMG 451 Seminars and Contemporary 2 Credits **Issues in Hospitality Industry**

The course exposes students to contemporary issues in the hospitality industry. The issues covered include but not limited to technological advancements and impacts on the hospitality industry; security, insecurity and terrorism; natural calamities; diseases; legal aspects in the hospitality industry; new developments in food service and production systems; social cultural diversity; challenges in providing recreation, leisure and hospitality services and other current issues in the hospitality industry. Emphasis is placed on seminar design, preparation and presentation at professional for a (seminars and conferences). Attendance to at least one seminar/conference on hospitality or related field is required.

#### HTMG 472 Hospitality Law

**3 Credits** 

1 Credit

The course equips students with detailed accounts of legal aspects of the hospitality industry. They include judicial system in Kenya, the booking contract and the contract for sale of goods and drink, duty to care, crime in the industry among others, commercial contracts, licensing law and the working environment. Students will be exposed to; familiarize students with current issues affecting the hospitality and tourism industry and to enable the students to manage the change process required to take advantage of the opportunities they create. Legal framework of hospitality services, Regulation and quality, Food Law, Accommodations law, Guests and the law, licensing law, Ethics in hospitality services; ethics and the front office, ethical concerns in food and beverage management, ethics and housekeeping, hotel engineering and security, ethics in information technology and in relationship with the community, student will also be exposed to various legal frameworks that govern hospitality industry the various regulatory agencies that implement laws and regulations in the industry. Risks and endurances.

#### NUTR 110 First Aid

The scope of first aid; the first aider; definition and duty; assessing first aid situations; diagnosis and treatment in first aid situations. First aid in: shock, loss of consciousness, drowning, difficulty in breathing, cuts, infected wounds, burns, broken bones, dislocations, strains and sprains, poisoning, bites, and stings, constipation, stomach problems, emergency problems of the gut, appendicitis, peritonitis. Care of the sick: home based nutritional support and psychological factors in patients care; link between hospital and home.

#### NUTR 130 Life Skills

#### **3 Credits**

Increase students' knowledge and ability in using the skills necessary for everyday living: emphasis on personal values, goal-setting and planning, and solving problems, media and peer pressure, communication and relationships, working with others, avoiding and/or resolving conflict, decision making, wellness and personal safety, good citizenship, environmental awareness, and how to contribute to one's own community. Practicals are designed to enable the students apply knowledge and skills learned in theory lessons towards real world experience. Students will be expected to carry out their practical in proper way of cleaning, formulate simple healthy recipes, gardening, basic home and personal financial management plans, and counsel clients on how to manage difficult situations that they encounter in their everyday lives e.g. positive emotional regulation. This course provides for two hours of theory and three hours of laboratory.

#### NUTR 200 Nutrition Pharmacology

#### **3 Credits**

This course introduces the study of the properties, effects, and therapeutic value of the primary agents in the major drug categories and their interaction to nutrition. The unit will explore the principles and practice of nutrition and pharmacology. A case-based learning approach will be used to gain an understanding of the pathophysiology of disease and conditions such as asthma and mental health.

#### NUTR 234 Human Nutrition

#### **3 Credits**

2 Credits

**3 Credits** 

Nutrients in foods: composition and variation, the basics of interaction of nutrients and their metabolism; introduction to nutrient digestion, absorption, sources of nutrients and intake regulation; natural and human-made factors influencing nutrient utilization; balanced diets and disorders related to under-and over nutrition, dietary guidelines, non-nutritive components of food; energy metabolism, weight control and contemporary nutrition issues. Prerequisites: BIOL 111 and BIOL 112.

#### NUTR 255 Nutrition in the Life Cycle

#### To meet the expanded needs of a broad spectrum of students pursing degrees in nutrition, nursing and other related health professional studies. The main focus is management of the normal nutritional needs of individuals across the life span. It approaches nutrition from a basic development approach, maintaining a person centered view of individual integrity. It seeks to discuss the nutritional needs of different stages of

#### NUTR 290 Nutrition in Emergency

human development. Prerequisite NUTR 234.

To build capacity among students in protecting the nutritional status of vulnerable groups affected by emergencies, exposing them to health and food security assessment, livelihood interventions, working in the community with emergencies and monitoring and evaluating emergency situations. The students are also exposed to various emergency situations that have nutritional implications to health. The course requires students to visit the community for practical assessment of health and food security through an organized field trip to an emergency prone area(s). Prerequisite NUTR 234.

#### NUTR 303 Research Method I

#### **3 Credits**

This course introduces students to principles, methods and tools of research. Emphasis is placed on practical applications of basic research techniques such as formulation of research problem and objectives, development of theoretical and conceptual framework, identification of appropriate methods to be used in data collection and analysis, making judgments on hypothesis, and coming up with conclusions and recommendations. Students are required to develop a research proposal and data collection instruments at the end of this section. Prerequisites: ENGL 105, PHEP 100, PHNL 202.

#### NUTR 304 Research Method II

1 Credit

This course provides students with an opportunity to put into practice what was learned in research I by actively engaging in scientific research. Each student is required to design a research project and perform the research independently. The student shall be under guidance of an advisor. The student is expected to report the findings and make an oral presentation to departmental faculty, senior students and any other invited quests. The class will be spread throughout one academic year. Prerequisite: NUTR 303.

#### NUTRO 322 Primary Health Care

**3 Credits** 

The aim of the course is to enable students gain knowledge and skills that are essential to effectively execute community health activities and assess the health of communities. The course develops an understanding of the components of community diagnosis; introduces community entry techniques and sources of community health data that may be used in community diagnosis and reports. The roles of community health providers are also discussed. The community is considered as the primary client in determining the health status of communities. This course provides for two hours of theory and three hours of laboratory. Prerequisites: BIOL 111, BIOL 112.

#### NUTR 342 Nutrition in HIV and AIDS

234, NUTR 255, NUTR 290.

2 Credits The course is designed to provide knowledge and skills regarding HIV and AIDS prevention, counseling and homecare, All modes of HIV transmission are explored for the sake of protecting oneself as well as protecting others not infected. Students are furnished with counseling techniques for the purpose of supporting and caring for both infected and the affected. In addition, students are expected to utilize knowledge in nutrition to provide nutrition care to the infected. Prerequisites: NUTR

#### NUTR 365 Nutrition Assessment and **3 Credits Surveillance**

Students will study the principles of nutritional assessment; nutritional assessment techniques; procedures used in identifying individuals and groups at risk; planning, implementing, monitoring and evaluation of activities required to institute a successful nutritional intervention program. It presents quality assurance requirements and program implementation, theoretical frameworks of the methods, their history, standards of reference and limitations of the different methods. Criteria for selection of method and determination of method appropriateness for different assessment needs are taught in this course. Practical experience in application of methods and principles of nutritional surveillance and methods of monitoring household food security are also included.

### SCHOOL OF SCIENCE AND TECHNOLOGY



The course provides two hours of theory and three hours of laboratory. Prerequisites: NUTR 234 and NUTR 255.

#### NUTR 369 Nutrition Anthropology

#### 3 Credits

The purpose of this course is to impart learners with knowledge and skills in social cultural aspects of human nutrition. Prerequisite: NUTR 234.

#### **NUTR 403 Macronutrients**

**3 Credits** 

This class describes the macronutrients: carbohydrates, proteins and fats; classification, dietary requirements, function and deficiencies; digestion and absorption; metabolism, disorders of nutrient imbalances; case studies; visit to rehabilitation centres. The course provides two hours of theory and a three-hour laboratory that includes hospital/community visits. Prerequisites: NUTR 234 and CHEM 113.

#### **NUTR 404 Micronutrients**

#### **3 Credits**

The class describes Vitamins: Classification, structure, dietary requirements, vitamin deficiencies and avitaminosis; minerals; classification, dietary requirements, function and deficiencies, absorption; micronutrient supplements; Current micronutrient research; new discoveries, micronutrients and malnutrition; case studies of micronutrient deficiencies; hospital visits. The course provides two hours of theory and three hours of laboratory. Prerequisites: NUTR 234 and CHEM 113.

#### NUTR 417 Nutrition and Behavior

The link between behavioral sciences and nutrition. The role of behavior in guiding diet and nutrition and the effects of diet and nutrition on shaping behavior. It will provide a solid foundation in the physiology and biochemistry of nutrition, which is complemented by units focused on the role of nutrition in behavior and cognition and the management of associated clinical condition. The development of food likes and dislikes in children, food promotion, psychological factors contributing to the development of obesity including appetite and weight control, disordered eating behaviors, and prevention of dietrelated disease. Prerequisites: NUTR 234, NUTR 342.

#### NUTR 461 Nutrition Epidemiology

Types of studies and study designs appropriate for specific surveys; nutritional related disorders and their distribution and determinants; measuring exposure outcomes, measuring dietdisease (exposure outcome) associations; interpretation of associations nutritional surveillance; screening tests; collection of data for program evaluation and decision-making; management of nutritional related disorders; research methodology. Principles of research methods; ethical considerations in human and animal research; the research process: data sources, research designs, sampling procedures and guide to referencing. Importance of research in nutrition and dietetics; evaluation of nutrition and dietetic research; purposes of scientific research; basic terminologies; types of nutrition research; proposal development, primary health care. Prerequisite: NUTR 303.

### 3 Credits

**3 Credits** 

#### SWCA 356 Child and Spouse Abuse

**3 Credits** 

The course is designed to make students understand and recognize different types of abuses practiced by family members. There is an awareness of situations contributing to family violence. Emphasis is on abuse prevention.

#### SWCD 254 Child Development

**3 Credits** 

2 Credits

**3 Credits** 

Child Development is a study of the factors that affect the total development of the child from conception to school age. Emphasis is placed on understanding children's basic needs and on parental responsibilities. The students are expected to observe the development of a child in home and pre-school atmosphere and then compare with theories about child development.

#### SWFC 250 Family Cultural Perspective 3 Credits

This course is deigned to study how different families around the world function and interrelate with their environments. The emphasis is to develop an open mind towards family lifestyles of all cultures.

#### SWFI 207 Family Issues

With the modern world where families are facing various challenges, this course is designed to equip students with factors that lead to stable marriages and healthy family relationships. Several contemporary issues about families are evaluated and analyzed.

#### SWHS 473 Human Sexuality

This course introduces information and the attitude a counselor needs and presents help for the counselor to educate the public, the client and the community. Topics covered are sexual anatomy, sexual physiology, reproduction, birth control, intimacy and communication skills, enhancing sexual relationships, sexual dysfunctions and therapy, STDs, sexual disorders, sexual health, and sex and the law. Topics on sexual harassment are included.

#### SWMD 275 Marriage Dynamics and Growth 3 Credits

This course entails the study of factors leading to a stable and fulfilling marriage relationship in the context of contemporary society. This course is designed to teach marriage development right from dating up to old age in marriage life. In addition, the course examines and clarifies goals, attitudes, and values in reference to the contemporary marriages. The factors that lead to stable and fulfilling marriages, as well as good family relationships are studied. Finally, students are taught how to integrate this knowledge into their personal and professional lives.

#### SWPC 410 Parent/Child Relationships 3 Credits

This is a study of parental, sibling, and peer interactions of the child in the home environment. Emphasis is placed on the development of a child and parent healthy relationships.



### **DEPARTMENT OF MATHEMATICS, CHEMISTRY, AND PHYSICS**

#### FACULTY

Francis, P., PhD., (Head of Department) Abuto E., MSc. Abuto J., MSc., PhD in progress (Study Leave) Atuya G., MSc. Bakker D., MSc. Chebos C., MSc., PhD in progress Kayiita Z., MSc. Magut H., MSc. Mitaki R., MSc. Okerio J., PhD. Onkoba E., BSc., MSc in progress Janet T., MSc.

#### **Teaching Assistants**

Njagi S., BSc. Rono F., BSc. Rotich J. BSc.

Email: hod\_mathematicalsciences@ueab.ac.ke

#### **PHILOSOPHY**

The Department of Mathematics, Chemistry and Physics operates on the UEAB worldview, which holds that God is the Creator and Sustainer of the universe and life and is the source of true knowledge. The entrance of sin caused man's alienation from God; therefore, the educative process in the Department of Mathematics, Chemistry and Physics seeks to restore the relationship of men and women with God by providing an avenue for students to be exposed to new and relevant information that will enhance their ability to analyze problems and think critically. This leads students into studying the composition, structure and properties of matter and how it interacts with energy to bring about physical, chemical and biochemical changes. And whatever knowledge and skills they acquire can be oriented towards further development of their mental, spiritual, and physical powers.

#### **MISSION**

The mission of the Department of Mathematics, Chemistry, and Physics is to provide and advance wholistic Christian quality education which develops to be preparing students with the knowledge in mathematics, chemistry and physics understanding, problem-solving skills, and dispositions that enable them to excel in their chosen careers; increasing mathematical and scientific knowledge through publication and presentation; supporting the broader education community and mentoring others for generous service through a committed Christian life.

#### VISION

The Department of Mathematics, Chemistry, and Physics envisions being a center of excellence in higher education and research producing world class graduates in mathematics, chemistry, physics and applied statistics equipped with moral virtues towards global competitiveness. To achieve this vision, the department is committed to providing a course of study which combines mental, spiritual and physical engagement that are high-quality, innovative and intellectually challenging.

#### **OBJECTIVES**

To bring to the attention of the students the role of chemistry in understanding current global problems such as food security, energy, natural resources, health and management of the environment.

- 1. To prepare students for careers in the chemical industry, in research institutions and in educational institutions at all levels.
- 2. To provide the necessary chemical background for students majoring in Agriculture, Biology, Health Sciences, Nutrition, Earth Sciences and Technology.
- 3. To lay the foundation for graduate studies in various fields of chemistry.
- 4. To impart chemical laboratory skills on how chemical materials are synthesized, purified, analysed, stored and how their chemical and physical properties are determined.
- To give students the necessary chemical knowledge that can be used in decision making in managerial careers and in other disciplines hitherto unlearned.

#### **DEGREES OFFERED BY THE DEPARTMENT**

- 1. Bachelor of Science in Chemistry
  - a. Analytical Chemistry Option
  - b. Analytical Chemistry with Management Option
  - c. Biochemistry Option
  - d. General Chemistry Option
  - e. Industrial Chemistry Option
  - f. Industrial Chemistry with Management Option
- 2. Bachelor of Science in Mathematics
- 3. Minor in Applied Statistics
- 4. Minor in Chemistry
  - a. Minor in Analytical Chemistry
  - b. Minor in Biochemistry
  - c. Minor in General Chemistry
  - d. Minor in Industrial Chemistry
- 5. Minor in Mathematics
- 6. Minor in Physics

# EXPECTED LEARNING OUTCOMES FOR CHEMISTRY

- To bring to the attention of the students the role of chemistry in understanding current global problems such as food security, energy, natural resources, health and management of the environment.
- To prepare students for careers in the chemical industry, in research institutions and in educational institutions at all levels.
- 3. To provide the necessary chemical background for students majoring in Agriculture, Biology, Health Sciences, Nutrition, Earth Sciences and Technology.
- 4. To lay the foundation for graduate studies in various fields of Chemistry.
- 5. To impart chemical laboratory skills on how chemical materials are synthesized, purified, analysed, stored and how their chemical and physical properties are determine
- To give students the necessary chemical knowledge that can be used in decision making in managerial careers and in other disciplines hitherto unlearned.



### EXPECTED LEARNING OUTCOMES FOR MATHEMATICS, APPLIED STATISTICS AND PHYSICS

By the end of the degree program in mathematics, applied statistics and physics, the student should be able to:

- Define the terms logic, mathematics, physics, statistics, numbers, acceleration, gravity, velocity, time, mass, weight, force, energy, and work;
- Describe the origins and development of mathematics, physics, and statistics as academic areas of study;
- Relate the mathematical, physics, and statistical concepts of symmetry and design demonstrated in God's creation throughout the universe;
- 4. Explain derivatives of functions and their antiderivatives;
- Explain equations of straight line, conics, tangents and algebraic curves;
- 6. Discuss the relationship between mathematical theory and logic;
- 7. Solve linear and non-linear equations;
- Test statistical hypotheses using descriptive and inferential statistics;
- 9. Analyze and interpret statistical data using computer program packages;
- 10. Discuss the concept of relativity, Lagrangian mechanics, and crystal structure;
- 11. Demonstrate how to generate energy using different modes;
- 12. Prove mathematical theorems;
- 13. Construct linear and non-linear mathematical models;
- 14. Analyze the fitness of curves, lines, and charts;
- 15. Illustrate the use of various mathematical software programs;
- 16. Carry out and report results of a scientific research.

#### **CAREER OPPORTUNITIES**

#### CHEMISTRY

The graduates in Chemistry will find job opportunities in manufacturing and processing industries, mining and petroleum industries, research institutions and in educational institutions.

#### MATH, APPLIED STATISTICS, AND PHYSICS

A degree in math can take you just about anywhere you want to go in life because studying mathematics strengthens your ability to think carefully, clarify concepts, solve problems, and apply analytical tools. Employers pay very good money for these abilities. Choosing a math degree is one of the best career moves you can make.

Our graduates are destined to work in the education sector, industry, finance sector, software analyst, operation research analyst, modeling and simulation analyst, actuary, the private sector and many more. Other may go further studies in the different areas of mathematics, physics and statistics.

#### ENTRANCE REQUIREMENTS

#### **DIRECT ENTRY**

#### Chemistry

The general entrance requirements for the university must be satisfied. The student must have attained at least a C+ (plus) in Chemistry / B- (minus) in physical science and C+ (plus) or above in either Maths or physics in KCSE or its equivalent. In

addition, the student must have attained at least a C+ (plus) in any one of the following courses;

- 1. Biology or biological sciences
- 2. Geography
- 3. Agriculture
- 4. Business studies

Students entering with an 'A' level principal pass in chemistry and a subsidiary pass in maths or physics or biology may be considered in the chemistry program.

Those who took secondary school chemistry and earned a C+ but lacked a C+ in either mathematics or physics can take MATH 101 and must attain a grade of C+ (plus) to clear the deficiency.

NOTE: Those who may not have had an exposure to secondary school chemistry must take CHEM 111 and pass with a minimum grade of C+ (plus).

#### Math and Physics

The minimum entrance requirements are the following:

- In addition to meeting the minimum university entrance requirements, applicants must have a grade of C+ (plus) in mathematics in the KCSE or its equivalent.
- 2. A minimum grade of C+ (plus) in physics and mathematics at KCSE or equivalent for a minor in physics.
- 3. A minimum grade of B-(minus) in STAT 150 or STAT 201 for a minor in Statistics.
- A minimum grade of C+ (plus) in the required mathematics course in their respective degree program for interdepartmental transfer.

#### INTERDEPARTMENTAL TRANSFER

#### Chemistry

The general university requirements for interdepartmental transfer must be satisfied. In addition, the students wishing to transfer to chemistry must have at least C grade in CHEM 121 and C+ in either MATH 100 or MATH 101.

#### Math and Physics

The general university requirements for interdepartmental transfer must be satisfied. In addition, students admitted into other degree programs but wishing to enter one of the Mathematics program options can do an interdepartmental transfer into Mathematics provided, they have

- 1. An average minimum grade of at least a B plain grade in either MATH 121, MATH 127, MATH 101 or MATH 113, for BSc. Mathematics and Minor in Mathematics;
- 2. An average minimum grade of at least a C+ (plus) in PHYS 155 or B (plain) in PHYS 100 for a minor in Physics.
- An average minimum grade of at least a B plain in STAT 150 for minor in applied statistics.

#### ENTRANCE REQUIREMENTS FOR OTHER DEPARTMENTS (BRIDGING COURSE) FOR CHEMISTRY

Those students who want to take Chemistry courses and require a C+ (plus) or C (plain) in their department's requirement should take CHEM 111 as bridging course and pass with a minimum grade of C+ (plus).

#### **UPGRADING STUDENTS FOR BSC CHEMISTRY**

This program is prepared to meet the needs of chemistry professionals who hold diploma qualifications in chemistry and related areas. The upgrading students can choose any option in the BSc Chemistry courses. The upgrading program is expected to take 2-3 years to complete.

# ENTRANCE REQUIREMENTS FOR UPGRADING STUDENTS

The applicant must hold a diploma in chemistry or related course from a recognised institution.

#### CREDIT TRANSFER FROM OTHER RECOGNIZED INSTITUTIONS

A student wishing to transfer some courses may do so by following the university's credit transfer procedures. A total of 30 credits can be transferred. Those students seeking for credit transfer or course exemption must have attained a minimum grade of C+ (plus) in the equivalent course.

#### **CHALLENGE EXAMS**

A total of 10 credits can be challenged. University regulations apply.

#### **GRADUATION REQUIREMENTS**

- 1. Bachelor of Science in Chemistry Analytical Chemistry Option
  - a. A student must complete a minimum of 131 credit hours with an overall GPA of at least 2.00.
  - b. A minimum grade of C (Plain) is required in core, concentration and elective courses with a GPA of at least 2.25
  - c. A minimum of C- (minus) is required for cognates with a GPA of 2.00.

#### 2. Bachelor of Science in Chemistry – Analytical Chemistry with Management Option

- a. A student must complete a minimum of 139 credit hours with an overall GPA of at least 2.00
- b. A minimum grade of C (plain) is required in core, concentration and elective courses with a GPA of at least 2.25
- c. A minimum of C- (minus) is required for cognates with a GPA of 2.0.

#### 3. Bachelor of Science in Chemistry – Biochemistry Option

- a. A student must complete a minimum of 140 credit hours with an overall GPA of at least 2.00 is required
- b. A minimum grade of C (plain) is required in core, concentration and elective courses with a GPA of at least 2.25
- c. A minimum of C- (minus) is required for cognates with a GPA of 2.00.

### 4. Bachelor of Science in Chemistry – General Chemistry Option

a. A student must complete a minimum of 134 credit hours with an overall GPA of at least 2.00

- b. A minimum grade of C (plain) is required in core, concentration and elective courses with a GPA of at least 2.25
- c. A minimum of C- (minus) is required for cognates with a GPA of 2.00.

### 5. Bachelor of Science in Chemistry - Industrial Chemistry Option

- a. A student must complete a minimum of 137 credit hours with an overall GPA of at least 2.00
- b. A minimum grade of C (plain) is required in core, concentration and elective courses with a GPA of at least 2.25
- c. A minimum of C- (minus) is required for cognates with a GPA of 2.00.

### 6. Bachelor of Science in Chemistry - Industrial Chemistry with Management Option

- a. A student must complete a minimum of 143 credit hours with an overall GPA of at least 2.00
- b. A minimum grade of C (plain) is required in core, concentration and elective courses with a GPA of at least 2.25
- c. A minimum of C- (minus) is required for cognates with a GPA of 2.00.

#### 7. Minor in Analytical Chemistry

A student must complete 24 credits with a GPA of 2.00 and above with no grade below C (plain) in core and C- (minus) in cognate courses.

#### 8. Minor in Biochemistry

A student must complete 25 credits with a GPA of 2.00 and above with no grade below C (plain) in core and C- (minus) in cognate courses.

#### 9. Minor General Chemistry

A student must complete 25 credits with a GPA of 2.00 and above with no grade below C (plain) in core and C- (minus) in cognate courses.

#### 10. Minor in Industrial Chemistry

A student must complete 27 credits with a GPA of 2.00 and above with no grade below C (plain) in core and C- (minus) in cognate courses.

### 11. BSc in Mathematics and Minors in Mathematics, Physics or Applied Statistics

- a. A total of 130 credit hours are required with an aggregate GPA of 2.00.
- b. A minimum of 66 credit hours in Mathematics with a GPA of at least 2.25 in Mathematics for a Bachelor of Science degree in Mathematics, and a minimum of 30 credit hours in Mathematics, Physics and Applied Statistics with a GPA of at least 2.25 for a minor in either Mathematics or Physics or Applied Statistics.
- c. A minimum grade of C-(minus) in all Mathematics, Statistics and Physics or Chemistry courses.
- d. A GPA of 2.25 for all core courses with a grade of not less than C- (minus) in any one of them.

### SCHOOL OF SCIENCE AND TECHNOLOGY



# **Course Listing**

### BACHELOR OF SCIENCE IN CHEMISTRY – ANALYTICAL CHEMISTRY OPTION

### SUMMARY

General Education Requirements	28
Core requirements	45
Concentration	37
Cognates	15
Electives	6
Total	131 Credits

Analytical Chemistry Option students are exempted from the following general education requirements:

MGMT 103	Basic Management and Entrepreneurial Skills	2		
AGRI 105	Principles of Agriculture Technology	2		
BIOL 105	Human Biology	2		
MATH 101	Pre-Calculus	3		
PHYS 100	Concepts of Physical Sciences	2		
ENVI 227	Environment and Society	2		
Total				

GENERAL	EDUCATION REQUIREMENTS 28 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two classes from the following (4 credits)

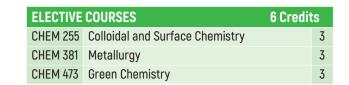
HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

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CORE COL	JRSES 45 Credi	ts
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic Structure & Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 231	Physical Chemistry I	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 341	Inorganic Chemistry I	3
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENTRATION 37 Credit		ts
CHEM 251	Analytical Chemistry I	3
CHEM 252	Analytical Chemistry II	4
CHEM 358	Analytical Food Chemistry	3
CHEM 377	Modern Methods of Chemical Analysis and Synthesis	3
CHEM 405	Industrial Chemistry I	3
CHEM 406	Industrial Chemistry II	3
CHEM 422	Forensic Analytical Chemistry	3
CHEM 424	Pharmaceutical Chemistry	3
CHEM 454	Aquatic Chemistry	3
CHEM 430	Biochemical Pharmacology	3
CHEM 470	Chemistry Project	3
<b>CHEM 499</b>	Industrial Experience	3

COGNATE COURSES 15 Credit		ts
MATH 127	Differential calculus	3
MATH 227	Integral Calculus	3
PHYS 155	General Physics	3
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3



### BACHELOR OF SCIENCE IN CHEMISTRY - ANALYTICAL CHEMISTRY WITH MANAGEMENT OPTION

#### SUMMARY

General Education Requirements	28
Core Courses	45
Concentration	37
Cognates	23
Electives	6
Total	139 Credits

Analytical Chemistry with Management Option students are exempted from the following general education requirements:

MGMT 103	Basic Management and Entrepreneurial Skills	2
AGRI 105	Principles of Agriculture Technology	2
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physical Sciences	2
ENVI 227	Environment and Society	2
MATH 101	Pre-Calculus	3
Total		13

GENERAL	EDUCATION REQUIREMENTS 28 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II Or	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two classes from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2

PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

Tractor Operations and Maintenance	1
Personal Auto care	1
Automobile Driving	1
Basic Electronics Maintenance	1
Weaving	1
Quilting	1
Creative Fashion Crafts Laboratory	1
First Aid	1
Cooking	1
Basic Cake Preparation and Cake Decoration	1
Woodwork	1
	Personal Auto care Automobile Driving Basic Electronics Maintenance Weaving Quilting Creative Fashion Crafts Laboratory First Aid Cooking Basic Cake Preparation and Cake Decoration

CORE COURSES 45 Credit		s
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic Structure & Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 231	Physical Chemistry I	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 341	Inorganic Chemistry I	3
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENT	RATION 37 Credit	ts
CHEM 251	Analytical Chemistry I	3
CHEM 252	Analytical Chemistry II	4
CHEM 358	Analytical Food Chemistry	3
CHEM 377	Modern Methods of Chemical Analysis and Synthesis	3
CHEM 405	Industrial Chemistry I	3
CHEM 406	Industrial Chemistry II	3
CHEM 422	Forensic Analytical Chemistry	3
CHEM 424	Pharmaceutical Chemistry	3
CHEM 454	Aquatic Chemistry	3
CHEM 430	Biochemical Pharmacology	3
CHEM 470	Chemistry Project	3
CHEM 499	Industrial Experience	3



COGNATE COURSES 23 Credit		ts
ACCT 110	Bookkeeping and Accounting	2
MATH 127	Differential Calculus	3
MATH 227	Integral Calculus	3
MGMT 130	Fundamentals of Managements	3
MGMT 231	Human Resource and Management	3
MGMT 475	Production and Operation Management	3
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3

ELECTIVE COURSES 6 Credits		ts
CHEM 255	Colloidal and Surface Chemistry	3
CHEM 381	Metallurgy	3
CHEM 473	Green Chemistry	3

### BACHELOR OF SCIENCE IN CHEMISTRY – BIOCHEMISTRY OPTION

#### **SUMMARY**

Total	143 Credits
Cognates	27
Concentration	40
Core Courses	45
General Education Requirements	31

Biochemistry Option students are exempt from the following general education requirements:

MGMT 103	Basic Management and Entrepreneurial Skills	2
AGRI 105	Principles of Agriculture Technology	2
BIOL 105	Human Biology	2
PHYS 100	Concepts of Physical Sciences	2
ENVI 227	Environment and Society	2
	Total	10

GENERAL	EDUCATION REQUIREMENTS 31 Credit	ts
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
MATH 100	Foundations of Mathematics Or	3
MATH 101	Pre-calculus	3
INSY 107	Information Technology Today Or	2

INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto Care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake	1
	Decoration	
W00D 100	Woodwork	1

CORE COURSES 45 Credits		dits
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic Structure & Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 231	Physical Chemistry I	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 341	Inorganic Chemistry I	3
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENTRATION 40 Credits		S
CHEM 300	Introductory Biochemistry	3
CHEM 311	Protein Biochemistry	3
CHEM 327	Intermediary Metabolism	3
CHEM 346	Applied Biochemistry and Biotechnology	3
CHEM 362	Bioinformatics	3

CHEM 364	Immunochemistry	3
CHEM 372	Industrial Biochemistry	3
CHEM 374	Nutritional Biochemistry	4
CHEM 430	Biochemical Pharmacology	3
CHEM 442	Nucleic Acids and Recombinant DNA	3
	Technology	
CHEM 451	Biochemical Techniques	3
CHEM 462	Microbial Biochemistry	3
<b>CHEM 499</b>	Industrial Experience	3

COGNATE	COURSES 27 Credit	ts
BIOL 155	Foundation of Biology I	4
BIOL 156	Foundation of Biology II	4
BIOL 293	Cell Biology	3
BIOL 447	Molecular Biology	3
BIOL 449	Genetics	3
CLCS 221	Fundamentals of Clinical Chemistry	3
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3

### BACHELOR OF SCIENCE IN CHEMISTRY – GENERAL CHEMISTRY OPTION

#### **SUMMARY**

General Education Requirements	28
Core Courses	45
Concentration	43
Cognates	12
Elective	6
Total	134 Credits

General Chemistry Option students are exempt from the following general education requirements:

MGMT 103	Basic Management and Entrepreneurial Skills	2
AGRI 105	Principles of Agriculture Technology	2
BIOL 105	Human Biology	2
MATH 101	Pre-Calculus	3
PHYS 100.	Concepts of Physical Sciences	2
ENVI 227	Environment and Society	2
	Total	13

GENERAL EDUCATION REQUIREMENTS 28 Credits			
ENGL 105	Writing Skills		3
ENGL 106	Speech Communication		1
KISW 114	Language Use in Kiswahili Or		2
FREN 103	Beginning French II		2
GCAS 107	Music Appreciation Or		2
LITE 151	Introduction to Literary Appreciati	ion	2

OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

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AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto Care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE COURSES 45 Credits		ts
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
<b>CHEM 205</b>	Atomic Structure & Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 231	Physical Chemistry I	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laborator	1
CHEM 332	Physical Chemistry II	4
CHEM 341	Inorganic Chemistry I	3
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2



CONCENT	RATION 43 Credit	S
CHEM 251	Analytical Chemistry I	3
CHEM 255	Colloidal and Surface Chemistry	3
CHEM 271	Chemical Thermodynamics and Phase equilibria	3
CHEM 300	Introductory Biochemistry	3
CHEM 345	Synthetic Organic Chemistry	3
CHEM 339	Polymer Chemistry	4
CHEM 362	Bioinformatics	3
CHEM 377	Modern Methods of Chemical Analysis and Synthesis	3
CHEM 384	Coordination Chemistry	3
CHEM 394	Heterocyclic Chemistry and Stereo Chemistry	3
CHEM 402	Transition metals Chemistry	3
CHEM 405	Industrial Chemistry I	3
CHEM 431	Advanced Organic Chemistry	3
CHEM 470	Chemistry Project	3

COGNATE COURSES 12 Credit		ts
MATH 127	Differential Calculus	3
MATH 227	Integral Calculus	3
PHYS 155	General Physics	3
STAT 150	Introduction to Probability and Statistics	3

ELECTIVE	COURSES	12 Credits
CHEM 424	Pharmaceutical Chemistry	3
CHEM 443	Bioinorganic Chemistry	3
CHEM 473	Green Chemistry	3
CHEM 499	Industrial Experience	3

### BACHELOR OF SCIENCE IN CHEMISTRY -INDUSTRIAL CHEMISTRY OPTION

#### SUMMARY

Concentration	47
Cognates	15
Total	135 Credits

Industrial Chemistry Option students are exempt from the following general education requirements:

MGMT 103	Basic Management and Entrepreneurial Skills	2
AGRI 105	Principles of Agriculture Technology	2
BIOL 105	Human Biology	2
MATH 101	Pre-Calculus	3
PHYS 100	Concepts of Physical Sciences	2
ENVI 227	Environment and Society	2
	Total	13

GENERAL	EDUCATION REQUIREMENTS 28 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto Care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE COURSES 45 Credits		S
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic Structure & Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 231	Physical Chemistry I	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4



CHEM 341	Inorganic Chemistry I	3
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENT	RATION 47 Credit	ts
CHEM 251	Analytical Chemistry I	3
CHEM 252	Analytical Chemistry II	4
CHEM 303	Industrial Organic Chemistry	3
CHEM 316	Unit Operation, Process Control and Industrial Systems	3
CHEM 337	Fluid Flow, Material and Energy Transfer	3
CHEM 339	Polymer Chemistry	4
CHEM 372	Industrial Biochemistry	3
CHEM 381	Metallurgy	3
CHEM 405	Industrial Chemistry I	3
CHEM 406	Industrial Chemistry II	3
CHEM 420	Industrial Waste Management	3
CHEM 424	Pharmaceutical Chemistry	3
CHEM 434	Industrial Catalysis	3
CHEM 470	Chemistry Project	3
CHEM 499	Industrial Experience	3

COGNATE COURSES 15 Credit		ts
MATH 127	Differential Calculus	3
MATH 227	Integral Calculus	3
PHYS 155	General Physics	3
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3

### BACHELOR OF SCIENCE IN CHEMISTRY - INDUSTRIAL CHEMISTRY WITH MANAGEMENT OPTION

### SUMMARY

General Education Requirements	28
Core Courses	45
Concentration	47
Cognates	23
Total	143 Credits

Industrial Chemistry with Management Option students are exempt from the following general education requirements:

MGMT 103	Basic Management and Entrepreneurial Skills	2
AGRI 105	Principles of Agriculture Technology	2
BIOL 105	Human Biology	2
MATH 101	Pre-Calculus	3
PHYS 100.	Concepts of Physical Sciences	2
ENVI 227	Environment and Society	2

GENERAL	EDUCATION REQUIREMENTS 28 Credit	S
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two courses from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

### Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto Care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE COL	JRSES 45 Credi	ts
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic Structure & Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 231	Physical Chemistry I	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1

## SCHOOL OF SCIENCE AND TECHNOLOGY



CHEM 482 Seminar in Chemistry II

CONCENT	RATION 47 Credi	ts
CHEM 251	Analytical Chemistry I	3
CHEM 252	Analytical Chemistry II	4
CHEM 303	Industrial Organic Chemistry	3
CHEM 316	Unit Operation, Process Control and Industrial Systems	3
CHEM 337	Fluid Flow, Material and Energy Transfer	3
CHEM 339	Polymer Chemistry	4
CHEM 372	Industrial Biochemistry	3
CHEM 381	Metallurgy	3
CHEM 405	Industrial Chemistry I	3
CHEM 406	Industrial Chemistry II	3
CHEM 420	Industrial Waste Management	3
CHEM 424	Pharmaceutical Chemistry	3
CHEM 434	Industrial Catalysis	3
CHEM 470	Chemistry Project	3
CHEM 499	Industrial Experience	3

COGNATE COURSES 23 Credits		ts
ACCT 110	Bookkeeping and Accounting	2
MATH 127	Differential Calculus	3
MATH 227	Integral Calculus	3
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3
MGMT 130	Fundamentals of Management	3
MGMT 231	Human Resource and Management	3
<b>MGMT 475</b>	Production and Operation Management	3

### BACHELOR OF SCIENCE IN CHEMISTRY FOR UPGRADING STUDENTS

### BACHELOR OF SCIENCE IN CHEMISTRY -ANALYTICAL OPTION FOR UPGRADERS

#### **SUMMARY**

2

General Education Requirements	12
Core Courses	24
Concentration	37
Cognates	6
Electives	6
Total	87 Credits

**General Education Requirement Course Exemptions** 

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Introduction to Keyboarding	0
MGMT 103	Basic Management	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
MATH 101	Pre-calculus	3
PHYS 100	Concepts of Physical Sciences	2
ENVI 227	Environment and Society	2
SOCI 121	Principles of Sociology	2
PSYC 101	Introduction to Psychology	
	Vocational Skills (Any)	

#### **Core Course Exemptions**

CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic structure and Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 231	Physical Chemistry I	3
CHEM 341	Inorganic Chemistry I	3

MATH 127	Differential calculus	3
MATH 227	Integral Calculus	3
PHYS 155	General Physics	3

GENERAL	EDUCATION REQUIREMENTS 12 Credit	S
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2

<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
<b>RELT 255</b>	Introduction to Christian Ethics	2

CORE COL	JRSES 24 Cred	its
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENT	RATION 37 Credi	ts
CHEM 251	Analytical Chemistry I	3
CHEM 252	Analytical Chemistry II	4
CHEM 358	Analytical Food Chemistry	3
CHEM 377	Modern Methods of Chemical Analysis and Synthesis	3
CHEM 405	Industrial Chemistry I	3
CHEM 406	Industrial Chemistry II	3
CHEM 422	Forensic Analytical Chemistry	3
CHEM 424	Pharmaceutical Chemistry	3
CHEM 454	Aquatic Chemistry	3
CHEM 430	Biochemical Pharmacology	3
CHEM 470	Chemistry Project	3
CHEM 499	Industrial Experience	3

COGNATE	COURSES 6 Credit	ts
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3

ELECTIVE COURSES		6 Credits	
CHEM 255	Colloidal and Surface Chemistry		3
CHEM 381	Metallurgy		3
CHEM 473	Green Chemistry		3

### BACHELOR OF SCIENCE IN CHEMISTRY ANALYTICAL WITH MANAGEMENT OPTION FOR UPGRADERS

### SUMMARY

General Education Requirements	12
Core Courses	24
Concentration	37
Cognates	14
Electives	6
Total	95 Credits

### **General Education Requirement Course Exemptions**

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Introduction to Keyboarding	0
MGMT 103	Basic Management	2
EDUC 215	Introduction to Philosophy of Christian	2
	Education	
PEAC 107	Physical and Recreational Activities	1
AGRI 105	Principles of Agricultural Technology	2
ENVI 227	Environment and Society	2
BIOL 105	Human Biology	2
MATH 101	Pre-calculus	3
PHYS 100	Concepts of Physical Sciences	2
SOCI 121	Principles of Sociology	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills (Any)	1

### Core Course Exemptions

CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic structure and Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 231	Physical Chemistry I	3
CHEM 341	Inorganic Chemistry I	3

MATH 127	Differential calculus	3
MATH 227	Integral Calculus	3
MGMT 130	Fundamentals of Managements	3

GENERAL	EDUCATION REQUIREMENTS 12 Credit	S
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2



CORE COURSES 24 Credits		ts
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENT	RATION 37 Credi	ts
CHEM 251	Analytical Chemistry I	3
CHEM 252	Analytical Chemistry II	4
CHEM 358	Analytical Food Chemistry	3
CHEM 377	Modern Methods of Chemical Analysis and Synthesis	3
CHEM 405	Industrial Chemistry I	3
CHEM 406	Industrial Chemistry II	3
CHEM 422	Forensic Analytical Chemistry	3
CHEM 424	Pharmaceutical Chemistry	3
CHEM 454	Aquatic Chemistry	3
CHEM 430	Biochemical Pharmacology	3
CHEM 470	Chemistry Project	3
CHEM 499	Industrial Experience	3

COGNATE COURSES 14 Credits		ts
ACCT 110	Bookkeeping and Accounting	2
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3
MGMT 231	Human Resource and Management	3
MGMT 475	Production and Operation Management	3

ELECTIVE COURSES 6 Credit		ts	
CHEM 255	Colloidal and Surface Chemistry		3
CHEM 381	Metallurgy		3
CHEM 473	Green Chemistry		3

### BACHELOR OF SCIENCE IN CHEMISTRY BIOCHEMISTRY OPTION FOR UPGRADERS

#### SUMMARY

General Education Requirements	12
Core Courses	24
Concentration	40
Cognates	18
Total	94 Credits

**General Education Requirement Exemptions** 

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1

KISW 114	Language Use in Kiswahili	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Introduction to Keyboarding	0
MGMT 103	Basic Management	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
MATH 101	Pre-calculus	3
ENVI 227	Environment and Society	2
PHYS 100	Concepts of Physical Sciences	2
SOCI 121	Principles of Sociology	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills (Any)	1

### **Core Course Exemptions**

CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic structure and Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 231	Physical Chemistry I	3
CHEM 341	Inorganic Chemistry I	3

BIOL 155	Foundation of Biology I	4
BIOL 156	Foundation of Biology II	4

GENERAL	EDUCATION REQUIREMENTS 12 Credit	ts
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE COURSES 24 Credits		ts
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENT	RATION	40 Credits
CHEM 300	Introductory Biochemistry	3
CHEM 311	Protein Biochemistry	3
CHEM 327	Intermediary Metabolism	3
CHEM 346	Applied Biochemistry and Biotechnol	logy 3
CHEM 362	Bioinformatics	3
CHEM 364	Immunochemistry	3
CHEM 372	Industrial Biochemistry	3
CHEM 374	Nutritional Biochemistry	4
CHEM 430	Biochemical Pharmacology	3
CHEM 442	Nucleic Acids and Recombinant DNA Technology	3
CHEM 451	Biochemical Techniques	3
CHEM 462	Microbial Biochemistry	3
CHEM 499	Industrial Experience	3

COGNATE COURSES 18 Credits		ts
BIOL 293	Cell Biology	3
BIOL 447	Molecular Biology	3
BIOL 449	Genetics	3
CLCS 221	Fundamentals of Clinical Chemistry	3
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3

### BACHELOR OF SCIENCE IN CHEMISTRY GENERAL OPTION FOR UPGRADERS

#### **SUMMARY**

General Education Requirements	12
Core Courses	24
Concentration	40
Cognate	3
Electives	6
Total	85 Credits

### **General Education Requirement Course Exemptions**

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Introduction to Keyboarding	0
MGMT 103	Basic Management	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
MATH 101	Pre-calculus	3
ENVI 227	Environment and Society	2
PHYS 100	Concepts of Physical Sciences	2
SOCI 121	Principles of Sociology	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills (Any)	1

### **Core Course Exemptions**

CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic structure and Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 231	Physical Chemistry I	3
CHEM 341	Inorganic Chemistry I	3

MATH 127	Differential calculus	3
MATH 227	Integral Calculus	3
PHYS 155	General Physics	3

GENERAL	EDUCATION REQUIREMENTS 12 Cred	dits
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE COURSES 24 Credits		ts
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENT	RATION	40 Credit	s
CHEM 251	Analytical Chemistry I		3
CHEM 255	Colloidal and Surface Chemistry		3
CHEM 271	Chemical Thermodynamics and Phase Equilibria		3
CHEM 300	Introductory Biochemistry		3
CHEM 345	Synthetic Organic Chemistry		3
CHEM 339	Polymer Chemistry		4
CHEM 362	Bioinformatics		3
CHEM 384	Coordination Chemistry		3
CHEM 394	Heterocyclic Chemistry and Stereo Chemistry		3
CHEM 402	Transition metals Chemistry		3
CHEM 405	Industrial Chemistry I		3
CHEM 431	Advanced Organic Chemistry		3
CHEM 470	Chemistry Project		3



COGNATE COURSES 3 Credits		s
STAT 150	Introduction to Probability and Statistics	3
ELECTIVE COURSES 6 Credits		
CHEM 424	Pharmaceutical Chemistry	3
CHEM 443	Bioinorganic Chemistry	3
CHEM 473	Green Chemistry	3
<b>CHEM 499</b>	Industrial Experience	3

### **BACHELOR OF SCIENCE IN CHEMISTRY INDUSTRIAL OPTION FOR UPGRADERS**

#### SUMMARY

General Education Requirements	12
Core Courses	24
Concentration	47
Cognates	6
Total	89 Credits

**General Education Requirement Course Exemptions** 

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Introduction to Keyboarding	0
MGMT 103	Basic Management	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
MATH 101	Pre-calculus	3
ENVI 227	Environment and Society	2
PHYS 100	Concepts of Physical Sciences	2
SOCI 121	Principles of Sociology	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills (Any)	1

### **Core Course Exemptions**

CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic structure and Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 231	Physical Chemistry I	3
CHEM 341	Inorganic Chemistry I	3

### Cognate Course Exemptions:

MATH 127	Differential calculus	3
MATH 227	Integral Calculus	3
PHYS 155	General Physics	3

GENERAL	EDUCATION REQUIREMENTS 12 Credit	S
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

#### **CORE COURSES**

CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

24 Credits

CONCENT	RATION 47 Credit	ts
CHEM 251	Analytical Chemistry I	3
CHEM 252	Analytical Chemistry II	4
CHEM 303	Industrial Organic Chemistry	3
CHEM 316	Unit Operation, Process Control and Industrial Systems	3
CHEM 337	Fluid Flow, Material and Energy Transfer	3
CHEM 339	Polymer Chemistry	4
CHEM 372	Industrial Biochemistry	3
CHEM 381	Metallurgy	3
CHEM 405	Industrial Chemistry I	3
CHEM 406	Industrial Chemistry II	3
CHEM 420	Industrial Waste Management	3
CHEM 424	Pharmaceutical Chemistry	3
CHEM 434	Industrial Catalysis	3
CHEM 470	Chemistry Project	3
CHEM 499	Industrial Experience	3

COGNATE COURSES 6 Credits		ts
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3



### BACHELOR OF SCIENCE IN CHEMISTRY INDUSTRIAL WITH MANAGEMENT OPTION FOR UPGRADERS

#### SUMMARY

General Education Requirement	12
Core Courses	24
Concentration	47
Cognates	14
Total	97 Credits

General Education Requirement Course Exemptions

ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili	
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Introduction to Keyboarding	0
MGMT 103	Basic Management	
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
MATH 101	Pre-calculus	3
ENVI 227	Environment and Society	2
PHYS 100	Concepts of Physical Sciences	2
SOCI 121	Principles of Sociology	2
PSYC 101	Introduction to Psychology	2
	Vocational Skills (Any)	1

### Core Course Exemptions

CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 205	Atomic structure and Bonding	3
CHEM 211	Organic Chemistry I	4
CHEM 231	Physical Chemistry I	3
CHEM 341	Inorganic Chemistry I	3

MATH 127	Differential calculus	3
MATH 227	Integral Calculus	3
MGMT 130	Fundamentals of Managements	3

GENERAL	EDUCATION REQUIREMENTS 12 Credit	S
HLED 110	Health Principles	1
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

CORE COL	JRSES 24 Credit	ts
CHEM 201	Environmental Chemistry I	3
CHEM 212	Organic Chemistry II	4
CHEM 221	Computer Applications in Chemistry	3
CHEM 254	Laboratory Practice and Safety	2
CHEM 309	Laboratory Experience	1
CHEM 332	Physical Chemistry II	4
CHEM 342	Inorganic Chemistry II	3
CHEM 419	Environmental Chemistry	3
CHEM 481	Seminar in Chemistry I	2
CHEM 482	Seminar in Chemistry II	2

CONCENT	RATION 47 Credi	ts
CHEM 251	Analytical Chemistry I	3
CHEM 252	Analytical Chemistry II	4
CHEM 303	Industrial Organic Chemistry	3
CHEM 316	Unit Operation, Process Control and Industrial Systems	3
CHEM 337	Fluid Flow, Material and Energy Transfer	3
CHEM 339	Polymer Chemistry	4
CHEM 372	Industrial Biochemistry	3
CHEM 381	Metallurgy	3
CHEM 405	Industrial Chemistry I	3
CHEM 406	Industrial Chemistry II	3
CHEM 420	Industrial Waste Management	3
CHEM 424	Pharmaceutical Chemistry	3
CHEM 434	Industrial Catalysis	3
CHEM 470	Chemistry Project	3
CHEM 499	Industrial Experience	3

COGNATE COURSES 14 Credits		ts
ACCT 110	Bookkeeping and Accounting	2
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3
MGMT 231	Human Resource and Management	3
MGMT 475	Production and Operation Management	3

### **BACHELOR OF SCIENCE IN MATHEMATICS**

#### **SUMMARY**

<b>General Education Requir</b>	rements 36
Core Courses	66
Cognates Courses	21 or 22
Electives	9
Total	132 to 133 credits

Mathematics majors and minors in Physics and Applied Statistics are exempted from the courses listed under the Natural Sciences and Mathematics section of the general education requirements:

MATH 101	Pre-Calculus	3
PHYS 100	Concepts of Physical Sciences	3

GENERAL	EDUCATION REQUIREMENTS 12 Credit	s
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	2
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	2
OFTE 120	Keyboarding	0
MGMT 103	Basic Management and Entrepreneurial Skills	2
EDUC 215	Introduction to Philosophy of Christian Education	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology (Non-science majors)	2
INSY 107	Information Technology Today Or	2
INSY 108	Information Technology for the Health Professionals	2
CHEM 200	Environmental Science Or	2
ENVI 227	Environment and Society Or	2
TCED 231	Safety Education	2
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two classes from the following (4 credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

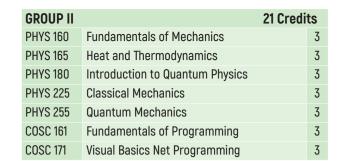
#### Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

CORE CO	JRSES 66 Credit	ts
MATH 121	Discrete Mathematics	3
MATH 124		3
MATH 127	Analytical Geometry Differential Calculus	3
MATH 127 MATH 150		3
	Linear Algebra I	
STAT 205	Probability Theory and Its Applications	3
MATH 227	Integral Calculus	3
MATH 240	Real Analysis I	3
MATH 248	Ordinary Differential Equations I	3
MATH 274	Complex Analysis I	3
MATH 278	Vector Analysis	3
MATH 330	Operations Research I	3
MATH 336	Numerical Methods	3
MATH 346	Group Theory	3
MATH 354	Ring Theory	3
MATH 365	Number Theory	3
MATH 371	Linear Algebra II	3
MATH 414	Тороlоду	3
MATH 415	Measures Theory and Integration	3
MATH 445	Partial Differential Equations	3
MATH 480	Functional Analysis	3
MATH 499	Mathematics Project and Attachment	3

COGNATE COURSES22 or 21 CreditsStudents should take courses from either GROUP I,GROUP II or from Group III.

GROUP I 22 Crea		lits
CHEM 121	General Chemistry I	4
CHEM 122	General Chemistry II	4
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 231	Physical Chemistry I	3
COSC 171	Visual Basics Net Programming	3



GROUP III 21 Cred		dits
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3
STAT 207	Regression Analysis	3
STAT 300	Multivariate Probability Distributions	3
STAT 313	Test of Hypothesis	3
STAT 330	Sample Survey	3
STAT 336	Quality Control Methods	3

ELECTIVE COURSES 22 or 21 Credits Students should select 9 credit hours from any one of the following groups:

#### **GROUP I: APPLIED MATHEMATICS**

MATH 348	Ordinary Differential Equations II	3
MATH 355	Dynamics	3
MATH 380	Analytic Applied Mathematics	3
MATH 385	Fluid Mechanics	3
MATH 404	Numerical Analysis	3
MATH 430	Operations Research II	3
MATH 432	Mathematical Modeling	3
MATH 447	Fluid Flow Analysis	3
MTH 448	Method of Fluid Mechanics	3
MATH 474	Complex Analysis II	3

#### **GROUP II: PURE MATHEMATICS**

MATH 342	Boolean Algebra and Its Applications	3
MATH 375	Algebraic Structures	3
MATH 345	Graph Theory	3
MATH 408	Differential Geometry	3
MATH 411	Field Theory	3
MATH 412	Galois Theory	3
MATH 474	Complex Analysis II	3
MATH 483	Coding Theory	3

#### **GROUP III: APPLIED STATISTICS**

STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3
STAT 207	Regression Analysis	3
STAT 305	Theory of Estimation	3
STAT 308	Operations Research	3
STAT 310	Introduction to Econometrics	3

STAT 313	Tests of Hypothesis	3
STAT 400	Stochastic Processes	3
STAT 410	Design and Analysis of Experiments	3
STAT 430	Systems Analysis and Design	3
STAT 435	Time Series Analysis	3

### MINORS

### MINOR IN APPLIED STATISTICS

#### SUMMARY

Core	Courses
Total	

30 30 Credits

CORE COURSES 30 Credits		ts
STAT 150	Introduction to Probability and Statistics	3
STAT 204	Non Parametric Statistics	3
STAT 205	Probability Theory and Its Applications	3
STAT 207	Regression Analysis	3
STAT 300	Multivariate Probability Distributions	3
STAT 313	Test of Hypothesis	3
STAT 330	Sample Survey	3
STAT 336	Quality Control Methods	3
STAT 430	Systems Analysis and Design	3
STAT 490	Special Project in Statistics	3

#### **MINOR IN ANALYTICAL CHEMISTRY**

#### **SUMMARY**

Core	Courses
Total	

24 Credits

24

CORE COL	JRSES 24 Credi	24 Credits	
CHEM 121	General Chemistry I	4	
CHEM 211	Organic Chemistry I	4	
CHEM 231	Physical Chemistry I	3	
CHEM 251	Analytical Chemistry I	3	
CHEM 252	Analytical Chemistry II	4	
CHEM 254	Laboratory Practice and Safety	2	
CHEM 309	Laboratory Experience	1	
CHEM 358	Analytical Food Chemistry	3	



### **MINOR IN BIOCHEMISTRY**

#### **SUMMARY**

Core Courses	25
Total	25 Credits

CORE COL	IRSES 25 Credi	ts
CHEM 121	General Chemistry I	4
CHEM 211	Organic Chemistry I	4
CHEM 254	Laboratory Practice and Safety	2
CHEM 300	Introductory Biochemistry	3
CHEM 311	Protein Biochemistry	3
CHEM 362	Bioinformatics	3
CHEM 424	Pharmaceutical Chemistry	33
CHEM 346	Applied Biochemistry and Biotechnology	3

### **MINOR IN GENERAL CHEMISTRY**

#### **SUMMARY**

Core Courses	25
Total	25 Credits

CORE COU	RSES	25 Credit	ts
CHEM 121	General Chemistry I		4
CHEM 209	Atomic Structure and Bonding		3
CHEM 212	Organic Chemistry II		4
CHEM 231		3	
CHEM 254	Laboratory Practice and Safety		2
CHEM 300	Introductory Biochemistry		3
CHEM 341		3	
CHEM 424	Pharmaceutical Chemistry		3

### MINOR IN INDUSTRIAL CHEMISTRY

### SUMMARY

Core Courses Total 25 25 Credits

CORE COL	JRSES 24 Credit	ts			
CHEM 121	General Chemistry I	4			
CHEM 211	Organic Chemistry I	4			
CHEM 231	Physical Chemistry I	3			
CHEM 251	M 251 Analytical Chemistry I				
CHEM 254	Laboratory Practice and Safety				
CHEM 309	Laboratory Experience				
CHEM 316	M 316 Unit Operation, Process Control and Industrial Systems				
CHEM 337	Fluid Flow, Material and Energy Transfer				
CHEM 405	Industrial Chemistry I	3			

### **MINOR IN MATHEMATICS**

#### SUMMARY

Core Courses	•	
CORE COUR	RSES 25 Credit	s
MATH 121	Discrete Mathematics	3
MATH 127	Differential Calculus	3
MATH 150	Linear Algebra I	3
STAT 150	Introduction to Probability and Statistics	3
MATH 240	Real Analysis I	3
MATH 248	Ordinary Differential Equations I	3
MATH 278	Vector Analysis	3
MATH 336	Numerical Analysis	3
MATH 340	Real Analysis II	3
MATH 346	Group Theory	3

### **MINOR IN PHYSICS**

### SUMMARY

Core Courses	30
Total	30 Credits

CORE COU	RSES 25 Cred	its					
PHYS 155	General Physics or	3					
PHYS 160	Fundamentals of Mechanics						
PHYS 165	Heat and Thermodynamics						
PHYS 170	Geometric Optics	3					
PHYS 180	Introduction to Quantum Physics	3					
PHYS 215	Waves and Oscillations	3					
PHYS 231	Electricity and Magnetism I	3					
PHYS 225	Classical Mechanics	3					
PHYS 255	Quantum Mechanics	3					
PHYS 300	Properties of Matter	3					
PHYS 431	Environmental and Renewable Energy Physics I	3					



## **BACHELOR OF SCIENCE CHEMISTRY (ANALYTICAL CHEMISTRY OPTION)**

### Four-Year Course Plan and Checklist

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	T		CODE	COURSE TITLE	Th	L	T
	ENGL 105	Writing Skills	3		3	1	ENGL 106	Speech Communication	1		1
1st	GCAS 207/ LITE 151	Music Appreciation/ Introduction to Literary Appreciation	2		2		RELT 207	Christian Beliefs	3		3
	PSYC 101/ SOCI 121/ SWFI 207	Introduction Psychology/ Sociology/ Family Issues	2		2		INSY 107	Information Technology Today	2		2
	OFTE 120	Keyboarding	0		0	1	PHYS 155	General Physics I	2	1	3
	RELH 155	Adventist Heritage	2		2	1	MATH 227	Integral Calculus	3		3
	STAT 150	Intro. to Probability and Statistics	3		3	1	CHEM 122	General Chemistry I	3	1	4
	MATH 127	Differential Calculus	3		3	1	CHEM 251	Analytical Chemistry I	2	1	3
	CHEM 121	General Chemistry I	3	1	4	1	HLED 110	Health Principles	1		1
		Total	18	1	19			Total	17	3	20
	PEAC 107	Physical & Recreational Activities	1		1		EDUC 215	Phil Christian Educ	2		2
2nd	RELB 220	Life and Teachings of Jesus	2		2	1	RELT 255	Intro. Christian Ethics	2		2
	STAT 204	Non Parametric Statistics	3		3	1	KISW 114/	Language Use Kiswahili/	2		2
	CHEM 205	Atomic Structure & Bonding	3	0	3		FREN 103	Beginning French II			
	CHEM 211	Organic Chemistry I	3	1	4	1		Vocational Skill	1		1
	CHEM 221	Computer Application in Chemistry	2	1	3	1	CHEM 212	Organic Chemistry II	3	1	4
	HIST 111/ HIST 119	World Civilizations/ Issues in Development Studies	2		2		CHEM 252	Analytical Chemistry II	3	1	4
	CHEM 254	Lab Practice & Safety	2	0	2	$\left  \right $	CHEM 309	Laboratory Experience	1	0	1
		Total	18	2	20			Total	16	2	18
	CHEM 341	Inorganic Chemistry I	2	1	3		CHEM 342	Inorganic Chemistry II	2	1	3
3rd	CHEM 231	Physical Chemistry I	2	1	3	1	CHEM 332	Physical Chemistry II	3	1	4
	CHEM 358	Analytic Food Chemistry	2	1	3	1	CHEM 405	Industrial Chemistry I	2	1	3
	CHEM 377	Analytic & Synthesis	2	1	3		CHEM 422	Forensic Analytical Chemistry	3		3
	CHEM	Elective	3		3	1	CHEM 424	Pharmaceutical Chemistry	3		3
	CHEM	Elective	3		3	1	CHEM 480	Semeninar in Chemistry I	2		2
		Total	14	4	18			Total	15	3	18
	CHEM 430	Biochemical Pharmacology	2	1	3		CHEM 499	Industrial Experience	3		3
4th	CHEM 406	Industrial Chemistry II	2	1	3	1		Total	3		3
	CHEM 470	Chemistry Project	3	0	3					1	
	CHEM 482	Seminar in Chemistry II	2	0	2						
	CHEM 419	Environmental Chemistry I	2	1	3						
	CHEM 428	Aquatic Chemistry	2	1	3						
		Total	13	4	17						



## BACHELOR OF SCIENCE IN CHEMISTRY (ANALYTICAL CHEMISTRY MANAGEMENT OPTION) Four-Year Course Plan and Checklist

YEAR	l	FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	ENGL 105	Writing Skills	3		3		ENGL 106	Speech Communication	1		1
1st	PSYC 101	Intro Psychology	2		2		RELT 207	Christian Beliefs	3		3
	OFTE 120	Keyboarding	0		0		INSY 107	Inform Tech Today	2		2
	RELH 155	Adventist Heritage	2		2		HLED 110	Health Principles	1		1
	ACCT 110	Book Keeping & Accounting	2		2			Vocational Skill	1		1
	STAT 150	Int Prob & Statistics	3		3		KISW 108/	Lang Use Kiswahili/	2		2
	MATH 127	Differential Calculus	3		3		FREN 103	Beginning French II			
	CHEM 121	General Chemistry I	3	1	4		LITE 151	Intro. Literature Appreciation	2		2
		Total	18	1	19		MATH 227	Integral Calculus	3		3
	CHEM 122 General Chemistry I		3	1	4						
								Total	20	1	21
	GCAS 207	Music Appreciation	2		2		EDUC 215	Phil Christian Educ	2		2
2nd	STAT 204	Non Parametric Stat	3		3		RELT 255	Intro. Christian Ethics	2		2
	CHEM 205	Atomic Structure And Bonding	3	0	3		CHEM 212	Organic Chem II	3	1	4
	CHEM 211	Organic Chemistry I	3	1	4		CHEM 252	Analytical Chem II	3	1	4
	CHEM 221	Comp App in Chem	2	1	3		CHEM 309	Laboratory Experience	1		1
	CHEM 251	Analytical Chem I	2	1	3		CHEM	Elective I	3		3
	CHEM 254	Lab Practice & Safety	2	0	2		MGMT 130	Fundamentals of Mgmt.	3		3
		Total	17	3	20			Total	17	2	19
	RELB 220	Life & Teach Jesus	2		2		PEAC 107	Physical & Recreational Activities	1		1
3rd	CHEM 231	Physical Chemistry I	2	1	3		CHEM 332	Physical Chemistry II	3	1	4
	CHEM 341	Inorganic Chemistry I	2	1	3		CHEM 342	Inorganic Chemistry II	2	1	3
	CHEM 377	Analytic & Synthesis	2	1	3		CHEM 406	Industrial Chemistry II	2	1	3
	CHEM 358	Analytic Food Chemistry	2	1	3		CHEM 422	Forensic Analt Chemistry	2	1	3
	CHEM 405	Industrial Chemistry I	2	1	3		CHEM 424	Pharmaceutical Chemistry	2	1	3
	MGMT 231		3		3		CHEM 480	Seminar in Chemistry I	2		2
		Total	15	5	20			Total	14	5	19
	CHEM 430	Biochemical Pharmacology	2	1	3		CHEM 499	Industrial Experience	3		
4th	CHEM 470	Chemistry Project	3	0	3		UTEN 400	Total	3		
	CHEM 481	Seminar in Chemistry II	2	0	2				5		
	CHEM 454		2	1	3						
	CHEM 419	Envir Chemistry I	2	1	3						
	CHEM	Elective II	3		3						
	MGMT 475	Production and Operation	3		3						
	110111 170	Management									
		Total	17	3	20						

## BACHELOR OF SCIENCE IN CHEMISTRY (GENERAL CHEMISTRY OPTION)

### Four-Year Course Plan

YEAR		FIRST SEMESTER					SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	CODE	COURSE TITLE	Th	L	T
	ENGL 105	Writing Skills	3		3	ENGL 106	Speech Communication	1		1
1st	GCAS 207/ Lite 151	Music Appreciation/ Introduction to Literary Appreciation	2		2	INSY 107	Inform Tech Today	2		2
	PSYC 101	Intro Psychology	2		2	HLED 110	Health Principles	1		1
	OFTE 120	Keyboarding	0		0		Vocational Skill	1		1
	RELH 155	Adventist Heritage	2		2	PHYS 155	General Physics I	2	1	3
	STAT 150	Int Prob & Statistics	3		3	MATH 227	Integral Calculus	3		3
	MATH 127	Differential Calculus	3		3	CHEM 122	General Chemistry I	3	1	4
	CHEM 121	General Chemistry I	3	1	4	CHEM 201	Envir. Chemistry I	3	0	3
		Total	18	1	19		Total	16	2	18
	PEAC 107	Physical & Recreat	1		1	EDUC 215	Phil Christian Education	2		2
2nd	CHEM 255	Colloidal & Surface	2	1	3	KISW 114/	Language Use in Kiswahili/	2		2
	CHEM 205	Atomic Struct. & Bon	2	1	3	FREN 103	Beginning French II			
	CHEM 211	Organic Chemistry I	3	1	4	RELT 207	Christian Beliefs	3		3
	CHEM 221	Comp App in Chemistry	2	1	3	CHEM 212	Organic Chem II	3	1	4
	CHEM 251	Analytical Chemistry I	2	1	3	CHEM 309	Laboratory Experience	1		1
	CHEM 254	Lab Practice & Safety	2		2	СНЕМ	Elective I	3		3
		Total	14	5	19		Total	14	1	15
	RELB 220	Life & Teachings of Jesus	2		2	RELT 255	Intro Christian Ethics	2		2
3rd	CHEM 341	Inorganic Chemistry I	2	1	3	CHEM 377	Analytic & Synthesis	2	1	3
	CHEM 231	Physical Chemistry I	2	1	3	CHEM 332	Physical Chemistry II	3	1	4
	CHEM 300	Intro. Biochemistry	3		3	CHEM 342	Inorganic Chemistry II	2	1	3
	CHEM 345	Synthetic Organic	3		3	CHEM 384	Coordination Chemistry	2	1	3
	CHEM 362	Bioinformatics	3		3	CHEM 394	Heterocyclic Chemistry & Stereo Chemistry	2	1	3
		Total	15	2	17		Total	13	5	18
4.1	CHEM 431	Adv. Organic Chemistry	2	1	3	CHEM 470	Chemistry Project	3		3
4th	CHEM 339	Polymer Chemistry	3	1	4	CHEM 481	Seminar in Chemistry II	2		2
	CHEM 480	Seminar in Chemistry I	2		2	CHEM 402	Trans. Metal Chemistry	2	1	3
	СНЕМ	Elective II	3		3		Total	7	1	8
	CHEM 425	Electrochemistry	2	1	3			1		
	CHEM 405	Industrial Chemistry I	2	1	3					
		Total	14	4	18					



# BACHELOR OF SCIENCE IN CHEMISTRY (INDUSTRIAL CHEMISTRY OPTION)

# Four-Year Course Plan

YEAR		FIRST SEMESTER					SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	CODE	COURSE TITLE	Th	L	Т
	ENGL 105	Writing Skills			3	ENGL 106	Speech Communication	1		1
1st	GCAS 207/ Lite 151	Music Appreciation/ Introduction to Literary App	2		2	RELT 207	Christian Beliefs	3		3
	PSYC 101	Intro Psychology	2		2	INSY 107	Information Technology Today	2		2
	0FTE 120	Keyboarding	0		0	HLED 110	Health Principles	1		1
	RELH 155	Adventist Heritage	2		2		Vocational Skill	1		1
	STAT 150	Intro. Prob & Statistics	3		3	PEAC 107	Physical & Recreational Activities	1		1
	MATH 127	Differential Calculus	3		3	PHYS 155	General Physics I	3		3
	CHEM 121	General Chemistry I	3	1	4	MATH 227	Integral Calculus	3		3
		Total	18	1	19	CHEM 122	General Chemistry I	3	1	4
							Total	18	1	19
	STAT 204	Non Parametric Stat	3		3	EDUC 215	Phil Christian Educ	2		2
2nd	CHEM 205	Atomic Structure & Bonding	2	1	3	KISW 114/	Language Use in Kiswahili/	2		2
	CHEM 211	Organic Chemistry I	3	1	4	FREN 103	Beginning French II			
	CHEM 221	Computer Application in Chemistry	2	1	3	RELT 255	Intro. Christian Ethics	2		2
	CHEM 251	Analytical Chem I	2	1	3	CHEM 212	Organic Chemistry II	3	1	4
	CHEM 254	Lab Practice & Safety	2		2	CHEM 252	Analytical Chemistry II	3	1	4
		Total	14	4	18	CHEM 309	Laboratory Experience	1		1
			1	1		CHEM 381	Metallurgy	3	0	3
							Total	16	2	18
	RELB 220	Life & Teach Jesus	2		2	CHEM 332	Physical Chem II	3	1	4
3rd	CHEM 231	Physical Chemistry I	2	1	3	CHEM 342	Inorganic Chem II	2	1	3
	CHEM 341	Inorganic Chemistry I	2	1	3	CHEM 337	Fluid Flow, Material & Energy Transfer	3	0	3
	CHEM 350	Polymer Chemistry	3	1	4	CHEM 480	Seminar in Chem I	2		2
	CHEM 303	Indust. Organic Chem	2	1	3	CHEM 372	Indust. Biochemistry	2	1	3
	CHEM 316	Unit Operation, Process Control	3	0	3	CHEM 406	Industrial Chem II	2	1	3
	CHEM 405	Industrial Chem I	2	1	3		Total	14	4	18
		Total	16	5	21					
	CHEM 420	Indus. Waste Manage	3	0	3	CHEM 499	Industrial Experience	3		3
4th	CHEM 434	Industrial Catalysis	3	0	3		Total	3		3
	CHEM 470	Chemistry Project	3		3				1	
	CHEM 481	Seminar in Chemistry II	2		2					
	CHEM 419	Environtal Chemistry I	2	1	3					
	CHEM 424	Pharmaceutical Chem	2	1	3					
		Total	15	2	17					

# BACHELOR OF SCIENCE IN CHEMISTRY (INDUSTRIAL CHEMISTRY WITH MANAGEMENT OPTION)

# Four-Year Course Plan

YEAR		FIRST SEMESTER					SECOND SEMESTER		-	
	CODE	COURSE TITLE	Th	L	Т	CODE	COURSE TITLE	Th	L	Т
	ENGL 105	Writing Skills	3		3	ENGL 106	Speech Communication	1		1
1st	GCAS 207/ LITE 151	Music Appreciation/ Introduction to Literary App	2		2	RELT 255	Intro. Christian Ethics	2		2
	0FTE 120	Keyboarding	0		0	INSY 107	Inform Tech Today	2		2
	RELH 155	Adventist Heritage	2		2	HLED 110	Health Principles	1		1
	STAT 150	Intro. Prob & Statistics	3		3		Vocational Skill	1		1
	MATH 127	Differential Calculus	3		3	PSYC 101	Intro. Psychology	2		2
	CHEM 121	General Chemistry I	3	1	4	MATH 227	Integral Calculus	3		3
	ACCT 110	Book Keeping & Accounting	2		2	CHEM 122	General Chemistry I	3	1	4
	Total	I	18	1	19	MGMT 130	Fund. of Management	3		3
							Total	18	1	19
	STAT 204	Non Parametric Stat	3		3	EDUC 215	Phil Christian Educ	2		2
2nd	CHEM 205	Atomic Structure & Bonding	2	1	3	PEAC 107	Physical & Recreational	1		1
	CHEM 211	Organic Chemistry I	3	1	4	KISW 114/	Language Use in Kiswahili/	2		2
	CHEM 221	Comp App in Chem	2	1	3	FREN 103	Beginning French II			
	CHEM 251	Analytical Chem I	2	1	3	RELT 207	Christian Beliefs	3		3
	CHEM 254	Lab Practice & Safety	2		2	CHEM 212	Organic Chem II	3	1	4
	Total		14	4	18	CHEM 252	Analytical Chem II	3	1	4
						CHEM 309	Laboratory Experience	1		1
						CHEM 381	Metallurgy	3	0	3
							Total	18	2	20
	CHEM 231	Physical Chem I	2	1	3	CHEM 342	Inorganic Chem II	2	1	3
3rd	CHEM 341	Inorganic Chem I	2	1	3	CHEM 332	Physical Chem II	3	1	4
	CHEM 350	Polymer Chemistry	3	1	4	MGMT 231	Human Resource & Mgmt	3		3
	CHEM 303	Industrial Organic Chem	2	1	3	CHEM 337	Fluid Flow, Material & Energy Transfer	3	0	3
	CHEM 405	Industrial Chem I	2	1	3	CHEM 372	Indust. Biochemistry	2	1	3
	CHEM 316	Unit Operation, Process Control	3	0	3	CHEM 406	Industrial Chem li	2	1	3
		Total				CHEM 480	Seminar In Chem I	2		2
							Total	14	5	19
	RELB 220	Life & Teachings of Jesus	2		2	CHEM 499	Industrial Experience	3		
4th	CHEM 420	Industrial Waste Management	3	0	3		Total	3		1
	CHEM 434	Industrial Catalysis	3	0	3					-
	CHEM 470	Chemistry Project	3		3					
	CHEM 481	Seminar In Chem II	2		2					
	CHEM 419	Envir Chemistry I	2	1	3					
	CHEM 424	Pharmaceutical Chem	2	1	3					
	MGMT 475	Production & Oper. Mgmt	3		3					



# **BACHELOR OF SCIENCE IN CHEMISTRY – BIO- CHEMISTRY**

# Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	PSYC 101	Introduction Psychology	2		2		RELT 207	Christian Beliefs	3		3
1st	GCAS 207	Music Appreciation	2		2	1	INSY 107	Inform Tech Today	2		2
	OFTE 120	Keyboarding	0		0		MATH 101	Pre Calculus	3		3
	RELH 155	Adventist Heritage	2		2		ENGL 106	Speech Communication	1		1
	STAT 150	Intro. Prob & Statistics	3		3		CHEM 122	General Chemistry I	3	1	4
	CHEM 121	General Chemistry I	2	1	3		CHEM 205	Atomic Structure And Bonding	3		3
	ENGL 105	Writing Skills	3		3		BIOL 152	Foundation of Biology li	2	1	3
	BIOL 151	Foundation Of Biology I	2	1	3	1		Total	17	2	19
		Total	16	2	18						
2nd	RELB 220	Life & Teachings Jesus	2		2		KISW 114/ FREN 103	Language Use in Kiswahili/ Beginning French II	2		2
		Vocational Skill	1		1	1	EDUC215	Phil Christian Educ	2		2
	HLED 110	Health Principles	1		1	1	PEAC 107	Physical & Recreat Acti	1		1
	CHEM 254	Lab Practice & Safety	2		2		RELT 255	Intro Christian Ethics	2		2
	HIST 111	World Civilization	2		2	1	BIOL 293	Cell Biology	2	1	3
	CHEM 221	Comp App in Chem	2	1	3		CHEM 300	Introductory Biochemistry	2	1	3
	BIOL 153	Foundation of Biology III	2	1	3		CLSC 221	Fundamentals of Clinical Chemistry	2	1	3
	STAT 204	Non Parametric Stat	3		3			Total	13	3	16
		Total	15	2	17						
	CHEM 341	Inorganic Chem I	2	1	3		CHEM 332	Physical Chem II	3	1	4
3rd	CHEM 231	Physical Chem I	2	1	3		CHEM 362	Bioinformatics	2	1	3
	CHEM 342	Inorganic Chem II	2	1	3		CHEM 364	Immunochemistry	2	1	3
	CHEM 311	Protein Biochemistry	2	1	3		CHEM 374	Nutritional Biochemistry	3	1	4
	CHEM 327	Intermediary Metabolism	2	1	3	1	BIOL 447	Molecular Biology	2	1	3
	CHEM 372	Industrial Biochemistry	2	1	3	1	CHEM 309	Laboratory Experience	1		1
		Total	12	6	18	1	CHEM 481	Seminar in Chem II	2		2
				1				Total	15	5	20
4th	CHEM 442	Nucleic Acids and Recombinant DNA Technology	2	1	3		CHEM 499	Industrial Experience	3		
	CHEM 451	Biochemical Techniques	2	1	3			Total	3		
	CHEM 462	Microbial Biochemistry	2	1	3	1					
	CHEM 482	Seminar in Chemistry II	2		2	1					
	CHEM 430	Biochemical Pharmacology	2	1	3	1					
	BIOL 449	Genetics	2	1	3	1					
	CHEM 419	Envir Chemistry	2	1	3	1					
		Total	14		14	1					

# **BACHELOR OF SCIENCE MATHEMATICS-CHEMISTRY COGNATES**

# Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	T	CO	DE	COURSE TITLE	Th	L	T
1st	ENGL 105	Writing Skills	3			ENC	GL 106	Speech Communication	1		
	SOCI 121	Sociology	2			HLE	ED 110	Health Principles	1		
	OFTE 120	Keyboarding	0			INS	SY 118	Intro. to Business Information Systems	3		
	GCAS 107	Music Appreciation	2			MA	TH 121	Discrete Mathematics	3		
	RELH 115	Adventist Heritage	2			MA	TH 127	Differential Calculus	3		
	MATH 124	Basic Math. & Analy. Geo.	3			MA	TH 150	Linear Algebra I	3		
	STAT 150	Probability Theory & Stat.	3			CHE	EM 122	General Chemistry II	3	1	4
	CHEM 121	General Chemistry I	3	1	4			Total	17	1	18
		Total	18	1	19						
2nd	AGRI 105	Principles of Agricultural Technology	2			REL	LT 207	Christian Beliefs	3		
	KISW 114	Language Use in Kiswahili	2			MG	MT 103	Basic Management& Entr. Skills	2		
	MATH 227	Integral Calculus	3			MA	TH 248	Ordinary Diff. Equations	3		
	MATH 240	Real Analysis I	3			MA	TH 274	Complex Analysis I	3		
	STAT 204	Non Parametric Statistics	3			STA	AT 205	Prob. Theory and its App.	3		
	CHEM 211	Organic Chemistry I	3	1	4	CHE	EM 212	Organic Chemistry II	3	1	4
		Total	16	1	17			Total	17	1	18
3rd	HIST 111/ HIST 119	Concepts of World Cililization/ Issues in Development Studies	2		2	EDU	JC 215	Intro. to Phil. of Christian Educ.	2		
	MATH 278	Vector Analysis	3			REL	T 255	Intro. to Christian Ethics	2		
	MATH 330	Operations Research I	3					Vocational Skills	1		
	MATH 336	Numerical Methods	3			COS	SC 171	Visual Basic Net Programming	3		
	MATH 340	Real Analysis II	3			MA	TH 414	Тороlоду	3		
	MATH 346	Group Theory	3			MA	TH 415	Measure Theory and Integration	3		
	CHEM 231	Physical Chemistry I	2	1	3	MA <sup>-</sup> STA	TH/ AT	Elective	3		
		Total	19	1	20			Total	17		
	RELB 220	Life and Teachings of Jesus	2			MA	TH 480	Functional Analysis	3		
4th	MATH 365	Number Theory	3			MA <sup>-</sup> STA	TH/ AT	Elective	3		
	MATH 445	Partial Differential Equations	3					Total	6		$\square$
	MATH 499	Math. Project	3						1		
		Elective	3		1						
		Total	14								



# BACHELOR OF SCIENCE IN MATHEMATICS-APPLIED STATISTICS COGNATES

# Four-Year Course Plan

YEAR	F	IRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	AGRI 105	Principles of Agricultural Technology	2	ENGL 106	Speech Communication	1
1st	0FTE 120	Keyboarding	0		Vocational Skills	1
	ENGL 105	Writing Skills	3	HLED 110	Health Principles	1
	KISW 114	Language Use in Kiswahili	2	<b>RELT 207</b>	Christian Beliefs	3
	MGMT 103	Basic Management & Entrepreneurial Skills	2	INSY 118	Intro. to Business Information Systems	3
	SOCI 121	Sociology	2	MATH 121	Discrete Mathematics	3
	RELH 155	Adventist Heritage	2	MATH 127	Differential Calculus	3
	MATH 124	Basic Math. & Analy. Geo.	3	MATH 150	Linear Algebra I	3
	STAT 150	Probability Theory & Stat.	3		Total	18
		Total	19			
	GCAS 207/	Music Appreciation	2	EDUC 215	Intro. to Phil. of Christian Educ.	2
2nd	LITE 151	Intro. Literacy Appreciation		MATH 248	Ordinary Diff. Equations	3
	RELB 220	Life and Teachings of Jesus	2	MATH 274	Complex Analysis I	3
	HIST 111 HIST 119	Concepts of World Civilization/ Issues in Development Studies	2	STAT 205	Prob. Theory and its App.	3
	MATH 227	Integral Calculus	3	STAT 207	Regression Analysis	3
	MATH 240	Real Analysis I	3	STAT 305	Theory of Estimation	3
	STAT 204	Non Parametric Statistics	3	STAT 310	Introduction to Econometrics	3
		Total	15		Total	20
	MATH 278	Vector Analysis	3	RELT 255	Intro. to Christian Ethics	2
3rd	MATH 330	Operations Research I	3	MATH 414	Тороlоду	3
	MATH 336	Numerical Methods	3	MATH 415	Measure Theory and Integration	3
	MATH 340	Real Analysis II	3	STAT 313	Test of Hypothesis	3
	MATH 346	Group Theory	3	STAT 330	Sample Surveys	3
	STAT 300	Multivariate Probability Distributions	3	STAT 336	Quality Control Methods	3
		Total	18	MATH/ STAT	Elective	3
					Total	20
	MATH 365	Number Theory	3	MATH 480	Functional Analysis	3
4th	MATH 445	Partial Differential Equations	3	MATH/ STAT	Elective	3
	MATH 499	Math. Project	3		Total	6
	MATH/ STAT	Elective	3			
		Total	12			

# **BACHELOR OF SCIENCE IN MATHEMATICS – PHYSICS COGNATES**

# Four-Year Course Plan

YEAR	l	FIRST SEMESTER			SECOND SEMESTER	
	CODE	COURSE TITLE	CR	CODE	COURSE TITLE	CR
	ENGL 105	Writing Skills	3	ENGL 106	Speech Communication	1
1st	SOCI 121	Sociology	2		Vocational Skills	1
	RELH 155	Adventist Heritage	2	HLED 110	Health Principles	1
	MATH 124	Basic Math. & Analy. Geo.	3	INSY 118	Intro. to Business Infor. Syst.	3
	STAT 150	Probability Theory & Stat.	3	MATH 121	Discrete Mathematics	3
	PHYS 160	Introduction to Mechanics	3	MATH 127	Differential Calculus	3
	PHYS 165	Heat & Thermodynamics	3	MATH 150	Linear Algebra I	3
		Total	19	PHYS 180	Intro. to Quantum Physics	3
					Total	18
	AGRI 105	Principles of Agricultural Technology	2	EDUC 215	Intro. to Phil. of Christian Educ.	2
2nd	OFTE 120	Keyboarding	0	MGMT 103	Basic Management & Entrepreneurial Skills	2
	GCAS 207	Music Appreciation	2	MATH 248	Ordinary Diff. Equations	3
	KISW 114	Language Use in Kiswahili	2	MATH 274	Complex Analysis I	3
	RELT 207	Christian Beliefs	3	STAT 205	Prob. Theory and its App.	3
	MATH 227	Integral Calculus	3	COSC 161	Programming in C Language	3
	MATH 240	Real Analysis I	3	PHYS 225	Classical Mechanics	3
	STAT 204	Non Parametric Statistics	3		Total	19
		Total	18			
	LITE 151	Intro. Literacy Appreciation	2	RELT 255	Intro. to Christian Ethics	2
3rd	SWFI 207	Family Issues	2	MATH 414	Тороlogy	3
	MATH 278	Vector Analysis	3	MATH 415	Measure Theory & Integration	3
	MATH 330	Operations Research I	3	PHYS 255	Quantum Mechanics	3
	MATH 336	Numerical Methods	3	COSC 171	Visual Basic Net Programming	3
	MATH 340	Real Analysis II	3	MATH/STAT	Elective	3
	MATH 346	Group Theory	3		Total	17
		Total	19			
441	RELB 220	Life and Teachings of Jesus	2	MATH 480	Functional Analysis	3
4th	MATH 365	Number Theory	3	MATH/STAT	Elective	3
	MATH 445	Partial Differential Equat.	3		Total	6
	MATH 499	Math. Project	3			
	MATH/STAT	Elective	3			
		Total	14			

# **Course Descriptions**

### CHEM 111 Introductory General Chemistry 4 Credits

This course is an introduction to general chemistry designed for students pursuing courses in Medical Laboratory Sciences, Public Health and in Family and Consumer Science departments. Topics to be covered include: introduction to chemistry, mathematical chemistry, acids, bases and salts, atomic theory, nuclear chemistry, introduction to organic chemistry; chemistry of organic functional groups: alkanes, alkenes, alkynes, carbonyl compounds, alcohol, aromatic compounds, amines, amides, carboxylic acids, esters, ethers and esters, chemical kinetics and equilibrium, electrochemistry and thermodynamics.. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: Consent of the Department.

### CHEM 113 Principles of Organic 4 Credits and Biochemistry

This course is a continuation of CHEM 111. The course covers topics in biochemistry, nomenclature, physical and chemical properties, preparation and reactions of organic functional groups. The structure, nomenclature and reactions of benzene and other aromatics. Other topics include; the chemistry of protein, carbohydrates, lipids, vitamins, nucleic acids, bioenergetics, glycolysis, citric acid cycle, oxidative phosphorylation, glycogen and lipid metabolism, body fluids, application of biochemistry to medical fields, and biotechnology. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 111.

### CHEM 114 Textile Chemistry

### 4 Credits

This course is designed for students taking courses in fashion and textile. Topics to be covered include: organic chemistry of synthetic and natural polymers, applications of polymers in textiles, fiber chemistry, chemistry and application of dyes and colors, chemical processes for enhanced value textiles, pollution and prevention. This course will be complemented by educational trips to industries. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 111.

### CHEM 115 Basic Medical Biochemistry I 4 Credits

This course has been designed to fulfill curricula needs of prenurses. This course will introduce students to fundamentals of chemistry such as composition of atoms and molecules, mass balance, basic stoichiometry, properties of gases and solutions, fundamentals of acid - base chemistry and their medical relevance. Introduction to organic chemistry with emphasis to molecular functional groups and how they influence solubility and chemical reactivity; introduction to biochemistry: definition of terms in medical biochemistry; water, pH and ionic equilibrium, bioenergetics, biological membrane structure; Biomolecules: structure, properties and functions of carbohydrates, lipids, proteins, vitamins, enzymes nucleic acids and micronutrients]. There will be three lecture hours and one three-hour laboratory session per week. Prerequisite: Consent of the Department.

### CHEM 116 Basic Medical Biochemistry II 3 Credits

This course is a continuation of CHEM 115. Topics to be covered include metabolism of biomolecules: carbohydrates, lipids, amino acids, RNA, DNA; protein synthesis; lipid transport

and storage; cholesterol synthesis transport and excretion; integration of metabolism; conversion of amino acid into specialized products - porphyrins, bile pigments; metabolism of purines and pyrimidines; inborn errors of metabolism. Biochemical procedures which includes common biochemical test; application, limitations biochemical reference values. Biochemistry of specialized tissues: brain, liver, erythrocyte, muscle, adipose; Functional tests of liver, kidney, thyroid, adrenal, pancreas, serum proteins, and enzymes. There will be two lectures and one three-hour laboratory session per week. Prerequisite: CHEM 115.

### CHEM 120 Fundamentals of Chemistry 3credits

This course is an introduction to general chemistry designed for students pursuing Education. Topics to be covered include: Atomic Structure; Atomic Models; Electronic structure and configuration: Energy levels and quantum numbers, orbitals and orbits. Spin, Hund's rule, Pauli exclusion principle and Aufbau's building up principle. Periodic Table; Types of bonds; Bonding theories; Valence and molecular orbital theories; Intermolecular forces; Structures and shapes of simple molecules. Stoichiometry: The mole concept. Volumetric analysis: balancing of equations. Redox reactions; Electron transfer reactions. Gases, liquids and solids. Gases laws. Energetics: Heats of reactions. Hess's law and Born-Haber cycle. Lattice energy. Equilibria and reaction Rates There will be two lecture hours and one three-hour laboratory each week. Prerequisite: Consent of the Department.

### CHEM 121 General Chemistry I

### 4 Credits

4 Credits

This course provides a thorough introduction to the principles of general Chemistry to students who are science majors and who already had some previous introduction to Chemistry. Mathematical chemistry; Atomic Structure; Atomic models; Basic Quantum Chemistry; Electronic structure and configuration; Gaseous state, Liquid state, Solid state, Dilute solutions and colligative property; Volumetric Analysis are topics to be covered. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: Consent of the Department.

### CHEM 122 General Chemistry II

This course is a continuation to CHEM 121. The topics to be covered: Types of bond - Covalent bonding - Covalent bond properties of organic molecules - Naming of organic compounds (up to 10 carbon systems) - Isomerism - Polarity of molecules - Intermolecular forces - Melting and boiling point - Solubility -Types of organic reactions - Reagents and Intermediate - Types of bond cleavages - Calculation of empirical and molecular formulae - Acid - Base theory; Qualitative Inorganic Analysis: Interfering acid radicals, Theory of Interference, Elimination of Interfering acid radicals, Group separation, Common ion effect and Solubility product. Basic concepts of chemical kinetics, equilibrium, acid-base reactions, metathesis reactions, redox reactions, thermodynamics and electrochemistry (derivation is not required). There will be three lecture hours and one threehour laboratory each week. Prerequisite: CHEM 121.

### CHEM 130 Introduction to Organic 3 Credits Chemistry

This course is an introduction to organic chemistry designed for students pursuing Education. Topics to be covered include: Introduction to Carbon Chemistry: Its Uniqueness and importance of Organic Chemistry. Classification of organic compounds, functional groups and homologous series and formulae. Alkanes, alkenes, alkynes, aromatic hydrocarbons (arenes), organic halogen compounds, alcohols, phenol and ethers, aldehydes and ketones, carboxylic acids, esters and amines: Definition, structures, nomenclature, preparation, physical and chemical properties and uses. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 120.

### CHEM 154 Introduction to Analytical 3 Credits Chemistry

This course is designed for students pursuing Education to help the student to develop the habit of accurate manipulation and an attitude of critical thinking and to learn the analytical methods and appreciate what is involved in an analysis. Topics to be covered include: Introduction to elementary quantitative analysis. Principles and practice of precision measurement in chemistry. Sampling, analytical method selection and statistical treatment of data. Types of errors; precision and accuracy. Distribution of errors: mean, standard deviation, variance, student t-test and confidence limits. Gravimetric analysis; precipitation: titrimetric analysis: acid-base and oxidationreduction and complexometric analysis. Separation techniques: such as liquid-liquid extraction, fractional distillation, crystallization, and chromatography including TLC, paper, column, ion-exchange, gas- liquid and high pressure liquid methods. Prerequisite: CHEM 120.

### CHEM 171 Organic Functional Groups

**3 Credits** 

This course is a continuation to CHEM 130. Introduction to organic synthesis; General survey of the scope and limitations. Stereochemistry: Conformation in alkanes. Chirality. Molecules with one asymmetric carbon. enantiomerism. R/S system of nomenclature. Optical activity. Molecules with more than one asymmetric carbon. Diastereoisomerism. Meso compounds. Nomenclature. Separating enatiomers. Reaction mechanism: Nucleophilic substitution reactions: SN2 reactions and SN1 reactions. Elimination reactions: E2 reaction and E1 reaction (mechanism, rearrangement), E2 versus E1. Stereochemistry of E1 and E2 reactions, Elimination from cyclic compounds, Elimination versus substitution. Addition reactions: Addition of hydrogen halides, addition of water and alcohols, addition of halogens (stereo specificity), oxymercuration-reduction, hydroboration-oxidation, addition of radicals (anti-markovnikov), addition of hydrogen (syn and anti-additions). There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 130.

### **CHEM 200 Environmental Science**

### 2 Credits

**3 Credits** 

This is a general requirement course is designed for non-science students to study and understand the environment in terms of: earth systems and resources, the living world, population, land and water use, energy resources and consumption, pollution and global change. There will be two lecture hours and field trips to industries.

### CHEM 201 Environmental Chemistry I

This is a course which emphasize on the chemistry of the environment. Students in this course are expected to have some knowledge of Chemistry, with a desire of applying this knowledge to the environment. Topics of interest include the atmosphere, energy flow, resources and their use, atmospheric chemistry, geochemistry, environmental chemistry of water, pollution and its solutions. The course will be supplemented by educational field trips. There will be three lecture hours each week. Prerequisite: Consent of the Department.

### CHEM 205 Atomic Structure and Bonding 3 Credits

This course is designed to help the students to understand the different kinds of chemical forces in molecules and to identify the nature of chemical bond in a given inorganic compound. The topics to be covered includes: Primary particles of chemical interest; Isotopes; Particle wave duality, de Broglie relationship; The Bohr atom; wave functions; the Schrödinger equation, and solutions for the hydrogen atom; shapes of orbitals: s, p and d; Magnetic and electron quantum numbers; Hund's rule; Pauli exclusion principle; Aufbau principle leading to the periodic table; Many-electron atoms; need for Slater effective atomic numbers, penetration and shielding. Chemical bonding, ionic and covalent character, dipole moments. MO theory; LCAO approximations, bonding and antibonding orbitals, bond order; Delocalisation. Valence bond theory: Hybridization, symmetry, overlap, resonance. Comparison of VBT and MO descriptions; shapes of molecules. Solvation energies. Born Haber cycle. Metallic bonding. Insulators, semi-conductors. Defects in crystalline solids. The bond theory of metals. Complexions, definitions and examples of acids and bases, coordinate bond. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 121 (CHEM 120 and CHEM 130 FOR EDUCATION STUDENTS).

### CHEM 211 Organic Chemistry I

4 Credits

This course provides a thorough introduction to the Chemistry of carbon containing compounds. The topics to be covered includes: nomenclature, physical and chemical properties of organic compounds, general and specific chemical reactions of major organic functional groups and how they are prepared and used in everyday life and in industry. Uniqueness and importance of Organic Chemistry. Classification of organic compounds, functional groups and homologous series and formulae. Simple acyclic and cyclic alkanes, alkenes, alkynes, alkyl halides, mono and polyhydric alcohols, ethers, aldehydes, ketones, carboxylic acids and its derivatives esters and amines: are dealt with. In all cases emphasis is placed on relationship between structure and reactivity will also be covered. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 122.

### CHEM 212 Organic Chemistry II

**4 Credits** 

This course is a continuation to CHEM 211. It covers the stereochemistry, reaction mechanism, chemistry of benzene and its derivatives, aromatic compounds in general and aliphatic aromatic compounds. Stereochemistry: Conformation in alkanes; E/Z and R/S system of nomenclature. Geometrical isomerism; Optical isomerism: chirality, enantiomerism, diastereomerism and meso compounds; Reaction mechanism: SN2 and SN1 reactions, E2 and E1 reaction; Stereochemistry of SN2, SN1, E1 and E2 reactions; elimination from cyclic compounds. Addition reactions: Addition of hydrogen halides, addition of water and alcohols, addition of halogens (stereo specificity), oxymercuration-reduction, hydroboration-oxidation, addition of radicals (anti-markovnikov), addition of hydrogen (syn and anti-

additions). Preparation, property and uses of benzene, toluene, naphthalene, anthracene, chlorobenzene, phenol, benzaldehyde, acetophenone, benzoic acid and benzene sulphonic acid are also dealt with. Structure of benzene, aromaticity and aromatic electrophilic substitution reaction and its mechanisms is also covered. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 211.

### CHEM 221 Computer Applications in 3 Credits Chemistry

The course is designed to help develop an appreciation and understanding of how to use a computer program to solve problems related to chemical research, analysis and product development. This is a course in which computational tools in chemistry are discussed. Topics to be covered include: Introduction to internet information sources, data analysis, spreadsheets and graphing applications and presentation software, handling of chemical structures and molecular modelling; the students will also be introduced to modern chemistry software including but not limited to Chemtool, ChemDraw, JChemPaint, xDrawChem,virtual chemistry lab, CS23D, Discovery Studio etc. will be covered. There will be two lecture hours and one practical each week. Prerequisite: INSY107 and CHEM 212.

### **CHEM 231 Physical Chemistry I**

### 3 credits

This course covers principles and application of physical chemistry. Topics to be covered include chemical kinetics: kinetic parameters; zero, first, second and third order reaction; determination of rate, rate constant and order by different methods; types and theories of chemical reaction rates; qualitative treatment of Boltzmann factor. Catalysis: homogeneous and heterogeneous catalysis. Surface chemistry. Phase equilibria and phase rule. Gaseous theory: Properties of gases, kinetic theory of gases, ideal gas laws, deviation from ideality and Van der Waals equation. Derivation of heat capacities (Cv and Cp) from the kinetic theory of gases. Liquefaction of gases, Law of corresponding states and the critical point. There will be two lecture hours and one threehour laboratory session each week. Prerequisites: CHEM 122 and MATH 101 or MATH 127 (CHEM 120 and MATH 101 or MATH 127 FOR EDUCATION STUDENTS).

### CHEM 235 Chemical Analysis & Structural 3 Credits Determination

This course is a continuation of CHEM 154: This course covers theory and application of the instruments in analyzing compounds. Topics to be covered include: Optical methods. Applications of the techniques in analyzing compounds. Emission spectroscopy. X-rays methods. Electrochemical methods. Chromatographic techniques. In each component of the course, instructions and practical work on the skills of handling instruments, acquisition of spectra and data interpretation will be emphasized. Interphase between chromatography and spectrometric techniques: (NMR - MS -IR - GC), i.e., LC-GC, LC-MS, GC-IR, LC-NMR, MS-MS, LC-NMR-MS. Ionization modes; electroionisation, electro-spray ionization, fast atom bombardment ionization, atmospheric pressure chemical ionization, matrix assisted laser desorption ionization. Instrumentation of MS, NMR, Tandem Mass Spectrometry. Selected ion MS, Selected ion monitoring Fourier transformation (FT). Qualitative analysis. Applications. This course will be complemented by educational trips to industries. There will be two lecture hours and one three-hour laboratory session each week. Prerequisite: CHEM 154.

### CHEM 251 Analytical Chemistry I

**3 Credits** 

This course is designed to help the student to develop the habit of accurate manipulation and an attitude of critical thinking and to learn the analytical methods and appreciate what is involved in an analysis. The topics covered include principle and practice of precision measurement in chemistry; sampling, analytical method selection and statistical treatment of data: types of errors: distribution of errors: quantitative methods of analysis. particularly the classical methods, gravimetric, volumetric and colorimetric analyses, titrations such as acid/base and oxidation/reduction, potentiometry, chronopotentiometry. amperometric titration, and chronocoulometry. Separation techniques: separation by precipitation, freeze drving, extraction and various chromatographic methods (paper, thin layer, partition, absorption, ion exchange, gas-liquid, high performance liquid, and gas chromatography). There will be three lecture hours and a three-hour laboratory session per week. This course will be complemented by educational trips to industries. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 122.

### CHEM 252 Analytical Chemistry II 2 Credits

This course is a continuation of CHEM 354. This course covers theory and application of the instruments in analyzing compounds. Topics to be covered include: Basic principles of electrochemical reactions, electroanalytical, voltammetry and polarography as applied to analysis and the chemistry of heterogeneous electron transfers, analog electronics, and electrochemical instrumentation. Chromatographic techniques. Interphase between chromatography and spectrometric techniques: Optical spectroscopy, UV-Vis spectrometry, luminescence spectroscopy, Infrared spectrometry, Raman spectroscopy, Atomic Optical and Emission spectroscopy, Atomic absorption spectrometry. Mass spectrometry. FT-IR. NMR. X-Ray Diffraction. Electron spectroscopy and Flow injection Analysis. Instrumentation of MS, NMR, I, UV and Tandem mass spectrometry. This course will be complemented by educational trips to industries. There will be two lecture hours and one three-hour laboratory session each week. Prerequisite: CHEM 251.

### CHEM 254 Laboratory Practice and Safety 2 Credits

This course is designed to give laboratory practice and safety principles to students. Definition and establishment of a Laboratory; Role of laboratories in biochemical and chemical studies and research. Structure and categorization of Biochemical and chemical laboratories. Total Quality Management in laboratories. Quality Assurance (AS); Standard Operating Procedures (SOPs). Quality Control (QC); External Quality Assessment (EQA). Safety rules in the laboratory. Risk assessment. Common hazards and causes of accidents in laboratories. Personal health and safety measures. Personal hygiene. Protective clothing. Decontamination of infectious material and disposal of laboratory waste. Fire safety in the laboratory. Emergency First Aid in the laboratory. Use of laboratory equipment and apparatus. This course will be supplemented by field trips. There will be two lecture hours per week. Prerequisite: Consent of the Department.



This course is an introduction to colloidal and surface chemistry. Topics to be covered include general thermodynamical and molecular characterization of the surface: issues related to the thermodynamical and molecular description of the surface; surface tension and surface energy; wetting angle; functioning of adhesion and cohesion; methods of measuring surface tension. Select examples of special applications of the surface Chemistry in industry: issues related to wetting, flotation, detergency, adhesion, emulsion, foam and industrial applications of these phenomena. Colloidal systems (basics and important properties and electrical properties of colloids and stability of colloidal systems (Schulze-Hardy rule, critical coagulation, concentration, DVLVO theory. There will be three lecture hours each week. Prerequisite: CHEM 122.

### CHEM 271 Chemical Thermodynamics 3 Credits and Phase equilibria

This course is designed to expose students to understand the concepts of thermodynamics and to apply it to physical and chemical systems and also to understand the effect of pressure and temperature on phase equilibrium. Topics to be covered first law of thermodynamics includes Thermodynamics: and its applications to ideal and real (van der Waals) gases; thermochemistry; second law of thermodynamics; thermodynamics of reversible processes; third law of thermodynamics; statistical thermodynamics. Phase equilibria: phase rule; one component system; two component system; three component system; Raoult's and Henry's laws; azeotropes, eutectics; application to ideal and non-ideal systems and industrially important process. Distillation colligative properties. This course also involves a term project where the student uses some of these concepts in a specific example related to his/her thesis project. There will be two lecture hours and one threehour laboratory each week. Prerequisite: CHEM 231.

### CHEM 300 Introductory Biochemistry 3 Credits

This is a general introduction to the science of biochemistry. Topics to be covered include form, function and brief classification of prokaryotes; cellular architecture and diversity of eukaryotes. Unique properties of carbon and water, pH and buffers. Overview of biological molecules and their structure including proteins, carbohydrates, lipids, nucleic acids, hormones, enzymes, vitamins and micronutrients. Introduction to metabolic processes and bioenergetics. Biochemical basis of structural and functional variations in living beings. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 212.

### CHEM 303 Industrial Organic Chemistry 3 credits

The course covers applications of Organic Chemistry to Industrial processes. Topics to be covered includes basic products of industrial syntheses: Olefins and 1, 3-diolefins (cracking of hydrocarbons, production and applications); acetylene (manufacturing and applications). Synthesis gas (via coal, natural gas and oil, purification and application, production of the pure components). Aromatics (sources of feedstock, isolation, conversion processes for aromatics, alkylation derivatives). Raw materials from renewable sources. Main transformation processes: Halogenations, hydrogenation and oxidation: process operations transformation products, applications and derivatives. Syntheses involving carbon monoxide (hydroformylation of olefins: chemical basis, industrial operation and applications of oxo products; carbonylation processes). Some groups of compounds. Dicarboxylic acids, diamines, amino acids; lactams and lactones; lower and higher alcohols; esters. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 212.

### CHEM 309 Laboratory Experience

This course offers the student an opportunity to apply chemistry concepts in the laboratory. The course requires the student to prepare and administer reagents to assigned chemistry laboratory courses, marking of laboratory reports, and doing all chemistry laboratory work as assigned. This course will run for a semester. Prerequisite: CHEM 254.

### CHEM 310 Biochemistry for Life Sciences 4 Credits

This course is designed for students pursuing life sciences. Topics to be covered include in depth coverage of carbohydrates, proteins, lipids, nucleic acids and metabolic pathways, hormones, vitamins, glycolysis, tricarboxylic acid cycle, oxidative phosphorylation, and enzymes. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 300.

### CHEM 311 Protein Biochemistry

3 Credits

1 Credit

This course is an introduction to protein biochemistry. Topics to be covered include amino acids, general properties, classification, acid-base properties, optical activity, separation, specialized roles of amino acids. Classification, properties and functions of proteins, primary, secondary, tertiary and quaternary structure of proteins. General characteristics of enzymes, enzyme nomenclature and classification, coenzymes, substrate specificity. Regulation of enzyme activity, enzyme kinetics, Michaelis-Menten equation, inhibition of enzymes, rate of catalysis Role of vitamins as co-factors. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 300.

### CHEM 316 Unit Operations, Process 3 Credits Control and Industrial Systems

This course is an introduction to unit operations and process control in industries. Topics to be covered include: Plants and processes; flow diagrams; size reduction and enlargement; separations of solid-solid, solid-liquid, solid-gas and liquidliquid mixtures; mixing and blending, material handling; plant services: - water, steam, compressed air; materials of construction. Concepts of process control. Industrial health and safety. Industrial visits to relevant industries. There will be three lecture hours each week. Prerequisite: CHEM 231.

### CHEM 327 Intermediary Metabolism

**3 Credits** 

This course provides concepts of metabolism. Topics to be covered include: bioenergetics; oxidative phosphorylation; metabolic pathways: carbohydrates, proteins, lipids, nucleic acids; biochemistry of hormones, vitamins and enzymes. There will be two lecture hours and one three-hour laboratory each week. CHEM 300.

### CHEM 332 Physical Chemistry II

4 Credits

This course is a continuation of CHEM 231. Topics to be covered include: chemical equilibrium, ionic equilibrium, colloidal state, quantum chemistry, photochemistry, radiation chemistry and

nuclear chemistry. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 231.

### CHEM 337 Fluid Flow, Material and Energy 3 Credits Transfer

This course offers students with an overview of fluid flow. material science and energy transfer. Topics to be covered include: Introduction to the physical properties of fluids, fluid statics. Equations of conservation of mass, momentum and energy for systems and control volumes. Dimensional analysis and similarity. Principles of inviscid and real fluid flows; flow through pipes and around bodies. Application and design of fluid handling systems. Fundamental principles of conduction and convective heat transfer, and diffusional and convective mass transfer. Design applications to heat exchanges and packedbed absorbers. Material Balances: Component, elemental and differential material balances. Problems involving bypass, recycle, purge and chemical reactions. Applications of principles of thermodynamics. Integrated material and energy balance problems. There will be three lecture hours each week. Prerequisites: CHEM 332.

### CHEM 341 Inorganic Chemistry I

### **3 Credits**

**3 Credits** 

This course is designed to know the nature of compounds formed by s- and p-block elements and the various reagents of main group elements and their use in synthetic chemistry. Topics to be covered include general Principles of Metallurgy, chemistry of s – block element: chemical properties of the metals, compounds of s-block metals and complexes of s-block metals]; chemistry of p – block element: Group 13 (boron group), Group 14 (carbon group), Group-15 (nitrogen group), Group-16(oxygen group) and Group-17 (halogens); molecular structure, molecular shape and symmetry, and structure of solids. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 205.

### CHEM 342 Inorganic Chemistry II

This course is a continuation of CHEM 341. Topics to be covered include chemistry of d and f- block elements, descriptive chemistry of selected groups of transition metals, electronic spectra of complex, organometallic compounds and catalysis, metals Alloys, oxidation and reduction, and acids and bases (HSAB concept and their application). There will be two lecture hours and one three-hour laboratory each week. Prerequisites: CHEM 341.

### CHEM 345 Synthetic Organic Chemistry 3 Credits

This course offers intermediate organic chemistry to students who will pursue advanced organic chemistry in their course of study. Topics to be covered include Linear and Convergent Synthesis. Interconversion of Functional Group. Strategies for the Synthesis of C-C bond: nucleophilic addition to carbonyl, conjugate addition, enolate chemistry, stereoselective aspects of alkylation, kinetic and thermodynamic control. Strategies for the synthesis of C-O, C-N, C-S and C-P bonds. Stereo chemical considerations and choice of strategies will be followed by analysis of recent syntheses. Retrosynthetic analysis and design of synthetic routes in organic synthesis. Method of forming cyclic and alicyclic carbon bonds. Hydroboration and stereochemistry. Use of protecting group in organic synthesis. Reaction mechanisms associated with the above reactions are discussed. There will be three lecture hours and one two-hour laboratory each week. Prerequisite: CHEM 212 (CHEM 171 (for education students).

### CHEM 346 Applied Biochemistry and 3 Credits Biotechnology

This course is designed to offer students introduction to applied biochemistry and biotechnology. Topics to be covered includes: Industrial processes, food and energy production; Plant cell, tissue and organ culture. Isolation and cloning of gene. Genetic engineering for improved animal, plant and human health; viral vectors, haploids, protoplasts, hybrids and fusion; Disease diagnostics and pathogen monitoring; Mutagenesis. Molecular and somatic hybridization; Biosensor; Application to Agriculture, medicine, industry, healthcare and food processing with reference to Kenyan situation. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 300.

### CHEM 339 Polymer Chemistry

This course is designed to give the students the importance of polymers and an exposure to polymer science. Topics to be covered include:- Introduction to polymer: classification of polymers, bonding in polymers, determination of molecular mass of polymers; Kinetics and mechanism for polymerization: chain growth polymerization (cationic, anionic, free radical polymerization, stereo regular polymers, Ziegler - Natta and step growth polymers; polymers) Techniques of polymerization and polymer degradation; Preparation of various industrial polymers (Preparation of thermoplastics, thermosetting plastics and elastomers); Introduction to polymer processing (compounding and polymer processing). This course will be complemented by educational trips to industries. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 212.

### CHEM 358 Analytical Food Chemistry

The course encompasses the chemistry of biologically important food substances, their chemical composition and nutritional values, processing and preservation. Topics covered include: Water, Dispersed systems; colloids and gels, carbohydrates, lipids, proteins, vitamins, minerals, chemistry of food colors, flavors and food additives. Minerals. Food toxicants; pesticide residues. Theory and practice of modern methods of food analysis. Analytical principles. Official methods of analysis. Major instrumental techniques and their applications in Food analysis. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 252.

### **CHEM 362 Bioinformatics**

This course provides an introduction to Bioinformatics. The course content includes: Historical perspectives, definitions. Introduction to sequences; sequence formats. Introduction to databases; sequence retrieval from public databases. Sequence alignment; local and global alignment. The FASTA and BLAST methods for database searches. Dot Matrix sequence comparisons. Dynamic programming algorithm; scoring matrices. Phylogenetic analysis; CLUSTAL W and T-Coffee MSA tools. Gene prediction in microbial and in eukaryotes. Protein classification and structure prediction. Genome analysis- gene anatomy. Comparative genomics. Applications of Bioinformatics. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 300.

3 Credits rmatics Th

**3 Credits** 

4 Credits

### CHEM 364 Immunochemistry

**3 Credits** 

This course emphasizes the molecular genetics and structure function events that occur in the humoral immune response and cell mediated immunity. Interleukins and other mediators of inflammation, a field in which rapid changes are occurring are discussed which include transfusion, transplantation and tumor immunochemistry. The clinical significance of fundamental biochemical findings is described. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 300.

### CHEM 372 Industrial Biochemistry

3 Credits

This course is an application of biochemistry principles in industry. Topics to be covered includes: Introduction to food microbes' classification and methods for identification. Food poisoning and food borne infections. Water borne microbes. Microbes useful in industrial processes yeast in bread making, alcohol production, glycerol fermentation, manufacture of vinegar. Waste treatment and retting process. Microbes in production of chemotherapeutic agents. Use of microbes in insect pest control. Synthesis of vitamins or organic acids, enzymes and hormones. Crop husbandry and research. Biologically modified microbes in vaccines and antibiotic production. The course will be supplemented by several field trips. There will be two lecture hours and one three-hour laboratory each week. Prerequisites: CHEM 211.

### CHEM 374 Nutritional Biochemistry

### 4 Credits

This course offers concepts on nutritional biochemistry. Topics to be covered includes: Review of macro nutrients essential amino acids and fatty acids, function and metabolism of prostaglandins and eicosanoids. Micronutrients fat soluble and water soluble vitamins. Macro minerals calcium, phosphorus, magnesium, sodium, potassium. Micro minerals iron, zinc, copper, selenium, cobalt, fluoride, silicon, manganese, chromium and iodine. Food contaminants and their toxicity. Recommended daily requirements. Anaerobic and aerobic oxidation of glucose, electron transport chain, alternate pathways for carbohydrate metabolism (HMP shunt), gluconeogenesis, transmission deamination and decarboxylation reaction and urea cycle. Fatty acid oxidation biosynthesis of fatty acid glycerides, phospholipids, glycolipids and sterols. Digestion, absorption and metabolism of purines, pyrimidines and nucleotides. There will be three lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 300.

### CHEM 377 Modern Methods of Chemical 3 Credits Analysis and Synthesis

This course is designed to expose students to advanced chemical techniques. Emphasis is on physical and inorganic chemical systems. Experiments include the use of air sensitive techniques, organometallic compound synthesis and multi-step transition of metal compound preparations and kinetic studies, use of solid state synthesis, calorimetry, lasers, and isotope effect studies. There will be two lecture hours and one three-hour laboratory each week. Prerequisites: CHEM 252 and CHEM 342.

### CHEM 381 Metallurgy

### **3 Credits**

This course is designed to understand principles and process of metallurgy and metallurgy of various metals. Topics to be covered includes Principles of metallurgy: Introduction, occurrence of metals, ores and minerals, types of ores, operations involved in metallurgy, crushing, connotation, various methods of concentration such as hand picking, gravity separation, magnetic separation. Froth flotation, Calcinations, Roasting etc. Reduction, various methods of reduction such as smelting, Aluminothermy process and electrolytic reduction, Refining of metals, various methods of refining such as poling, liquation, electrolytic and vapor phase refining (Van Arkel Process); Metallurgy of AI, Fe, Ag, Cu, Pb, Sn, Ti, V, W, Cr, Th and U. There will be three lecture hours per week and this course will be supplemented by industry trips. Prerequisite: CHEM 122.

### CHEM 384 Coordination Chemistry

**3 Credits** 

This course is designed to expose students to understand the nature of bonding in coordination compounds and to know the role of transition metal ions in primary bioinorganic systems and the importance of coordination compounds in medicine. Topics to be covered includes Hard and soft acids and bases (HSAB) concept and their applications; Theory of Coordination Compounds; Reaction Mechanisms of Coordination compounds; Synthesis of Coordination Compounds; Inorganic Biochemistry; Theories of metal-ligand bonding; Preparation and stability of co-ordination complexes. Applications: Monodentate and multidentate, chelating agents and bioinorganic. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 341.

### CHEM 394 Heterocyclic and 3 Credits Stereochemistry

This course is designed to help the students to learn the basic aspects of heterocyclic compounds and stereochemistry of organic compounds. Topics to be covered include Heterocyclic compounds: The chemistry of heterocyclic compounds of three, four, five and six - member ring systems with one or more heteroatoms. Fused ring systems with carbocyclic and heterocyclic ring systems. Influence of heteroatoms on chemistry of these ring systems (synthesis and reactions of these rings). Heterocyclic compounds with pharmaceutical and industrial importance. Emphasis on the biologically active compounds and their synthesis. Also covers electrophilic aromatic substitution reactions of benzene and their mechanism; Reactions of substituted benzenes. Conformation and configuration. Stereoselective reactions of cyclic compounds. Diastereoselectivity. Stereoselective reactions. Prochirality. Diastereoselectivity in carbonyl addition. Effect of chelation. Stereoselectivity in aldol reactions. Determination of stereochemistry by spectroscopic methods: conformational analysis of both cyclic and acyclic systems. Practicals to include the use of NMR to determine stereochemistry of isomers. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 212 (CHEM 171 and CHEM 345 (for education students).

### CHEM 402 Transition Metals Chemistry 3 Credits

This course is designed to students to know the tendency of transition metals to exhibits variable valency and the catalytic properties of transition metals and industrial applications of their compounds. Topics to be covered include introductory survey; structure and colors of transition metal compounds, charge transfer spectra; Metal-metal bonding and cluster compounds; Descriptive chemistry of selected groups of transition metals; Energy levels in metal complexes and their consequences; Spectrochemical series; splitting of

d-orbitals, crystal field stabilization energy; structures and reaction of halides and halo-complexes, aquo ions, hydroxoand oxo-complexes. Spectra; Tanabe sugano diagrams. Metal carbonyls, nitrosyls and molecular nitrogen: Application of spectroscopic studies to predict structures and stabilities. Practical applications of selected oxides; selected catalytically important reaction. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 341.

### CHEM 405 Industrial Chemistry I

### **3 Credits**

This course introduces students to basic inorganic and organic based industries. Topics to be covered include: History of the chemical industry, current situation of raw materials and energy, products of the chemical industry, basic terms (conversion, selectivity, yield), comparison of labs vs. industry; calculation and solution of balance equations, costing, flow diagrams, basic organic chemicals (steam cracker and steam reforming), principles and processes in production, environmental protection (laws and processes). Other topics includes Chemical industry: Ceramic industries - Portland cement and calcium carbide - Sodium chloride, ammonia, nitric acid, sulphuric acid, caustic soda, soda ash, chlorine and their products - Fats and oils - Soaps, shampoo, detergents, perfumes, paints and tanning - Wood chemicals - Paper industry - Processing of raw materials - Agrochemicals -Chemistry of pesticides - Petrochemical industry - Industrial organic synthesis - Design of specialized polymers - Rubber industry - Dyes: Making matches and bleaches - Fermentation and fermentation based products - Starch industry - Sugar processing in Kenya - Pharmaceuticals and health care products. Students will be required to visit selected industrial sites. There will be two lecture hours and one three-hour laboratory each week. Prerequisites: CHEM 212 and CHEM 341 (CHEM 171 and CHEM 341 (for education students).

### CHEM 406 Industrial Chemistry II

### **3 Credits**

**3 Credits** 

This course is a continuation of CHEM 405. Topics to be covered include: sodium carbonate, manufacture of hydrogen gas from hydrocarbons, hydrochloric acid, phosphoric acid, electrolytic industries, chlor-alkali industry, surface coatings and man-made fibres. Industrial carbon, coal and natural gas, Industrial fuels: energy; solid fuels; gaseous fuels; liquid fuels. Coal liquefaction. Gasification thermodynamics and kinetics. Fluid bed and fixed bed processes. Water treatment. Pollution prevention and waste management will be covered. This course will be complemented by educational trips to industries. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 405.

### CHEM 419 Environmental Chemistry II

### This course is designed to introduce students to the importance of chemistry in solving the myriad of environmental problems in the atmosphere, biosphere, geosphere, hydrosphere and the astrosphere. Topics of interest include the atmosphere, energy flow, resources and their use; geochemistry, environmental chemistry of water, pollution and its solutions. Environmental Toxicology, Environmental Pollution: Its Causes and Effects, Atmospheric and photochemistry of major gaseous pollutants. Acid rains; production of oxides of carbon, nitrogen and sulphur from fossil fuels. Lead fuel additives as additives as potential health hazards; Effects of pesticide residues on food chains, eutrophication and environmental health implications.

Chemical Solutions to Current Energy and Resources Environmental Problems; Green Chemistry; Ozone chemistry. Wastes are among the topics to be covered. Environmental regulations guiding Kenyan industries on environmental pollutions. Rigorous quantitative methods of analysis and the general instrumental techniques will be covered. There will be two lecture hours and one three-hour laboratory each week. This course will be complemented by field trips. Prerequisite: Consent of the Department.

### CHEM 420 Industrial Waste Management 3 Credits

Types of industrial wastes; solids and liquids, nuclear waste. Causes and effects of water, land and air pollution; legislation on pollution; industry's responsibilities. Waste water treatment; air pollution control technologies; Incineration of industrial wastes, responsible use of landfills, recycling; sampling, analysis and management of industrial effluent. The course will be supplemented by educational field trips. There will be three lecture hours each week. Prerequisite: CHEM 419.

### CHEM 422 Forensic Analytical Chemistry 3 Credits

This course is an introduction to forensic analytical chemistry. Topics to be covered include: Drug identification, drug classes, spot tests; Toxicology: ethanol, breath testing, headspace GC, QA/ QC, drugs of abuse, drug screening, extraction and confirmation methods (GC/MS, LC/MS), poisons, death investigation, recent developments, case studies; Trace analysis: microscopy-hair, fiber, glass, paint, gunshot/primer analysis, distance evaluations, crime-scene analysis; arson: fire debris crime scene analysis types of accelerants, activated charcoal method, SPME; DNA: biological evidence, crime scene investigation, molecular biology primer DNA analysis, DNA chemistry, satellite repeat DNA, sexual assault evidence, Polymerase Chain Reaction - PCR, Short Tandem Repeat Analysis (STRs), Capillary electrophoresis. There will be three lecture hours each week. Prerequisite: CHEM 252.

### CHEM 424 Pharmaceutical Chemistry

The mission of this course is to introduce students to the structure, properties and analysis (both qualitative and quantitative) of pharmaceutical agents and metabolites as well as the fundamental techniques used in clinical laboratories. Topics include review of organic functional groups found in drug molecules, some basic concepts in medicinal chemistry as well as methods of pharmaceutical and biomedical analysis such as The drug discovery and development process, drug-target interactions, physicochemical properties related to drug actions, chemistry of OTC inorganic drugs, some common classes of drugs, classified according to their pharmacological effects, and the chemistry of their actions. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 212.

**3 Credits** 

**3 Credits** 

### **CHEM 425 Electrochemistry**

This course has been designed to understand the inter conversion of chemical and electrical energy and to link thermodynamics with electrochemistry and also to understand the concepts of non-equilibrium electrochemistry (conductance, transport number, overvoltage). Topics to be covered includes conductance of electrolytes, specific resistance and conductance, molar and equivalent conductance and cell constant. Conductivity, equilibrium electrochemistry, reference electrodes, heat effect in cells, electrode kinetics, electrochemical reactions, non-equilibrium electrochemistry, ionics, over voltage and polarization, electrochemical energy conversion (fuel cells and secondary batteries) and industrial electrochemical processes. Numerous problems (with worked solutions) are provided to clarify the concepts. There will be two lecture hours and one three-hour laboratory each week. Prereguisite: CHEM 231.

### CHEM 454 Aquatic Chemistry

### **3 Credits**

This course is an introduction to the water cycle; general characteristics of water bodies (groundwater, streams, rivers, lakes, estuaries and oceans); Chemistry of continental waters: the water molecule; chemical characteristics of water bodies; basic principles of aquatic chemistry (including equilibria, acid-base interactions, kinetics); Monitoring aquatic systems: approaches for chemical and biological monitoring; analysis of aquatic samples - methods for chemical analysis of water, sediment and biota including extraction, clean up and detection. Chemistry of the oceans: estuarine processes; buffering and CO2/bicarbonate/carbonate systems; ionic composition and ion balances; acidification of the oceans. Contaminants in aquatic systems: sources, fate, effects and impact on the environment; Water treatment. Water and the law. There will be two lecture hours and one three-hour laboratory each week. Prereguisite: CHEM 252.

#### CHEM 430 Biochemical Pharmacology **3 Credits**

This course is designed to familiarize students with some basic concepts of Pharmacology and to introduce them to the working of a broad range of chemotherapeutic drugs (e.g. Antibacterial, Antiviral, and Antifungal and Anticancer drugs) as well as some toxins. The main emphasis of this course will be on learning about the mechanisms of action of the above groups of drugs and how cellular resistance to them develops. Some applications of the drug-resistant mutants as tools for genetic, biochemical and cell biological studies will also be described. Topics to be covered include; Phytochemical studies, Effect of chemical structure on metabolism of drug molecules, Fundamentals of neurochemistry, Anti-platelet and antithrombotic drugs, Drugs used to treat cancer, Drugs used to control blood glucose and manage obesity, Drugs used to treat viral infections, Drugs used to manage patients with anxiety or depression. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 212.

### CHEM 431 Advanced Organic Chemistry

**3 Credits** 

Topics to be covered includes: Organo-Nitrogen compounds; Active-methylen compounds, Vitamins and Antibiotics; Retrosynthetic analysis and applications; Natural products chemistry covering terpenes, alkaloids and plant pigments is covered. Spectroscopic methods in structure determination of Organic compounds: UV spectroscopy, IR spectroscopy, NMR spectroscopy and Mass spectroscopy. Other topics include synthetic techniques in organic chemistry, reaction mechanisms in both organic and biological systems, organosulphur, organosilicon, and organometallic compounds. There will be two lecture hours and one three-hour laboratory each week. Prerequisites: CHEM 212.

### **CHEM 434 Industrial Catalysis**

### **3 Credits**

The course covers adsorption, the nature of the catalyst surface, kinetics of catalytic reactions, catalyst selection and preparation, deactivation and poisoning, and specific catalytic reactions. The types of reactions and the examples considered will depend to some extent on the particular interests of those selecting the course but will include, in any case, nitrogen fixation, CI chemistry, catalysis in petroleum refining (cracking, reforming, alkylation, hydro refining etc.,) and catalysis by transition metal complexes. There will be three lecture hours each week. Prerequisite: CHEM 342.

### CHEM 442 Nucleic Acids and Recombinant 3 Credits **DNA Technology**

The course is designed to offer concepts in nucleic acids and DNA technology. Topics to be covered includes: Mendelian inheritance and DNA as a carrier of genetic information. Nucleic acids; RNA and DNA. Structure, functions and physiochemical properties of nucleic acids. DNA replication in prokaryotes and eukaryotes. DNA polymerases. The genetic code. Protein synthesis; translation and transcription in prokaryotes and eukaryotes. Gene expression and regulation; The Lac operon. Nucleic acids extractions, purification detection and quantification: Polymerase chain Reactions (PCR) gel electrophoresis. Gene cloning: cloning vectors, plasmids and lambda bacteriophage. Potentials and applications of recombinant DNA technology. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 300.

#### CHEM 443 Bio-Inorganic Chemistry **3 Credits**

A goal of this course is to relate chemical phenomena with biological activities. Topics to be covered includes: Chemistry of cations, metalloenzymes, and simpler model systems. Reactions of coordinated ligands, Chemistry of sulphur and phosphorus. Chemical modifications of biological macromolecules and their potential effects. There will be two lecture hours each week. Prerequisite: CHEM 342.

#### **CHEM 451 Biochemical Techniques 3 Credits**

This is a survey of modern biochemical techniques. Such techniques include: isolation and characterization of proteins and DNA from natural sources; peptide mapping; protein finger printing; affinity chromatography of proteins; electrophoresis, ELISA, HPLC separation of sugars and proteins, western blot, northern blot and solid phase synthesis of peptides. There will be two lecture hours and one three-hour laboratory each week. Prerequisite: CHEM 300.

### CHEM 462 Microbial Biochemistry

**3 Credits** This covers major metabolic pathways in prokaryotes in comparison to Eukaryotes. Topic to be covers include: sugar metabolism in bacteria, nitrogen metabolism in bacteria and viruses, unique metabolic pathways in prokaryotes and biochemical basis of retroviral activity. There will be two lecture

**3 Credits** 

### CHEM 470 Chemistry Project

CHEM 300.

This course is gives an opportunity to students to make a project representing his/her major area of interest and ability. The course involves title defence, project proposal defences, implementation of project work and final defence of the project. The work is to be supervised by assigned departmental faculty. The project should reflect the student's level of competence and incorporate a variety of skill and originality. Prerequisite: Consent of the Department.

hours and one three-hour laboratory each week. Prerequisite:

### CHEM 473 Green Chemistry

### 3 Credits

This course gives an introduction to green chemistry. Topics to be covered includes: Principles of Green Chemistry, Waste Minimization/Prevention, Synthetic Efficiency, Less Hazardous Materials in Synthesis, Designing Safer Products, Safer Solvents and Auxiliaries, Energy Efficiency, Renewable Feedstock's, Minimal Derivatization, Catalysis, Design for Degradation in Process Controls and Hazard Minimization. There will be three lecture hours each week. Prerequisite: CHEM 405.

### CHEM 481 Seminar in Chemistry I

### 2 Credits

This course is an introduction to research techniques; laboratory work and literature search under the supervision of an instructor on a chemical research project. Involves laboratory experimentation as well as a written report on a project from any area of chemistry. Oral presentation of research results will be done at the end of the research work. Prerequisite: Consent of the Department.

### CHEM 482 Seminar in Chemistry II

This course is a continuation of CHEM 481. In this course, each students need to prepare written reports of their research work done and present a poster presentation. Prerequisite: CHEM 481.

### CHEM 499 Industrial Experience

### 3 Credits

2 Credits

This course is designed to offer industrial training to students for three months in any relevant industry after completing their junior year. The aim is to provide a detailed insight into aspects of company structure and activity through project work, reports and seminars. Assessment of the course will be based on the supervisor and course lecturer assessments and a written report submitted. Prerequisite: Consent of the Department.

### MATH 001 Developmental Mathematics 3 Credits

Review of basic algebra and trigonometry. Course topics to include: linear and non – linear inequalities, absolute values, sets of real numbers, equations of lines, systems of linear equations, exponents, quadratic equations and their graphs, formulas and applications of algebra, elementary trigonometric functions of angles. The student with a grade of C-(minus) and below in mathematics in the KCSE or its equivalent will be required to take MATH 001 before proceeding to his/her required mathematics course by his/her respective department.This course does not apply to the general education requirements.

### MATH 100 Foundations of Mathematics 3 Credits

This course provides a solid mathematical base for Liberal Arts students. Topics to be covered include: Sets and set operations, exponential and logarithmic functions, relations and functions, applications of statistics. Prerequisite: A minimum grade of C+ in mathematics in KCSE or a minimum grade of C (plain) in MATH 001.

### MATH 101 Pre-calculus

### **3 Credits**

For prospective students from other areas of science whose major areas of specialization require a strong mathematics background. A course in advanced algebra and trigonometry. Topics: sets and set operations, exponential and logarithmic functions, trigonometric functions, reduction formulas, trigonometric identities and equations, double angles, half angles, higher order systems of equations, vectors, matrices and their inverses. Applications of matrices in real life. Prerequisite: A minimum grade of C in mathematics in KCSE or a minimum grade of C in MATH 001.

### MATH 102 Basic Calculus

The purpose of this course is to expose students to the elements of differential and integral calculus. Topics include: Functions, limits and derivatives. Differentiation rules, applications of the derivative, Integration and its applications. Prerequisite: A minimum grade of C in MATH 101.

### MATH 104 Applied Mathematics for Health 3 Credits and Allied Sciences

Algebra: logic and true statements, binomial theorem for indices, sets, unions, arithmetic, geometric, progressions, polynomial functions, mapping and functions, complex numbers; matrix algebra. Trigonometric, exponential, logarithmic functions. Polar coordinates in the plane. Differentiation: definition and interpretation, derivatives of elementary functions, derivative rules and application. Numerical Integration. Prerequisite: A minimum grade of C in mathematics in KCSE or a minimum grade of C in MATH 001.

### MATH 113 Business Mathematics I

**3 Credits** 

**3 Credits** 

Sets and set operations, sets of real numbers and their properties and operations, arithmetic and geometric progressions, linear and quadratic equations, inequalities and their applications, functions and graphs, lines, parabolas and systems of equations, exponential and logarithmic functions and mathematics of finance, matrix algebra and linear programming, applications and limitations of linear programming, an introduction to the elements of probability theory, and an introduction to Network Analysis. Prerequisite: A minimum grade of C in mathematics in KCSE or a minimum grade of C in MATH 001.

### MATH 114 Business Mathematics II

This course is a sequel to Business mathematics I. The course exposes students to the calculus of functions of one variable: limits and continuity, differentiation, applications of the derivative, differentials and their use in approximation, integration and its applications in business and economics, an introduction to functions of several variables, and partial derivatives. Prerequisite: A minimum grade of C- in MATH 113. Note: No student is granted credit in more than one course from this group of courses: MATH 113, MATH 124.

### MATH 121 Discrete Mathematics

### **3 Credits**

**3 Credits** 

This is an introductory course in set theory and symbolic logic. Topics include: sets and elements, finite and infinite sets, subsets, set operations, Venn diagrams, propositions and truth tables, algebra of propositions, conditional statements, arguments and logical implications, applications in electronics and other fields. Elements of graph theory, trees and diagraphs. A field visit in industries will be required of every student. Prerequisite: A minimum grade of C in mathematics in KCSE or Departmental consent.

### MATH 124 Basic Mathematics and 3 Credits Analytical Geometry

Distance from point to a line, angle between straight lines. Circles: Standard equation, equation of tangent, length

of tangent from external point. Orthogonal circles. Conic Sections (Parabola, ellipse, hyperbola): Definitions, standard equations, graphs, analysis, tangent and normal. Polar and parametric equations: Conversions from polar to rectangular and vice versa. Polar and parametric equations of conic sections. Trigonometric and hyperbolic functions: Graphs and their inverses, trigonometric identities, addition and multiple angles. Factor and Remainder theorems and their applications. Counting axioms including permutations and combinations. An introduction to the use of MATLAB, Math Type, and Mathematica Programs. Prerequisite: A minimum grade of C+ in mathematics in KCSE or Departmental consent

### **MATH 127 Differential Calculus**

### **3 Credits**

Functions: Domain and range, composition of functions, properties of functions. Limits: Definition, techniques of evaluating limits, continuity, one sided limits, limits at infinity. Differentiation: Definition, differentiation using definition, properties of derivatives. Techniques of differentiation: power rule, product rule, quotient rule, chain rule, trigonometric functions, exponential, logarithmic, implicit, hyperbolic, parametric, inverse functions. Higher order derivatives. Applications of derivatives: Increasing/decreasing functions, concavity, curve sketching and asymptotes. Tangent and normal. Related rates. Optimization (applied maximum and minimum). Mean value theorem, indeterminate forms and L'Hospital rule. Linear and quadratic approximations. Prerequisites: A minimum grade of C- in MATH 124.

### MATH 150 Linear Algebra I

### **3 Credits**

Matrices: Order, addition, subtraction, scalar multiplication and matrix multiplication, row echelon forms. Determinants; Properties, determinants for general square matrices by permutation and cofactor methods. Inverse of square matrix. Systems of linear equations; solution by substitution, and elimination method. Gauss Jordan elimination method, Crammers rule, inverse matrix method. Vectors; addition, scalar multiplication, dot and cross products, magnitude. Vector Spaces; Definition and examples, subspace, linear independence and dependence, basis and dimension. Linear transformation: Definition and examples, matrix representation relative to standard basis, range and kernel (null space), rank and nullity. Prerequisite: A minimum grade of C - in either MATH114 or MATH 127 or Departmental consent.

### MATH 227 Integral Calculus

### **3 Credits**

Antiderivates and indefinite integrals. Riemann sums and definite integrals. Fundamental theorem of Calculus. Techniques of integration: Power rule, substitution, trigonometric functions, integration by parts including tabular form, partial fractions, trigonometric substitution. Powers and products of sines and cosines. Applications of integration: Area between curves, Volumes of revolution: Disk, Washer and cylindrical shells method, arc length, surface area of revolution. Real life problems involving integration. Numerical integration: Trapezoidal and Simpson's rule. Prerequisite: A minimum grade of C- in MATH 127.

### MATH 240 Real Analysis I

### **3 Credits**

Set theory: Set builder notation, union, intersection, difference, De Morgan laws. Real numbers: Bounded and unbounded sets, supremum and infimum, completeness axiom, interior and exterior, open and closed sets, closure of a set, countable and uncountable sets. Neighborhoods. Sequence and series: Limit point, limit inferior and superior, convergent sequence, monotone sequence, subsequence, Cauchy sequence. Series: Tests of convergence, Cauchy's root test, D'Alberts ratio test, integral test, alternating series test. Absolute and conditional convergence of series. Real valued functions: limit of a function, continuity and uniform continuity. Metric spaces: definition, examples, neighborhoods in metric spaces. Prerequisite: A minimum grade of C- in MATH 227.

### MATH 248 Ordinary Differential Equations I 3 Credits

Classification of differential equations. Differential equations associated to primitive equations. First order differential equations: separable, homogeneous, near homogeneous, exact, integrating factors for exactness, linear, Bernoulli. Applications of first order differential equations. Second and higher order differential equations: homogeneous with constant coefficients. The Wronskian and its significance in solution of differential equations. Uniqueness and existence of solutions. Non-homogeneous differential equations: Eulers equations, Method of undetermined coefficients and variation of parameters. Application to simple harmonic motion and real life problems. Power series solutions at ordinary points. Systems of linear differential equations. Prerequisite: A minimum grade of C- in MATH 240.

### MATH 274 Complex Analysis I

**3 Credits** 

**3 Credits** 

**3 Credits** 

Complex numbers: addition, subtraction, multiplication, division, conjugate, absolute value, complex plane and geometric representation, polar form, powers and roots, nth roots of unity. Elementary complex functions: polynomial, exponential, trigonometric, hyperbolic, logarithmic, inverse trigonometric, inverse hyperbolic. Differentiation of complex functions: limits, continuity, derivatives, Cauchy Riemann equations, harmonic functions. Complex integration: Contour and line integration, Cauchy's integral theorem and formula for nth derivative. Cauchy's residue theorem. Laurent series and residue at a singularity. Prerequisite: A minimum grade of C- in MATH 240.

### MATH 278 Vector Analysis

This course covers topics in vector analysis. Vector Algebra, vector differentiation and integration, gradient, divergence, curl, Green's Theorem, Stokes Theorem and other related theorems, tensors and tensorvalued functions, coordinate transformations, contravariant tensors, tangent spaces, covariant differentiation, geodesic coordinates, curvature tensor and Riemann Christoffel tensor and applications of tensor analysis in FrenetSerret formulas, parallel displacement of vectors, Einstein's Law of Gravitation, and Lagrange equations. Prerequisite: Minimum grades of C - in MATH 227.

### MATH 330 Operations Research I

A study of the linear programming (LP) problems including requirements for an LP problem. Formulation of linear optimization models, convex analysis in E n , graphical and algebraic solution methods, the Simplex Algorithm, the revised Simplex method, concepts in economics, viz. supply, demand and elasticity, duality, sensitivity analysis, solutions by computers, the classical transportation model, cautions of linear programming methods, applications of linear programming. A field visit to industries is required. Prerequisite: A minimum grade of C- in MATH 240 or Departmental consent.

### MATH 336 Numerical Methods

**3 Credits** 

The course will cover the following topics: solutions of numerical algebraic and transcendental equations: bisection method; regula falsi method; Newton - Raphson method; order of convergence; solution of simultaneous linear algebraic equations: Gauss elimination method: Gauss - Jordan method: method of triangularization; Crouts method; Gauss - Jacobi method; Gauss - Seidel method; differences - operators; forward and backward difference tables; Newton's forward and backward formulae: Gauss forward and backward formulae: Stirlings formula; interpolation (for unequal intervals); Lagrange's formula and inverse interpolation. A field visit to industries is required. Prerequisite: A minimum grade of C- in MATH 248.

### MATH 340 Real Analysis II

**3 Credits** 

This is a sequel to Real Analysis I covering; Infinite series, power series, radius of convergence, monotonic functions, functions of bounded variation, rectifiable paths, mappings, Riemann Stieltjes integrals, improper integrals, exponents and logarithms and Fourier series. Prerequisite: A minimum grade of C- in MATH 240.

### MATH 342 Boolean Algebra and **3 Credits Its Applications**

This course is a sequel to MATH 121. Algebra of sets, introduction and definition, symbolic logic, algebra of propositions, switching algebra, relay circuits and control problems, circuits for arithmetic computation. Karnaugh maps. A field visit to industries is required. Prerequisite: A minimum grade of C- in MATH 121 and MATH 227 or COSC 261.

### MATH 345 Graph Theory

Graph theory in mathematics and science. Different types of graphs, Graph operations, Binary relations and graphs, Functions, permutations and graphs, Graph descriptions, Trees and their properties, Degree functions of graphs and their properties, Efficient algorithms for recognition of degree functions for graphs of different types, Spanning trees of a graph, their properties and their enumeration, The Prüfer coding of a trees. Bipartite graphs and their properties. Prerequisite: A minimum grade of C- in MATH 342.

### MATH 346 Group Theory

### **3 Credits**

**3 Credits** 

Sets, set mappings, integers, groups, abelian and permutation groups, subgroups, normal sub groups, quotient groups, homomorphism, isomorphisms, automorphism, Cayley's theorem, Sylow's theorem, ring theory (homomorphism, ideals, quotient rings, field of quotients, Euclidean rings, rings of polynomials over fields). Prerequisite: A minimum grade of C- in MATH 240.

### MATH 348 Ordinary Differential Equations II 3 Credits

An introduction to differential equations and their applications, based upon knowledge of calculus. Topics include applications complementary and complete solutions, solutions by La Place Transforms, gamma and beta functions and applications. Solution by series, Taylor, FrÖebenius and others, numerical evaluation of solutions, systems of differential equations, matrices, Eigenvalues and Eigenvectors. Prerequisite: minimum grade of C- in MATH 248.

### MATH 354 Ring Theory

### **3 Credits**

**3 Credits** 

Review of rings, vector spaces and modules, linear dependence, dual spaces, inner products, field, extension fields, roots, constructability, solvability by radicals, linear transformations, algebra of transformation, characteristic roots, canonical forms, and some topics in linear algebra: matrix algebra, trace and transpose, determinants, real guadratic forms. Prerequisite: A minimum grade of C- in MATH 346.

### MATH 355 Dynamics

Motion of a straight line: Equations of motion-acceleration of falling bodies-vertical motion under gravity-motion down a smooth inclined plane. Newton's laws of motion. Newton's law of gravitation-conservation of linear momentum-work done by an elastic string-conservative forces-energy-potential energy and Kinetic energy-principle of energy. Path of a projectile-Greatest height-time of flight-range on an inclined plane through the point of projection-Maximum range. Radial and transverse components of velocity and acceleration - areal velocity - central orbits - Differential equation of a central orbit in polar coordinates. Simple Amplitude, periodic time, phase-composition of two simple harmonic motions of the same period in a straight line and in two perpendicular lines. Impact on a fixed surface: Impulsive force-Impact on a smooth fixed plane -Direct and oblique impact of two smooth spheres - loss of Kinetic energy during direct and oblique impacts. Prerequisite: A minimum grade of C- in MATH 240.

### MATH 365 Number Theory

**3 Credits** 

**3 Credits** 

In this course, the student will be exposed to: congruency, prime power moduli, residues, quadratic reciprocity, functions of number theory, Diophantine equations, linear and quadratic functions, continued fractions, irrational numbers, and distribution of primes, algebraic numbers, fields, factorization, and partition functions. Prerequisite: A minimum grade of C- in MATH 278.

### MATH 371 Linear Algebra II

This course a sequel to MATH 150 designed to cover the following topics: Linear algebra of linear transformations, Eigenvalues values and Eigenvectors, diagonalization of real quadratic forms, Transformations of matrices, congruence, orthogonal transformations, orthogonal congruence, definite and semidefinite forms. Prerequisite: A minimum grade of C- in MATH 240.

### MATH 375 Algebraic Structures

**3 Credits** 

Binary operations, groups, groups of permutations, Cosets and Lagrange's Theorem, homomorphisms and isomorphisms. Conjugacy, Conjugacy classes, conjugacy in symmetric groups, the class formula. Normal subgroups. Factor groups. The first isomorphism theorem, rings, fields and polynomials. Finite fields, finite geometry. Introduction to codes. Prerequisite: A minimum grade of C- in MATH 346.

### MATH 380 Analytic Applied Mathematic 3 Credits

This course presents the theory and applications of partial differential equations, which are differential equations involving functions of more than one variable. These are used to model phenomena in two dimensions or higher, and situations where two or more independent variables affect the changes in a function. Topics to be covered in this introductory

PDE course include wave phenomena, diffusion, and stationary problems. Analytical tools such as Fourier series, separation of variables, Green's functions and distributions will be presented. Prerequisite: A minimum grade of C- in MATH 248.

### MATH 385 Fluid Mechanics

**3 Credits** 

This course will cover the following topics: Fluids flows, modeling fluids, conservative derivative, Hydrostatic and Archimedes' principle, Euler's equations of motion, Bernoulli's streamline theorem Analysis and Clarification of Fluid motion, Fluid equations of motion and Incompressible viscous flows. Prerequisite: A minimum grade of C- in MATH 355 or PHYS 225 or Departmental consent.

### MATH 404 Numerical Analysis

**3 Credits** 

Numerical differentiations: Newton's forward and backward formulae to compute the derivatives - Derivative using Stirlings formulae - to find maxima and minima of the function given the tabular values. Numerical Integration: Newton - Cote's formula - Trapezoidal rule - Simpson's 1/3rd and 3/8th rules - Gaussian quadrature - two points and three points formulae, difference equation order and degree of a difference equation - solving homogeneous and non - homogeneous linear difference equations. Taylor series method - Euler's method - improved and modified Euler method; Runge - Kutta method (fourth order Runge - Kutta method only); numerical solution of ODE (for first order only): Milne's predictor corrector formulae - Adam-Bashforth predictor corrector formulae; solution of ordinary differential equations by finite difference method (for second order ODE). A field visit in industries will be required of every student. Prerequisites: A minimum grade of C- in MATH 336.

### MATH 408 Differential Geometry

**3 Credits** 

One Parameter family of Surfaces: Envelope, Characteristics, edge of regression, Developable surfaces. Developables Associated with a Curve: Osculating developable, Polar developable, Rectifying developable. Two- parameter Family of Surfaces: Envelope, Characteristics points, Curvilinear coordinates. First order magnitudes. Directions on a surface. The normal. Second order magnitudes. Derivatives of n. Curves on a Surface: Principal directions and curvatures, First and second curvatures, Euler's theorems, Dupin's indicatrix, The surfaces z = f(x,y). Surface of revolution. Conjugate directions. Conjugate systems. Asymptotic lines, Curvature and torsion, Isometric parameters, Null lines, or minimal curves. Geodesics and Geodesic Parallels: Geodesics: Geodesic property, Equation of Geodesics, Surface of revolution, Torsion of Geodesic. Curves in Relation to Geodesics: Bonnet's theorem, Joachimsthal's theorems, Vector curvature, Geodesic curvature, g, Other formulae for g , Bonnet's formula. Prerequisite: A minimum grade of C- in MATH 348.

### MATH 411 Field Theory

**3 Credits** 

Fields, examples, Algebraic and transcendental elements, Irreducible polynomials. Gauss Lemma, Eisenstein's criterion, Adjunction of roots, Kronecker's theorem, algebraic extensions, algebraically closed fields. Splitting fields, Normal extensions, multiple roots, finite fields, Separable extensions, perfect fields, primitive elements, Lagrange's theorem on primitive elements. Automorphism groups and fixed fields, Galois extensions, Fundamental theorem of Galois theory, Fundamental theorem of algebra, Roots of unity and cyclotomic polynomials. Cyclic extension, Polynomials solvable by radicals, Symmetric functions, cyclotomic extension, quintic equation and solvability by radicals. Prerequisite: A minimum grade of C- in MATH 354.

### MATH 412 Galois Theory

Constructions and extensions fields, separability, normality & splitting fields, Field automorphisms & Galois groups, The fundamental theorem of Galois Theory, Solvable groups and the insolubility of the general quintic, Ruler and Compass constructions, Calculation of Galois groups, Transcendence. Prerequisite: A minimum grade of C- in MATH 346.

### MATH 414 Topology

**3 Credits** 

**3 Credits** 

**3 Credits** 

This course aims at introducing the student with some knowledge of calculus to the elements of the topology: Topics to include: Topological spaces, bases and subbases, continuous mappings, metric and normed spaces, countability, convergence, sequences, separation of axioms, compactness, connectedness and homotopy theory. Prerequisites: A minimum grade of C- in MATH 340.

### MATH 415 Measure Theory and Integration 3 Credits

Riemann integral, General measures, measurability, Caratheodory Extension theorem and construction of measures, integration theory, convergence theorems, Lp-spaces, absolute continuity, differentiation of monotone functions, Radon-Nikodym theorem, product measures, Fubini's theorem, signed measures, Riesz Representation theorems for classical Banach spaces. Prerequisite: A minimum grade of C- in MATH 340.

### MATH 430 Operations Research II 3 Credits

The course covers the deterministic models and methods of solutions generally used in operations research. Topics to be covered include: Network analysis and flows, combinatorial optimization techniques, optimization in networks, nonprobabilistic inventory models, critical path analysis, the transshipment model, maximal flows in networks. Applications to problems in agriculture, industry and public policy will be emphasized here. A field visit in industries will be required of every student. Prerequisite: A minimum grade of C- in MATH 330.

### MATH 432 Mathematical Modeling

Foundations of mathematical modeling, construction of mathematical models in the natural sciences, agriculture, economics, physics and in mechanics and other disciplines; mathematical modeling education in secondary schools. A field visit in industries will be required of every student. Prerequisite: A minimum grade of C- in MATH 430.

### MATH 445 Partial Differential Equations 3 Credits

A rigorous introduction to PDE topics include physical examples of PDE's, method of characteristics. D'Alembert's formula, classification of equations. Hyperbolic PDE's: Wave equation, Cauchy problem, D'Alembert's solution, Characteristics, Separation of variables. Parabolic PDE's: Heat equation, Separation of variables. Elliptic PDE's: Laplace's equation, Dirichlet problem, 2-dim: Harmonic functions, 3-dim: Fundamental solution and their applications. Laplace transforms: Definition and basic theory, Examples of transforms, Shift theorem, Transforms of derivatives, Applications to ODE's and systems, Applications to PDE's. Prerequisite: A minimum grade of C- in MATH 348.

### MATH 447 Fluid Flow Analysis

### 3 Credits

Types of flows, Steady Flow and Uniform Flow, Path line, Streamline and Streak line, Flow Rate and Mean Velocity, Fluid System and Control Volume, Equation of Continuity, One-Twoand Three-Dimensional Flow. Prerequisite: A minimum grade of C- in MATH 348.

### MATH 448 Methods of Fluid Mechanics 3

s 3 Credits

Classifications of PDE's and their properties, basics of the finite difference method, finite difference solutions of ODE, finite difference solutions of time-dependent linear PDEs, advection equation ,heat equation, stability and dispersion properties of time differencing schemes, numerical solution of finite difference approximation of elliptic equations, special advection schemes, energetically consistent finite difference schemes, the finite element method. Prerequisite: A minimum grade of C- in MATH 445.

### MATH 474 Complex Analysis II

**3 Credits** 

Zeros-Cauchy's Inequality, Lioville's theorem, fundamental theorem of algebra, maximum modulus theorem, Gauss mean value theorem, Gauss mean value theorem for a harmonic function on a circle, Taylor's series, Laurent's series, isolated singularities (Removable singularity, pole and essential singularity), residues, residue theorem, evaluation using the calculus of residues, integration on the unit circle, meromorphic functions, principle of argument, Rouche's theorem. Prerequisite: A minimum grade of C- in MATH 340.

### MATH 480 Functional Analysis

### **3 Credits**

Definitions of metric spaces and examples, open sets, closed sets, neighborhoods, convergence of sequences, Cauchy sequences, completeness. Definition of normed space and examples, properties of normed spaces, Banach spaces, finite dimensional normed spaces, subspaces, linear operators, bounded linear operators, linear functionals, linear operators and linear functionals on finite dimensional spaces, normed space of operators, dual space. Definition of inner product space and examples, properties of inner product spaces, Hilbert spaces, orthogonal complements and indirect sums, orthogonal sets and sequences, total orthonormal sets and sequences, representation of functionals on Hilbert space. Zorn's Lemma, Hahn Banach Theorem, Uniform Boundedness Theorem, Open Mapping Theorem, Closed Graph Theorem. Prerequisite: A minimum grade of C- in MATH 474.

### MATH 483 Coding Theory

### **3 Credits**

**3 Credits** 

Introduction to the main problem of coding theory, hamming distance, code detection, code correction, ISBN code, length and weight of a code, perfect codes. linear codes, generator matrices and standard forms, encoding, nearest neighbor decoding, dual code, parity check matrix, syndrome decoding, incomplete decoding, hamming codes and decoding, finite fields, cyclic codes, bch codes, Reed-Solomon codes, mention of burst error-correcting codes for compact discs and DVDs, and of new methods from algebraic geometry. Prerequisite: A minimum grade of C - in COSC 161 and MATH 336.

### MATH 499 Mathematics Project

The students are given the choice to select their own topics in any area in mathematics and each is required to submit a written report and also to give an oral report on what he has researched on. A field visit in industries will be required of every student. Prerequisites: Completion of the 300level series of the required mathematics courses, a minimum grade of C- in ENGL 105.

### PHYS 100 Concepts of Physical Sciences 2 Credits

A non - mathematical course designed to interpret science to the liberal arts students. It considers all the principles and concepts of physics. This course does not apply to a minor in physics or to a major in mathematics.

### PHYS 155 General Physics

**3 Credits** 

**3 Credits** 

The course topics to be covered include: Units and dimensions, dimensional analysis and derivation of equations connecting physical quantities, mechanics and properties of matter, rectilinear motion, Newton's laws of motion and their applications, composition and resolution of forces, uniform circular motion, Newton's law of gravitation, simple harmonic motion, determination of g, conservation of energy and momentum, viscosity, surface tension, elasticity, elastic constants and their importance. Two lecture hours and a three hours laboratory each week. Prerequisites: A minimum grade of C- in MATH 101 or Departmental consent. Secondary school-level physics strongly recommended.

### PHYS 160 Fundamentals of Mechanics 3 Credits

Vectors; Composition and resolution of coplanar vectors. Forces and equilibrium. Free-body diagram techniques. Moments, couple and torque, Particle kinematics, Newton's laws and particle dynamics. Newtonian Mechanics. Newton's laws of motion and their limitations, inertial frames, Galilean transformations, relative velocity; non-inertial frames, conservation laws,. Circular motion of particles. Work and energy, linear and angular momentum. Conservation laws, C.M. frame of reference, collision of two particles, rocket, angular momentum and torgue. Potential energy, potential energy of two or more masses. Central forces. Planetary motion. Mechanics of systems of particles and rigid bodies Gravitational potential and field, Newton's law of gravitation, cases of thin spherical shell and spheres, rocket motion, rotating rigid body, angular momentum and moment of inertia, theorems on inertia. calculation of moment of inertia for important cases, rotational kinetic energy, fly-wheel, fluid dynamics: Bernoulli's equation, viscosity, Poiseulle's formula, Prerequisite: A minimum grade of C+ in physics in KCSE or a minimum grade of C- in PHYS 155.

### PHYS 165 Heat and Thermodynamics

The course will cover thermal physics: temperature and temperature scales. Thermal expansion of solids. Quantity of heat. Heat transport. Thermal equilibrium and Zeroth law. Heat and Work. Behavior of Gases: Isothermal and Adiabatic changes - PV diagrams; Joules Law and experiment; Departure from ideal gases; Boyles temperature and critical constants Thomson effect, porous plug experiment, First law of Thermodynamics. Thermodynamic processes. Ideal gas laws. Vander Waalls equation of state. Carnot heat engines and refrigerators. Second law of thermodynamics. Entropy: principle of increase of entropy, Clausius inequality; Thermodynamical relations: application of laws of thermodynamics; Enthalpy; Helmholtz and Gibbs free energy. Third law of thermodynamics. Two lecture hours and a three-hour laboratory per week. Prerequisite: A minimum grade of C+ in physics in KCSE or a minimum grade of C- in PHYS 155.

### PHYS 170 Geometric Optics

**3 Credits** 

Introduction: the wave equation and its solutions properties of waves, wavefront, the electromagnetic spectrum, light sources (thermionic and atomic) characteristics of light: radiometric and photometric quantities and units. Rectilinear propagation of light. Laws of reflection and refraction. Fermat's principle. Plane surfaces and prisms. Spherical surfaces. Lenses. Spherical mirrors. Lens aberration. Optical equipment (Microscopes, telescopes, prism binoculars, camera and prism spectrometer). Prerequisite: A minimum grade of C+ in physics in KCSE or a minimum grade of C- in PHYS 155.

### PHYS 180 Introduction to Quantum Physics 3 Credits

Development of modern atomic theory. Failure of classical theories and experimental basis for quantum theory: Matter waves and their statistical interpretation; wave functions, state functions and their basic properties; blackbody radiation, heat capacity, photoelectric effect, Compton effect, etc. Particle-wave duality of matter. De Broglie waves. Uncertainty principle. Structure and properties of atoms. The Bohr model of the atom. Emission and absorption spectra. Radioactivity. X-rays. Prerequisite: A minimum grade of C+ in physics in KCSE or a minimum grade of C- in PHYS 155.

### PHYS 200 Applied Physics and Bioinstrumentation

### **3 Credits**

This course is specifically designed for students pursuing studies in Medical Laboratory Sciences. Topics to be covered include: light, electromagnetic waves, production and use of X-rays, optics; mirrors, lenses, real and virtual images, magnification of images, focal lengths and focal points, power of lens, optoelectronics, circular motion, application of circular motion to centrifuges, basic electronics; power supplies used, transformers used, electricity and magnetism, electric circuits, electric safety, electric energy, power as relate to radiography, basic principles of bioinstrumentation; diffusion and diffusion equation, Langevin equation, fluid dynamics, low Reynolds numbers, basic nuclear medicine; types of radiation, half-life and radioactive decay, interactions of radiation, detection instrumentations, and basic radiation protection. Two lecture hours and a three-hour laboratory session per week.

### PHYS 215 Waves and Oscillations

### **3 Credits**

Periodic motions. Superposition of periodic motions. The simple harmonic oscillator. Damped harmonic oscillator. Forced oscillations and resonance. Coupled oscillations, normal coordinates, degrees of freedom and normal modes of vibration. Transverse waves. The wave equation. Characteristic impedance of waves on a string. Reflection and transmission coefficients. Longitudinal waves. Acoustic phenomena; interference and beats. Standing waves impedance matching; waves on a string; standing waves, standing wave ratio; phase and group velocity; longitudinal waves in gases, solids; reflection and transmission of sound waves and Eigen frequencies. Acoustic measurements and applications. Doppler Effect. Group and phase velocity. Introduction to Fourier analysis. Two lecture hours and a threehour laboratory each week. Prerequisite: A minimum grade of C- in PHYS 152.

PHYS 231 Electricity and Magnetism I 3 Credits Electrostatics: electric charge, coulomb's law, electric field, lines of electric force and electric flux. Gauss's law, electric potential and electric potential energy. Capacitors and capacitance, energy storage in capacitors, effect of dielectrics on capacitance. DC circuits; current, resistance, Ohm's law. Kirchhoff's laws, network theorems. Voltage measurement, Potentiometer, Wheatstone bridge. Magnetic field, magnetic flux, force on moving charge in a magnetic field, torque on a current loop, magnetic dipole. Magnetic induction: Faraday's laws of magnetic induction, self and mutual induction. Hysteresis. Energy in magnetic fields. Prerequisite: A minimum grade of C- in PHYS 180.

### PHYS 232 Electricity And Magnetism II 3 Credits

Gauss's law and its applications. Electric dipoles. Dielectrics. Modified Gauss's law. Solutions to Laplace's and Poisson's equations. Maxwell's electromagnetic equations. Electromagnetic radiation. A.C. circuits: generation of sinusoidal waveforms, rms value. AC in resistors, capacitors and inductors. Series and parallel LCR circuits. Resonance. Power in AC circuits. AC bridges, impedance and admittance. Filters. Delay lines. Transformers. Transmission lines. Prerequisite: A minimum grade of C- in PHYS 231.

### **PHYS 225 Classical Mechanics**

3 Credits

Lagrangian Mechanics: generalized co-ordinates: holonomic systems; calculus of variation; Hemilton's principle and Langrange's equation: applications; Hamiltonian Dynamics: Hamiltons functions, canonical equations of Hamilton; cyclic co-ordinates and conservation theorems; cononical transformations; Poisson brackets and properties, phase space and Liouville's theorem: two body central force problem, reduction to the equivalent one body problem, The equations of motion and first integral: Differential equation for the orbit, Inverse square law of force and deduction of Keplers laws; scattering in a central force field, Rutherford scattering crosssection. Prerequisite: A minimum grade of C- in PHYS 160.

### **PHYS 255 Quantum Mechanics**

**3 Credits** 

Hamiltonian operators. Schrödinger equation. Time-dependent Schroedinger equation to operators; superposition principle; physical interpretation of wave function and probability current density; Expectation values; proof of uncertainty principle; wave packets; linear operators; Eigenfunctions and eigenvalues; Orthogonal systems; Expansion in eigenfuction and completeness relation; Hermitian operators; parity operator; commutation rule; Equation of motion; Time independent Schroedinger equation and the concept of stationary states; Problems in one dimension: (i) Zero potential (the free particle case) (ii) Infinite square well potential (particle in a box), (iii) Potential step (reflectance and transmittance), (iv) Potential barrier, (v) Rectangular potential well (vi) Periodic potential, (vii) Linear Harmonic Oscillator. The Schroidinger equation for spherically symmetric potential: Angular momentum operators, hydrogen atom Born's probability density. Potential barriers and tunneling. Square well potential. Harmonic oscillator. Particle in a box and in a sphere. Hydrogen atom and atomic orbitals. Postulates of quantum mechanics. Hermitian operators. Complementarity. Uncertainty principle. Matrix mechanics. Angular momentum operators. Eigen values and Eigen functions of angular momentum and spin. Clebsh-Gordon series. The Harmonic Oscillator, properties of eigen functions. Transition between states, Perturbation theory, Variational methods, Schroedinger equation for a one electron atom,

orbital angular momentum, spherical harmonics, spin-orbit interaction, Quantum number j, Spatial degeneracy of the wave function, solutions of the radial equation, Scattering theory, Hilbert space. Prerequisite: A minimum grade of C- in PHYS 215.

### **PHYS 300** Properties of Matter

### **3 Credits**

**3 Credits** 

**3 Credits** 

Molecules and bonding, inter-atomic forces, states of matter, crystalline and amorphous structures, liquids and liquid crystals. Gases (ideal and nearly ideal), inter-atomic potentials, kinetic theory, Maxwell's distribution, rms speed and gas pressure, gas laws, equation of state, specific heat, thermal conductivity. Crystal structures: symmetry, Bravais Lattice. Radial distribution functions. X-ray diffraction. Miller indices. Cohesion of ionic crystals, Madelung's constant. Surface tension and surface energy of liquids. Application to convex surfaces, capillarity and suction. Viscosity: Poiselli's formula, Stoke's method. Laminar flow and Bernoulli's equation. Elastic properties of solids. Static flow properties of fluids. Prerequisite: A minimum grade of C- in PHYS 225.

### PHYS 315 Atomic Physics

Review of quantum ideas and Bohr's theory of the atom. Somerfield's relativistic model of the atom. Vector model of the atom. Coupling schemes. Normal and anomalous Zeeman effects. Lande g-factor. One -electron spectra. Two - electron spectra. X-ray spectra. Prerequisite: A minimum grade of C- in PHYS 300.

### PHYS 335 Physical Optics

Theory of interference. Fresnel and Franhouffer diffraction. Zone plate. Diffraction at straight edge and at a number of parallel slits. Resolving power of optical instruments. Fresnel's explanation of optical activity. Polarimeters. Polarization; Jones Matrix notation, polarization of matter, Absorption Optics: reflection and transmission angles and co-efficients, Brewster Angle, principle of ray tracing, illustrations; Diffraction: General Kirchoff - Sommerfield theory, Fresnel and Fraunhofer approximations, applications (slit and edge diffraction patterns); Lasers: Einstein's constants, Spontaneous and stimulated emissions, laser principle, properties of laser light. Prerequisite: A minimum grade of C- in PHYS 170

### PHYS 345 Electronics

Introduction to semiconductor physics. Energy bands, electrons and holes. The P-N junction biasing. Semiconductor diode. Rectifiers. Junction transistors (characteristics and operations). Manufacture of grown junctions, fused junctions and point contact diode. Field effect transistors. MOSFET. Transistor amplifiers, types of amplifier circuits. Current and Voltage amplifiers. Feedback. Oscillators. Linear integrated circuits. Operational amplifiers and its applications. Prerequisite: A minimum grade of C- in PHYS 232

### PHYS 410 Nuclear Physics

### **3 Credits**

**3 Credits** 

Atomic nucleus, systematics of stable nuclei. Natural and artificial radioactivity. Nuclear detectors. Nuclear models (shell and liquid-drop). Mass and isotropic abundance of nuclei. Nuclear stability. Nuclear forces. Neutron sources, slow down chain reacting pile and their interaction. Nuclear fission and power reactors. Nuclear fusion. Radiation monitoring and safety measures. Applications of nuclear Physics. Isotopes and applications in medicine, agriculture and industry. Prerequisite: A minimum grade of C- in PHYS 315.

### PHYS 415 Solid State Physics

### **3 Credits**

Review of atomic bonding, crystallinity and forms of solids. Brillouin zones. Lattice dynamics: Elastic waves and phonons, Phonon statistics, Vibrational modes and spectrum. Specific heat (lattice and electronic). Band structures. Electronphonon interaction. Impurity states and nature of lattice defects. Characteristic properties of dielectrics, metals, semiconductors and magnetic solids. Cooperative phenomena. Superconductivity. Mode of electronic transport in solids. Ferro -, para- and diamagnetic. Applications to solid state devices. Electro-optics and lasers. Prerequisite: A minimum grade of Cin PHYS 300.

### PHYS 421 Electronic Theory I

**3 Credits** 

Magnetic fields in matter: Magnetization, magnetic intensity, magnets. Electromagnetic waves. Maxwell's equations. Plane waves in isotropic dielectrics and conducting media. Reflection and refraction of plane waves at dielectric and metallic boundaries. Polarization. Wave guides. EM radiation: scattering and dispersion. Electromagnetism. Prerequisite: A minimum grade of C- in PHYS 232

### PHYS 431 Environmental and 3 Credits Renewable Energy

The concept of energy. Global energy supply and consumption patterns. Energy conservation practices. World energy sources: fossil fuels, nuclear, solar, geothermal, wind, water. Ocean thermal gradient. Tides. Biomass and wood fuel. The global environment. Physics of atmospheric processes (e.g. solar terrestrial radiation). Transport processes in atmosphere. Water, air, energy balance and hydrological cycle. Water vapor. Heat exchange. Heat conduction in soils, pollution problems. Applications of physics to medical, biological and environmental. Prerequisite: A minimum grade of C- in PHYS 335.

# STAT 150 Introduction to Probability and 3 Credits Statistics

Descriptive Statistics: Definition of data, statistic, elements and variables. Sources and methods of data collection. Representation of data; bar graphs, pie charts, frequency distributions, relative frequency distributions, histograms, cumulative frequency distribution curves (ogive), stem and leaf display. Measures of central tendency; mode, median, mean including geometric and trimmed mean. Measures of location; quartiles, deciles, percentiles. Measures of dispersion; range, inter-guartile range, standard deviation, coefficient of variation. Skewness and Kurtosis. Introduction to probability; experiments, sample space, event, probability of event, conditional probability, independence, addition and multiplication rules. Bayes rule. Probability distributions: Bernoulli, Binomial, Poisson, hyper geometric, normal. Approximation of Binomial using Poisson and normal. Expected value and variance. Linear regression and correlation; Scatter plots, Pearson's product and Spearman's rank correlation coefficient. Least square regression line. Prerequisite: Departmental consent.

### STAT 200 Fundamentals of Biostatistics 3 Credits

This course is designed to provide basic concepts widely used in biological and health sciences. The topics to be covered include: definitions of special biological and medical terms, data collection, organization, management and presentation, elements of probability and probability distributions, discrete

and continuous distributions, measures of central tendency and variability, sampling, estimation and hypothesis testing, applications of the normal distribution, testing sample means, comparison of means (two samples), the chi-square distribution and tests, simple linear regression and correlation, multiple regression, analysis of variance, use of nonparametric statistical test procedures. Prerequisite: MATH 101 or Departmental consent.

#### STAT 204 Non Parametric Statistics **3 Credits**

Review of the simple regression and correlation theory. multiple and partial correlation, multiple regression, significance of the correlation ratios. ANOVA (one, two and threeway classifications), post hoc multiple comparison tests (Tukey, NewmanKeuls, Tukey/Kramer and Scheffe's methods), chi-square test and nonparametric tests (Sign, Wilcoxon's MatchedPairs SignedRanks, Wilcoxon RankSum, Median, MannWhitney U, WaldWolfowitz Runs, KruskalWallis H, Friedman Fr Spearman's rho, McNemar and Cochran Q tests). Prerequisite: A minimum grade of C- in STAT 150.

#### **Probability Theory and Its** STAT 205 **3 Credits Applications**

Random variables, distribution functions, independence, special parametric families of univariate distributions discrete and continuous (Bernoulli, hypergeometric, binomial, exponential) distributions joint and conditional distributions, distribution of functions of random variables, sampling and sampling distributions, parametric point estimation and interval estimation, test of hypotheses, and linear models. Prerequisite: A minimum grade of C- in MATH 150.

### STAT 207 Regression Analysis

**3 Credits** 

Simple and multiple linear regressions, partial correlation, residual analysis, stepwise model building, multicollinearity and diagnostic methods, indicator variables, hypothesis testing, nonlinear and logistic regression. Interpretation of computer output will be emphasized. Prerequisites: A minimum grade of C- in STAT 204 or MATH 150.

### STAT 300 Multivariate Probability **3 Credits Distributions**

Random variables, distribution functions, independence, special parametric families of univariate distributions discrete and continuous (Bernoulli, hypergeometric, binomial, exponential) distributions joint and conditional distributions, distribution of functions of random variables, sampling and sampling distributions, parametric point estimation and interval estimation, test of hypotheses, and linear models. Prerequisite: A minimum grade of C- in MATH 150.

### STAT 305 Theory of Estimation

### **3 Credits**

Introduction to the fundamentals of estimation theory, with applications to stochastic and adaptive signal processing. Topics include deterministic and stochastic least-squares estimation, the innovation process, spectral factorization and Wiener filtering, tate-space structure and Kalman filters; array and fast array algorithms; LMS and RLS adaptive filters; Bayesian filtering; Markov chain Monte Carlo methods; particle filters: signal detection: parameter estimation. Prerequisite: A minimum grade of C- in MATH 150 or STAT 204.

#### **Concepts and Practice of 3 Credits STAT 308 Operations Research**

Decision Analysis, Fundamentals of Discrete Probability, Continuous Probability Distributions and Their Applications, Statistical Sampling, Simulation Modeling: Concepts and Practice, Regression Models: Concepts and Practice, Linear Optimization, Nonlinear Optimization, Discrete Optimization. A field visit to industries is required. Prerequisite: A minimum grade of C in MATH 150 or STAT 300.

#### STAT 310 Introduction to Econometric **3 Credits**

An introductory survey of econometrics and its applications in business and economics. The topics include probability sampling, hypothesis testing, regression and correlation techniques, the simultaneous equation models and problems of econometrics. Prerequisites: A minimum grade of C- in STAT 204.

### STAT 313 Test of Hypothesis

**3 Credits** 

This course focuses on the process of statistical inference, presenting confidence intervals and hypothesis testing for one and two populations, chi-square procedures, linear and nonlinear regression, and one-way analysis of variance. A group project is required. Prerequisite: A minimum grade of Cin MATH 150 or STAT 204 or STAT 207.

### STAT 330 Sample Surveys

**3 Credits** 

Practical problems of surveys. Design of optimal surveys. Questionnaire design. Practical problems of sampling. Design of optimal sampling procedures. Adapting standard statistical techniques to specialized sampling design. Prerequisite: A minimum grade of C- in STAT 204.

#### STAT 336 Statistical Quality Control **3 Credits**

An introduction to the basic philosophy of quality control and statistical tools used in quality control and quality assurance. Tools to include control charts, acceptance sampling, response surface methodology, Pareto charts, histograms, stem-andleaf plots and dot plots. Applications of statistical process controls. There will be industrial case studies and tours of local industries (when available). Prerequisite: A minimum grade of C- in STAT 204.

### STAT 400 Stochastic Processes

**3 Credits** 

Discrete and continuous random variables and their distributions, conditional distributions and conditional expectation, generating functions and their applications, convergence of random variables; introduction to Brownian motion, homogeneous and nonhomogeneous Poisson processes and martingales; Fundamental notions of Markov chains and processes, generating functions, recurrence, limit theorems, random walks, Poisson processes, birth and death processes, applications. Prerequisite: A minimum grade of C- in MATH 150 or STAT 300.

### STAT 410 Design and Analysis Experiments 3 Credits

A study of the various experimental designs in sciences. Topics include the randomized block design, incomplete block designs, analysis of Latin squares, and 2k-factorial experiments. Analysis of variance applied to experimental designs; analysis of covariance. Interpretation of computer output will be



emphasized. Prerequisites: A minimum grade of C - in STAT 204 or STAT 300.

### STAT 415 Multivariate Methods

### 3 Credits

Statistical analysis of multivariate data. Topics will include preparation of data for analysis, selection of techniques appropriate to research questions, measures of association for continuous and discrete variables, Hotelling's T, multivariate analysis of variance, multivariate analysis of covariance, cluster analysis, discriminant analysis, multidimensional scaling, principal component and factor analysis. This is a computeroriented course with emphasis on application. Prerequisite: A minimum grade of C- in STAT 300.

### STAT 425 Measure and Probability 3 Credits

Outer measures and Carathéodory extension, Lebesgue measure, Measurable function, Integration, Absolute continuous function on, fundamental theorem of integral calculus for Lebesgue Integral, Measure on product spaces and Fubini's theorem, Complex measures, Radon-Nikodyn theorem, Independence of events, Borel-Cantelli lemma, Random variables, distribution functions, moment generating functions, Conditional expectation, independence of random variables and Kolmogorov's zero-one law, Joint distributions, Convergence

of random variables, law of large numbers, Characteristic function, central limit theorem. Prerequisite: A minimum grade of C in MATH 415 or STAT 400.

### STAT 430 System Analysis and Design 3 Credits

Application of program packages (e.g. SPSS or SAS) to the solution of one-, two- and k-sample parametric and nonparametric statistical problems. Basic concepts in data preparation, modification, analysis and interpretation of results. A basic computer knowledge is required. (2-hour lecture; 3-hour laboratory) Prerequisite: A minimum grade of C- in STAT 204.

### STAT 435 Applied Time Series Analysis 3 Credits

The course is an introduction to univariate and multivariate time series models. It starts by introducing basic concepts and progresses to more complicated models. Regression and exponential smoothing methods for forecasting non-seasonal and seasonal time series, stochastic processes, moving average models, Autoregressive integrated moving average (ARIMA) modeling and forecasting of univariate time series. Estimation of spectral density functions, white noise tests, and tests for periodicities. Prerequisite: A minimum grade of C- in STAT 300.

# **DEPARTMENT OF TECHNOLOGY**

### FACULTY

Ayiemba, J., MSc., (Acting Head of Department) Bosire, T., MEd., PhD in progress Soi, E., MSc. Walela, P., MSc.

### **Teaching Assistant**

Leleiy, W., BT.

Email: hod\_technology@ueab.ac.ke

### **PHILOSOPHY**

The Department of Technology operates on the Seventh-day Adventist worldview which holds that God is the Creator and Sustainer of the universe and life and is the source of true knowledge. Society is increasingly becoming more dependent on technology, therefore the purpose of technology programs in this Institution is to train students to use their hands, heart and mind in applying science and technology in the service to God and man and in recognition of Jesus Christ, as the Master craftsman.

### MISSION

The Department of Technology provides and advances a wholistic quality Christian education which develops men and women to be earnest seekers of truth and equips them with appropriate knowledge, skills and attitudes that prepares them to use their hands, heart and mind in service to God and man.

### VISION

The Department of Technology envisions being a center of excellence in market-driven programs in Automotive, Computing and Electronics technologies.

### **PROGRAMS OFFERED BY THE DEPARTMENT**

- 1. Bachelor of Science in Automotive Technology
- 2. Bachelor of Science in Electronics Technology
  - a. Communication Option
  - b. Industrial Option
- 3. Minor in Electronics Technology

### LEARNING OUTCOMES

Programs in the Department of Technology are designed to:

- 1. Provide the education and training necessary to become entrepreneurs in various fields of Technology.
- Equip students with the requisite technical skills needed for employment in industry and institutions.
- Prepare students as instructors in technology oriented courses in secondary and technical institutes in the fields of Automotive Industry and Technology, Computing, Electronics, Welding and Wood Technology.
- 4. Prepare students for the rigors of postgraduate studies.
- 5. Inculcate the basic principles of practical Christianity such as honesty, dignity of work, and respect of authority.
- 6. Provide an academic environment that emphasizes and advocates critical thinking and research.
- 7. Foster collaboration with other institutions and industries in conjunction with the relevant office.



### **CAREER OPPORTUNITIES**

- Automotive technologists qualify for management positions in customer relations, credit and finance personnel, sales, marketing, inventory control, technical adviser, parts manager and fleet management. They find employment as field service personnel, assessors, diagnostic tool and service manual developers, dealership managers, warranty auditors, or automotive technology instructors.
- 2. Electronics technologists work as members of "engineering teams" in applied design, product development, installation, maintenance, manufacturing production, or operations. They find employment in technical services including field engineering, customer support, marketing and sales, line managers in semi-conductor industries, in the fields of radio, television, telecommunication, entrepreneurs of electronics and electrical industry and as instructors in technological colleges and technical institutes.

### **ENTRANCE REQUIREMENTS**

### **DIRECT ENTRY**

In addition to meeting University minimum entrance requirements, students entering the Department of Technology, must have at least a C+ (plus) in mathematics and physics.

### INTERDEPARTMENTAL TRANSFER

All students wishing to transfer to Technology must attain a minimum grade of C+ (plus) in TCEM 111 and PHYS 155. In addition, the students must officially transfer before they are allowed to take upper division Technology courses (levels of 300 and above).

### **GRADUATION REQUIREMENTS**

- Completion of all courses and attainment of the required grade and credit hours as listed under each respective degree program
- 2. A minimum overall cumulative GPA of 2.00 is required to graduate.
- A GPA of 2.25 is required for the Concentration and the Core. A minimum grade of C for each course in the Concentration and the Core is required.

# **Course Listing**

### BACHELOR OF SCIENCE IN AUTOMOTIVE TECHNOLOGY

### SUMMARY

General Education	28
Specialization	91
Cognates	21
Total	140 credits

Automotive majors are exempt from the following General Education Requirements

EDUC 215	Introduction to Philosophy of Christian Education	2
INSY 107	Information Technologies for Today	2
MGMT 103	Basic Management and Entrepreneurial Skills	2
MATH 101	Pre-Calculus	3
0FTE 120	Keyboarding	0
ENVI 227	Environment and Society	2
PHYS 100	Concepts of Physical Sciences	2
	Total	13

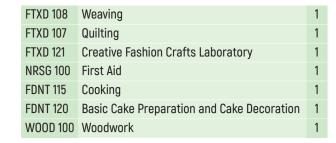
GENERAL	EDUCATION REQUIREMENTS 28 Credit	ts
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
KISW 114 FREN 103	Language Use in Kiswahili/ Beginning French II	2
GCAS 107 LITE 151	Music Appreciation/ Introduction to Literary Appreciation	2
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
RELB 220	Life and Teachings of Jesus	2
<b>RELH 155</b>	Adventist Heritage	2
<b>RELT 207</b>	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two Classes from the following (4 Credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

### Any one of the following:

AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1



### **SPECIALIZATION COURSES**

### 91 Credits

A minimum grade of C (plain) be attained at the prerequisite level in all Technology Courses before one can register for the next level.

AUBO 131	Fundamentals of Auto Body Repair	3
AUBO 212	Auto Body Refinishing	3
AUBO 221	Major Panel Repair	3
AUBO 311	Major Collision Repair	3
AUBO 330	Motor Vehicle Valuation and Insurance	2
AUTO 114	Power Technology	2
AUTO 222	Automotive Engines	3
AUTO 231	Auto Electricity and Electronics	3
AUTO 311	Automotive Air-conditioning	2
AUTO 322	Automotive Diesel	3
AUTO 331	Drive Trains and Suspension	3
AUTO 422	Engine Performance	3
AUTO 430	Heavy Commercial Vehicles Systems	3
COMP 130	Software Applications in Technology	2
ELCT 111	Fundamentals of Electronics	3
MECT 121	Technical Drawing	2
MECT 232	Computer Aided Drawing	2
MTLS 122	Welding Technology	2
MTLS 322	Workshop Practice	2
TCED 111	Engineering Materials	2
TCED 210	Machine and Tool Maintenance	3
TCED 211 A	Practicum in Technology	1
TCED 220	Philosophy of Technical Education	2
TCED 230	Industrial Safety Or	
TCED 231	Safety Education	2
TCED 310	Introduction to Fluid Mechanics	2
TCED 321 A	Advanced Practicum in Technology	1
TCED 325	Technology Entrepreneurship	2
TCED 330	Industrial Economy	2
TCED 410	Thermodynamics	3
TCED 411	Senior Project I	2
TCED 422	Senior Project II	2
TCED 425	Fleet Management	2
TCED 487	Industrial Attachment	2
TCEM 111	Engineering Mathematics I	3
TCEM 122	Engineering Mathematics II	3
TCEM 211	Engineering Mathematics III	3
TCEM 222	Engineering Mathematics IV	3
W00D 181	Bench Woodworking	2

COGNATE	COURSES 21 Credit	ts
ACCT 110	Bookkeeping and Accounting	3
ECON 201	Introduction to Principles of Economics	2
CHEM 121	General Chemistry	4
MGMT 130	Foundations of Management	3
MGMT 231	Human Resource Management	3
PHYS 155	General Physics I	3
STAT 150	Introduction to Probability and Statistics	3

## BACHELOR OF SCIENCE IN ELECTRONICS TECHNOLOGY

### SUMMARY

General Edu	ucation Requirements 28			
Specializati	on 82			
Communica	ation/Industrial Option 16			
Cognates	18			
Totals	144 Credits			
Electronic majors are exempt from the following Genera Education Requirements				
EDUC 215	Introduction to Philosophy of Christian			
	Education			
INSY 107	Information Technologies for Today	2		
MGMT 103	Basic Management and Entrepreneurial Skills	2		
MATH 101	Pre-Calculus	3		
OFTE 120	Keyboarding	0		
ENVI 227	Environment and Society	2		
PHYS 100	Concepts of Physical Sciences	2		

### GENERAL EDUCATION REQUIREMENTS 28 Credits

<b>U</b> LIILIIIL		•
AGRI 105	Principles of Agricultural Technology	2
BIOL 105	Human Biology	2
ENGL 105	Writing Skills	3
ENGL 106	Speech Communication	1
GCAS 107	Music Appreciation Or	2
LITE 151	Introduction to Literary Appreciation	
KISW 114	Language Use in Kiswahili Or	2
FREN 103	Beginning French II	
PEAC 107	Physical and Recreational Activities	1
HLED 110	Health Principles	1
RELB 220	Life and Teachings of Jesus	2
RELH 155	Adventist Heritage	2
RELT 207	Christian Beliefs	3
RELT 255	Introduction to Christian Ethics	2

### Two courses from the following (4 Credits)

HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
PSYC 101	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2

SWFI 207	Family Issues	2
HIST 111	Concepts of World Civilization Or	2
HIST 119	Issues in Development Studies	2
<b>PSYC 101</b>	Introduction to Psychology	2
SOCI 121	Introduction to Sociology	2
SWFI 207	Family Issues	2

## Any one of the following:

	-	
AGEN 235	Tractor Operations and Maintenance	1
AUTO 100	Personal Auto care	1
AUTO 110	Automobile Driving	1
ELCT 100	Basic Electronics Maintenance	1
FTXD 108	Weaving	1
FTXD 107	Quilting	1
FTXD 121	Creative Fashion Crafts Laboratory	1
NRSG 100	First Aid	1
FDNT 115	Cooking	1
FDNT 120	Basic Cake Preparation and Cake Decoration	1
W00D 100	Woodwork	1

SPECIALIZ	ATION COURSES 82 Credit	S
AUTO 114	Power Technology	2
CMMT 320	Analog and Digital Filters	3
COMP 130	Software Applications in Technology	2
COMP 321	Digital Integrated Circuits	3
COMP 333	Networking and Web Development	3
COMP 332	Microprocessor and Microcontroller Circuits	2
ELCT 111	Fundamentals of Electronics	3
ELCT 123	Analog Electronics I	3
ELCT 211	Analog Electronics II	3
ELCT 312	Product Development and Design	2
INEL 222	Instrumentation and Measurement	2
INEL 232	Electrical Machines	3
INEL 313	Electrical Installation and Costing	2
MECT 121	Technical Drawing	2
MECT 232	Computer Aided Drawing	2
MTLS 122	Welding Technology	2
SDEV 211	Software Engineering Principles	2
SDEV 222	Object Oriented Analysis and Design	3
SDEV 313	Object Oriented Programming in Java	3
TCED 111	Engineering Materials	2
TCED 211E	Practicum in Technology	1
TCED 220	Philosophy of Technical Education	2
TCED 230	Industrial Safety	2
TCED 321E	Advanced Practicum in Technology	1
TCED 325	Technology Entrepreneurship	2
TCED 330	Industrial Economy	2
TCED 410	Thermodynamics	3
TCED 411	Senior Project I	2
TCED 422	Senior Project II	2
TCED 487	Industrial Attachment	2

TCEM 111	Engineering Mathematics I	3
TCEM 122	Engineering Mathematics II	3
TCEM 211	Engineering Mathematics III	3
TCEM 222	Engineering Mathematics IV	3
W00D 181	Bench Woodworking	2
COMMUN	CATION OPTION 16 Credi	ts
CMMT 321	Communication Principles	3
CMMT 332	Digital Television Circuits	2
CMMT 333	Digital RF Systems and Circuits	2
CMMT 411	Sound and Video Production	3
CMMT 412	Telecom and Packets Networks	3
CMMT 423	Mobile and Satellite Communication	3
INDUSTRI	AL ELECTRONICS OPTION 16 Credi	ts

INDUSTRIAL ELECTRONICS OPTION 16 Credits			S
INEL 331	Control I		3
INEL 410	Industrial Elect. Devices, Circuits		2
COMP 334	Computer Hardware		3
INEL 412	Control II		2
INEL 420	Power Systems		3
INEL 423	Programmable Logic Controllers		3

COGNATES 18 Credits		ts
ACCT 110	Bookkeeping and Accounting	3
CHEM 121	General Chemistry	4
ECON 201	Introduction to Principles of Economics	2
MGMT 130	Foundations of Management	3
PHYS 155	General Physics I	3
STAT 150	Introduction to Probability and Statistics	3

## **MINOR IN ELECTRONICS**

## SUMMARY

Totals	27-28 Credits
Elective Courses	8-9
Specialization Courses	19

SPECIALIZATION COURSES 19 Credit		S	
COMP 321	Digital Integrated Circuits		3
ELCT 111	Fundamentals of Electronics		3
ELCT 123	Analog Electronics I		3
ELCT 211	Analog electronics II		3
ELCT 312	Electronics Fabrication		2
INEL 313	Electrical Installation and Costing		2
MECT 232	Computer Aided Drawing		2
TCED 211E	Practicum in Technology		1

ELECTIVE	COURSES 8-9 Credi	ts	
CMMT 332Digital Television Circuits3CMMT 320Analog and Digital Filters3COMP 333Networking and Web Development3INEL 222Instrumentation and Measurements2			
CMMT 320	Analog and Digital Filters	3	
COMP 333	Networking and Web Development	3	
INEL 222	Instrumentation and Measurements	2	
INEL 232	Electrical Machines	3	

# **UPGRADING PROGRAMS**

### BACHELOR OF SCIENCE ELECTRONICS or AUTOMOTIVE

This program is tailored to meet the needs of Technology professionals who hold diploma qualifications in Mechanical/ Automotive Technology and who wish to upgrade to degree level. The upgrading program is expected to take  $2\frac{1}{2}$  to 3 years to complete.

### ADMISSION REQUIREMENTS

Applicants must meet the following requirements:

- 1. A minimum grade of C (plain) at the Kenya Certificate of Secondary Education (KCSE) or its equivalent.
- 2. A diploma in Automotive/Mechanical Engineering from a recognized institution, with a minimum grade of 4 pass or equivalent.
- 3. An academic transcript and an updated curriculum vitae (CV).

### **CREDIT TRANSFER**

A student seeking to receive credit transfers is expected to petition by filling the credit transfer application form available in the Registrar's Office. The application must be accompanied by a CV, transcript showing all courses, grades from previous training, and course syllabi/outlines. A maximum of 30 credits may be transferred in accordance to policy in the governing bulletin. The student must have a minimum grade of C+ or its equivalent in the course he/she is seeking credit transfer.

### **RECOMMENDED EXEMPTION FOR THE GENERAL COURSES**

HIST 111	Concepts of World Civilization	2
KISW 114	Introduction to Kiswahili or	2
	Vocational Skills	1
FREN 103	Beginning French II	
PEAC 107	Physical and Recreational Activities	1
OFTE 120	Introduction to Keyboarding	0
LITE 151	Introduction to Literary Appreciation	2
PSYC 101	Introduction to Psychology	2
AGRI 105	Principles of Agricultural Technology	2

### RECOMMENDED CORE/CONCENTRATION/COGNATES COURSES FOR CREDIT TRANSFER

COMP 130	Software Applications in Technology	2
ELCT 111	Fundamentals of Electronics	3
ELCT 211	Analog Electronics II	3
INEL 222	Instrumentation and Measurements	2
INEL 232	Electrical Machines	3
INEL 313	Electrical Installation and Costing	3
TCEM 111	Engineering Mathematics I	3
TCEM 122	Engineering Mathematics II	3
MECT 121	Technical Drawing	2
TCED 111	Engineering Materials	2
TCED 211E	Practicum in Technology I (Electronics)	1

### RECOMMENDED COURSES FOR CHALLENGE EXAMINATION

\* Students are allowed to challenge 10 credits only

COMP 321	Digital Integrated Circuit	3
ELCT 211	Analog electronics II	3
MECT 232	Computer Aided Drawing	2
MTLS 122	Welding Technology	2
TCED 325	Technology Entrepreneurship	2
TCED 410	Thermodynamics	3

\*The challenge examination shall constitute theory and practical

### **RECOMMENDED EXEMPTION FOR THE GENERAL COURSES**

HIST 111	Concepts of World Civilization	2
KISW 114	Introduction to Kiswahili or	2
FREN 103	Beginning French II	1
	Vocational Skills	1
PEAC 107	Physical and Recreational Activities	1
ECON 201	Introduction to Principles of Economics	2
OFTE 120	Keyboarding	0
PSYC 101	Introduction to Psychology	2
LITE 151	Literature Appreciation	2
SWFI 207	Family Issues	2
SOCI 121	Introduction to Sociology	2
PSYC 101	Introduction to Psychology	2
AGRI 105	Principles of Agricultural Technology	2

### RECOMMENDED CORE/CONCENTRATION/COGNATES COURSES FOR CREDIT TRANSFER - 30 Credits

AUBO 131	Fundamentals of Auto Body Repair	3
AUTO 222	Automotive Engines	3
MECT 121	Technical Drawing	2
ELCT 111	Fundamentals of Electronics	3
TCED 111	Engineering Materials	2
MTLS 122	Welding Technology	2
TCED 210	Machine and Tool Maintenance	3
TCED 211A	Practicum in Technology I (Automotive)	1
AUTO 231	Automotive Electricity and Electronics	3
COMP 130	Software Applications in Technology	2
TCEM 111	Engineering Mathematics I	3
TCEM 122	Engineering Mathematics II	3

### RECOMMENDED COURSES FOR CHALLENGE EXAMINATION

\* Students are allowed to challenge 10 credits only

TCED 325	Technology Entrepreneurship	2
TCED 310	Introduction to Fluid Mechanics	2
AUTO 331	Drive Trains and Suspension	3
TCED 410	Thermodynamics	3
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\*The challenge examination shall constitute theory and practical



# **BACHELOR OF SCIENCE IN AUTOMOTIVE TECHNOLOGY**

# Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т	1 [	CODE	COURSE TITLE	Th	L	Т
	ELCT 111	Fundamentals of Elect.	2	1	3	1 [	AUTO 114	Power Technology	1	1	2
1st	TCEM 111	Engineering Mathematics I	3		3	1 [	COMP 130	Software Appl. Tech.	1	1	2
	MECT 121	Technical Drawing	1	1	2	1 [	TCEM 122	Engineering Math II	3		3
	ENGL 105	Writing Skills	3		3	1 [	TCED 111	Engineering Materials	1	1	2
	PSYC 101/	Intro. to Psychology/	2		2	] [	ENGL 106	Speech Communication	1		1
	SOCI 121/	Sociology/									
	SWFI 207	Family Issues	-						4		
	RELH 155	Adventist Heritage	2		2	$\left\{ \right\}$	HLED 110	Health Principles	1		1
	GCAS 107	Music Appreciation or	2		2		RELT 207	Christian Beliefs	3		3
	LITE 151	Introduction to Literary Appreciation						Vocational Skills (AUTO 110: Driving)	1		1
	PEAC 107	Phy. & Recr. Activities	1		1	1 [	MGMT 130	Found. of Management	3		3
		Total	16	2	18	1 [		Total	15	3	18
	AUBO 131	Funds. of AutoBody Repair	2	1	3		AUBO 221	Major Panel Repair	2	1	3
Ond	MTLS 122	Welding Technology	1	1	2	$\left\{ \right\}$	AUBO 221 AUTO 222	Automotive Engines	2	1	3
2nd	TCEM 211	Engineering Math III	3		3	$\left\{ \right\}$	TCEM 222	Engineering Math. IV	2	1	3
	RELB 220	Life & Teachings of Jesus	2		2		TCEN 222	Machine & Tool Maintenance	2	1	3
	MGMT 231	¥	3		3	$\left\{ \right\}$	MECT 232	Computer Aided Drawing	1	1	2
	HIST 111	Concepts of World Civilaztion or	2		2	$\left\{ \right\}$	AUBO 212	Auto Body Refinishing	2	1	3
	HIST 119	Issues in Dev. Studies			2		BIOL 105	Human Biology	2	1	2
	KISW 114	Intro to Kiswahili or	2		2	$\left\{ \right\}$	RELT 255	Intro. to Christian Ethics	2		2
	FREN 103	Beginning French II	- 2		2		KLLI ZJJ	Total	2 15	5	21
	AGRI 105	Prin. of Agri. Technology	1	1	2	$\left\{ \right\}$		lotal	IJ	J	21
	AOINI 103	Total	16	3	19						
	TCED 310	Intro. to Fluid Mechanics	2		2		AUTO 311	Automotive Air-con	1	1	2
3rd	AUBO 311	Major Collision Repair	2	1	3		STAT 150	Introduction to Probability and Statistics	3		3
	TCED 211A	Practicum in Tech.	1		1	1 [	TCED 321A	Adv. Practicum in Tech.	1		1
	ACCT 110	Bookkeeping & Accounting	3		3	1 [	TCED 230	Industrial Safety	2		2
	CHEM 121	General Chemistry	3	1	4	1 [	PHYS 155	General Physics I	2	1	3
	AUTO 231	Automotive Electricity	2	1	3	] [	ECON 201	Intro. to Prin. of Econ.	2		2
	TCED 220	Phil. of Tech. Education	2		2	] [	AUTO 322	Automotive Diesel	2	1	3
		Total	15	3	18			Total	13	3	16
	TCED 411	Senior Project I	2		2		TCED 487	Industrial Attachment	2	0	2
4th	TCED 410	Thermodynamics	3		3	1	TCED 422	Senior Project II	2	0	2
	AUTO 331	Drive Trains and Suspension	2	1	3	1	AUTO 422	Engine Performance	2	1	3
	TCED 330	Industrial Economy	2		2	1	MTLS 322	Workshop Practice	1	1	2
	AUBO 330	Vehicle Valuation	2		2	1	TCED 425	Fleet Management	2	0	2
	W00D 181	Bench Woodworking	1	1	2	1	AUTO 430	Heavy Commercial Vehicle System	2	1	3
	TCED 325	Tech. Entrepreneurship	2		2	1		Total	11	3	14
		Total	14	2	16	1					

# **BACHELOR OF SCIENCE MAJOR IN ELECTRONICS TECHNOLOGY (COMMUNICATION OPTION)**

# Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	ELCT 111	Fundamentals of Elect.	2	1	3		TCEM 122	Engineering Math II	3		3
1st	TCEM 111	Engineering Mathematics I	3		3		AUTO 114	Power Technology	1	1	2
	MECT 121	Technical Drawing	1	1	2		COMP 130	Software Appl. Tech.	1	1	2
	<b>RELH 155</b>	Adventist Heritage	2		2		RELT 207	Christian Beliefs	3		3
	PSYC 101	Intro. to Psychology/	2		2		ENGL 106	Speech Communication	1		1
	SOCI 121	Sociology/									
	SWFI 207	Family Issues									
	SOCI 121	Sociology/SWFI 207 Family Issues	-		-		HLED 110	Health Principles	1		1
	ENGL 105	Writing Skills	3		3		TCED 111	Engineering Materials	1	1	2
	GCAS 107	Music Appreciation or	2		2		0747 450	Vocational Skills (AUTO 110: Driving)	1		1
	LITE 151	Introduction to Literary Appreciation					STAT 150	Introduction to Probability and Statistics			3
	PEAC 107	Phy. & Recr. Activities	1		1			Total	15	3	18
		Total	16	2	18						-
	ELCT 123	Analog Electronics I	2	1	3		SDEV 211	Software Eng. Prin.	1	1	2
2nd	MTLS 122	Welding Technology	1	1	2		MECT 232	Computer Aided Drawing	1	1	2
Ling	TCEM 211	Engineering Math III	3		3		TCEM 222	Engineering Math. IV	3		3
	KISW 114	Intro to Kiswahili/	2		2		TCED 230	Industrial Safety	2		2
	FREN 103	Beginning French II						,			
	INEL 232	Electrical Machines	2	1	3		MGMT 130	Found. of Management	3		3
	AGRI 105	Prin. of Agri. Technology	1	1	2		RELT 255	Intro. to Christian Ethics	2		2
	<b>RELB 220</b>	Life & Teachings of Jesus	2		2		BIOL 105	Human Biology	2		2
	HIST 111 HIST 119	Concepts of World Civilization/ Issues in Dev. Studies	2		2		ELCT 211	Analog Electronics II	2	1	3
		Total	15	4	19			Total	16	3	19
	INEL 222	Instrumentation & Measurement	1	1	2		TCED 325	Tech. Entrepreneurship	2		2
3rd	SDEV 222	Object Oriented Analysis	2	1	3		SDEV 313	Object Oriented Prog Java	2	1	3
ord	INEL 313	Electrical Inst. & Costing	1	1	2		COMP 321	Digital Int. Circuit	2	1	3
	ACCT 110	Bookkeeping & Accounting	3		3		ELCT 312	Product Dev. and Design	1	1	2
	TCED 220	Phil. of Tech. Education	2		2		ECON 201	Intro. to Prin. of Econ.	2		2
	TCED 211E	Practicum in Technology	1		1		PHYS 155	General Physics I	2	1	3
	CHEM 121	Fundamentals of Chemistry	3	1	4		COMP 333	Network & Web Dev.	2	1	3
	TCED 321E	Advance Practicum	1		1			Total	13	5	18
		Total	14	4	18						
	CMMT 333	Digital RF Systems	1	1	2	· 	TCED 430	Attachment in Industry	2		2
4th	CMMT 333 CMMT 412	<u> </u>	2	1	2	{	TCED 430	Senior Project II	2		2
	TCED 411	Senior Project I	2	1	2		CMMT 411	Sound & Video Prod	2	1	3
	TCED 411 TCED 330	Industrial Economy	2		2		TCED 410	Thermodynamics	2	1	3
	W00D 181	Bench Woodworking	2	1	2	-	CMMT320	Analog & Digital Filters	2	1	3
	CMMT 332		1	1	2		CMMT 423	Mobile & Satellite Comm	2	1	3
	CMMT 332		2	1	2		611111 423	Total	2 13	I	5 16
	COMP332	Micropro. & Microcontroller circuit		1	2			ιυται	IJ		10
					4-						
		Total	12	6	18						

# BACHELOR OF SCIENCE IN ELECTRONICS TECHNOLOGY (INDUSTRIAL OPTION)

# Four-Year Course Plan

YEAR		FIRST SEMESTER						SECOND SEMESTER			
	CODE	COURSE TITLE	Th	L	Т		CODE	COURSE TITLE	Th	L	Т
	ELCT 111	Fundamentals of Elect.	2	1	3	1	TCEM 122	Engineering Math II	3		3
1st	TCEM 111	Engineering Mathematics I	3		3	1	AUTO 114	Power Technology	1	1	2
	MECT 121	Technical Drawing	1	1	2	1	COMP 130	Software Appl. Tech.	1	1	2
	RELH 155	Adventist Heritage	2		2	1	RELT 207	Christian Beliefs	3		3
	PSYC 101/	Intro. to Psychology/	2		2	1	ENGL 106	Speech Communication	1		1
	SOCI 121/	Sociology/									
	SWFI 207	Family Issues									
	ENGL 105	Writing Skills	3		3		HLED 110	Health Principles	1		1
	GCAS 107	Music Appreciation or	2		2		TCED 111	Engineering Materials	1	1	2
	LITE 151	Introduction to Literary						Vocational Skills (AUTO 110: Driving)	1		1
		Appreciation	1		1	-	OTAT 150	Introduction to Drobability and	7		7
	PEAC 107	Phy. & Recr. Activities	1		1		STAT 150	Introduction to Probability and Statistics	3		3
		Total	16	2	18			Total	15	3	18
	ELCT 123	Analog Electronics I	2	1	3		SDEV 211	Software Eng. Prin.	1	1	2
2nd	MTLS 122	Welding Technology	1	1	2	1	MECT 232	Computer Aided Drawing	1	1	2
	TCEM 211	Engineering Math III	3		3	1	TCEM 222	Engineering Math. IV	3		3
	KISW 114	Intro to Kiswahili or	2		2	1	TCED 230	Industrial Safety	2		2
	FREN 103	Beginning French II				1	MGMT 130	Found. of Management	3		3
	INEL 232	Electrical Machines	2	1	3	1	RELT 255	Intro. to Christian Ethics	2		2
	AGRI 105	Prin. of Agri. Technology	1	1	2	1	BIOL 105	Human Biology	2		2
	RELB 220	Life & Teachings of Jesus	2	-	2	1	ELCT 211	Analog Electronics II	2	1	3
	HIST 111	Concepts of World Civilization or	2		2	1		Total	16	3	19
	HIST 119	Issues in Dev. Studies				1				•	
		Total	15	4	19						
	INEL 222	Instrumentation & Measurement	1	1	2	I	TCED 325	Tech Entropropourchin	2		2
اسم	SDEV 222	Object Oriented Analysis	2	1	2	-	SDEV 313	Tech. Entrepreneurship Object Oriented Prog Java	2	1	2
3rd				-		-					
	INEL 313	Electrical Inst. & Costing	1	1	2	-	COMP 321	Digital Int. Circuit	2	1	3
	ACCT 110	Bookkeeping & Accounting	3		3	-	ELCT 312	Product Dev. and Design	1	1	2
	TCED 220	Phil. of Tech. Education	2		2	-	ECON 201	Intro. to Prin. of Econ.	2		2
	TCED 211E		1		1	-	PHYS 155	General Physics I	2	1	3
	CHEM 121	Fundamentals of Chemistry	3	1	4	-	COMP 333	Network & Web Dev.	2	1	3
	TCED 321E		1		1			Total	13	5	18
		Total	14	4	18						
1+h	CMMT 333	• •	1	1	2		TCED 430	Attachment in Industry	2		2
4th	CMMT 412	Telephone & Packet	2	1	3		TCED 422	Senior Project II	2		2
	TCED 411	Senior Project I	2		2		CMMT 411	Sound & Video Prod	2	1	3
	TCED 330	Industrial Economy	2		2		TCED 410	Thermodynamics	3		3
	WOOD 181		1	1	2		CMMT320	Analog & Digital Filters	2	1	3
	CMMT 332	Digital Television Circuits	1	1	2		CMMT 423	Mobile & Satellite Comm	2	1	3
	CMMT 321	Communication Principles	2	1	3			Total	13		16
	COMP332	Micropro. & Microcontroller circuit	1	1	2						
		Total	12	6	18						

# **Course Descriptions**

### AUBO 131 Fundamentals of Auto Body Repair 3 Credits

An introduction to the basic theory and repair procedures of automobile body structures. Appropriate welding and hand tool skills are developed on mock-ups, before work is done on damaged cars. The laboratory shall introduce students to safety practices while dealing with vehicle body repair, as well introduce them to the tools and equipment and refinishing materials. The students shall handle introductory panel repair work as a laboratory project. Two lecture hours per week and one three-hour laboratory per week. Prerequisite: MTLS 122.

### AUBO 212 Auto Body Refinishing

### 3 Credits

A study of the fundamentals of refinishing materials, equipment and procedures. Emphasis on surface preparation for spot, panel, overall and custom refinishing. The laboratory experiences shall introduce the students to the skills of surface preparation and application of automotive refinishing materials, emphasis will be on spot panel and overall spray with solid, Basement/clear coat, and pearl finishes. Two lecture hours and one three-hour laboratory per week. Prerequisite: AUBO 131.

### AUBO 221 Major Panel Repair

### **3 Credits**

**3 Credits** 

A study on sectioning, panel repair and alignment, fixed and movable glass replacement and preparation for final finish. The laboratory learning experience shall include removal and installation of goads, visual inspection for damage, panel repair, alignment and panel adjustment, glasses and other fixtures; removal and replacement. Two lecture hours and one threehour laboratory per week. Prerequisite: AUBO 212.

### AUBO 311 Major Collision Repair

A study of major repair covering skills, tools, heavy equipment, frame alignment within accepted tolerances and standards, and estimating. Emphasis is on panel replacement, clipping, and auto frame straightening. The laboratory skills and experiences shall include minor and major collision appraiser and estimating frame and body measurement alignment partial panel replacement and sectioning Two lecture hours and one three-hour laboratory per week. Prerequisite: AUBO 221.

### AUBO 330 Motor Vehicle Valuation 3 Credits and Insurance

A course dealing with the comprehensive technical assessment of the vehicle on the following areas; mechanical condition, body and chassis, mechanical testing, pit inspection, body and exterior inspection, electrical and electronic controls, suspension, tires and rim, and motor vehicle insurance. Three lecture hours per week.

### AUTO 100 Personal Auto Care

### 1 Credit

Stressing the need for proper procedures in routine automobile maintenance. Helping the automobile owner become a wise consumer with emphasis on how to do simple tune up, maintenance, and minor repairs. Not applicable to an automotive major or minor. 1 lecture hour and 1 three-hour laboratory per week.

### AUTO 110 Automobile Driving

### 1 Credit

This course aims at providing knowledge and skills in automobile driving. Emphasis is given to safe driving habits and an understanding of the Highway Code. 1 lecture hour and 2 hours of practical driving sessions per week. Prerequisites: Must be 18 years old or above with passport or National Identification card.

### AUTO 114 Power Technology

2 Credits

A study of basic power sources with regards to internal combustion principles and energy analysis as applies to small gasoline engines. The laboratory shall consist of disassembling, assessing and reassembling of a small internal combustion engine. One lecture hour and one three-hour laboratory per week.

### AUTO 231 Automotive Electricity 3 Credits and Electronics

The study of automotive electrical and electronic systems. Emphasis in starting, charging, and ignition systems, electrical and electronic diagnostic procedures, repairs, and adjustments. Laboratory activities include introduction to safe working habits in automotive electrical works and proper usage of tools, disassembly and reassembly of various electrical components including starter motors, alternators, tracing the various circuitry and identification of various electronic and electrical components, measurement and testing of electrical systems and problem solving procedures. Two lecture hours and one three-hour laboratory per week. Prerequisites: ELCT 111 and AUTO 222.

### AUTO 222 Automotive Engines

**3 Credits** 

**3 Credits** 

A study of automotive engine fundamentals. Emphasis is given to theory, design, types and operations of internal components and systems trouble diagnosis and repair procedures. The laboratory consists of disassembling, assessment, reassembling of an automobile engine, emphasis on identifying basic parts, procedures and operating principles and trouble diagnosis. Two lecture hours and one three-hour laboratory per week. Prerequisite: AUTO 114.

### AUTO 311 Automotive Air Conditioning 2 Credit

A study of heating ventilation and air conditioning system (HVAC) and controls. Emphasis is given to inspection and repair of compressor, dryer, evaporator, condenser, and controls and retrofitting. Laboratory session involves the identification of the various components of the various HVAC systems. Identification of the various AC controls, manipulation of ac control head. Dismantling and reassembly of ac compressors, measuring the high and low side pressures, repair of leakages, evacuation and refilling of systems, retrofitting and routine maintenance procedures of automotive HVAC Systems. One lecture hour and one three-hour laboratory per week. Prerequisite: AUTO 231

### AUTO 322 Automotive Diesel

A study of overall diesel engine principle as regards engine types, construction and management, fuel and injection principles, electronic engine management systems The laboratory consists of disassembling, assessment and reassembling of a compression ignition engine, special focus on the fuel injection system. Two lecture hours and one three-hour laboratory per week. Prerequisite: AUTO 222

### AUTO 331 Drive Trains and Suspension

**3 Credits** 

This is a study of automotive clutches, transmissions/transaxles, drivelines, differentials, brakes, suspension springs and shocks, steering, tire, wheel balancing and alignment. The laboratory consists of disassembling, assessment and reassembling of power transmission and suspension mechanisms. Two lecture hours and one three-hour laboratory per week. Prerequisite: AUBO 221.

### AUTO 422 Engine Performance

**3 Credits** 

A study of automotive tune-up fundamentals. Emphasis is given to fuel systems and metering devices, vacuum and air systems. Engine management systems and computer diagnostics. Laboratory on disassembling and reassembling of various types of fuel system components and ignition systems. Manipulating the fuel, air and ignition system and observing their effects on engine performance. Servicing and problem diagnosis in fuel, ignition and air delivery systems. Two lecture hours and one three-hour laboratory per week. Prerequisite: AUTO 231.

### AUTO 430 Heavy Commercial Vehicles Systems

**3 Credits** 

A study of heavy commercial vehicle systems that include cabins, chassis, axles, hitches, power systems, gearing and clutches, boosters, suspensions and tires. The laboratory consists of physical examination on operations of heavy vehicle systems. One lecture hour and one three-hour laboratory per week. Prerequisites AUTO 322

### CMMT 320 Analog and Digital Filters

**3 Credits** 

Survey of electrical filter technology, response, design and application of passive and active filters, effects of component imperfection on filter performance. Digital signal and system description. Difference equations. Discrete Fourier transform. The Z-transforms. Linear time-invariant systems; representation of linear-time-invariant systems described by difference equations. Design and implementation of digital filter. Laboratory sessions will give the ability to characterize circuits by looking at their step and sinusoidal steady-state responses, measure and plot the magnitude and the phase of the frequency response of the circuit: lowpass, highpass, bandpass and bandstop filters. Characterize and develop sallen key filters using simulation software and practical wiring. Implementation of digital filters through Matlab. Two lecture hours per week and one three-hour laboratory per week. Prerequisite: Elect 211

### CMMT 321 Communication Principles 3 Credits

An introductory course to electronic communication systems involving; noise in communication systems, AM and FM principles, transmitters and receivers, multiplexing and data communication. Laboratory consists of oscillator circuit building, Mixers, AM /FM radio building, AM/FM demodulation circuits, RF Amplifier circuit investigation. Two lecture hours and one three-hour laboratory per week. Prerequisite: ELCT 211.

### CMMT 332 Digital Television Circuits

**3 Credits** 

Study of television transmission principles, focusing on the theory and operation of monochrome and color television systems, Plasma TV, LCD and LED screen TV. It includes antenna systems, high and low voltage power supplies, picture tube and vertical detection systems. The laboratory consists of exercises that emphasize on both digital and analogue TV circuits, on

troubleshooting techniques, and assembly of television by sections. One lecture and one three-hour laboratory per week. Prerequisite: ELCT 211.

### CMMT 333 Digital RF Circuits and Systems 2 Credits

Analog and digital RF circuits for communication including broadcast TV and radio, mobile and cellular radio, transmitters and receivers, mixers, oscillators, modulators, AGC, gain distribution and IF amplifiers. Other applications of RF e.g. medicine, imaging, RFID, heating astronomy and optoelectronics spectrum management are discussed. The laboratory consists of design and practical winding of RF inductors, investigation of RF oscillator circuits, Use of smith charts and software for impendence matching, design of a low noise amplifier at RF frequencies. Analog to digital converter and digital to analog converter, Use of simulation software to investigate DSP circuits components. 2 lecture hours per week. Two lecture hours and one three-hour laboratory per week. Prerequisite: CMMT 321.

### CMMT 411 Sound and Video Production 3 Credits

Study on digital sound recording, video capturing, editing and production. It includes radio programming, broadcast operations, lighting technology, and color adjustment using digital imaging software. Laboratory activities include Sound and video capturing, editing and video production laboratories that deals with the mastery of the course. Two lecture hours and one three-hour laboratory per week. Prerequisite: CMMT 332.

### CMMT 412 Telecom and Packet Network 3 Credits

This course covers telecom, data communication and networks as used in telecommunication. Addresses circuit switching vs circuit switching, and the emergence of VoIP. Laboratory on handsets dial and tone types, appreciate the investigation of components used in circuit switching circuits. Use of packet methods to implement telephone circuit, VoIP. Use of the telephone with other systems. Call center or conferencing. Two lecture hours and one three-hour laboratory per week. Prerequisite: CMMT 333.

### CMMT 423 Mobile and Satellite 3 Credits Communications

This course covers satellite and mobile communications as applied in electronic communications. Fibre optic communication is covered, including Link Budgets for both Fibre optics and satellite. Laboratory project on designing some antennas, set up of a C and KU band satellite receiver system, splicing of cables, Design of a given fiber system. Appreciate the use of Mobile phones for Data rather than voice and multimedia application. Two lecture hours and one three-hour laboratory per week. Prerequisite: CMMT 412.

### CNST 140 Home Maintenance

2 Credits

A course designed to help the future and present homeowner save on home repairs. Emphasis is placed on maintenance, tools, supplies, and procedures followed in making home repairs. Two lecture hour and one three-hour laboratory per week.

### COMP 130 Software Applications 2 Credits in Technology

This course introduces the student to computer fundamentals and applications, concepts and tools they need for research

and presentation in a technological environment. Applications include keyboarding, word-processing, PowerPoint, Access, Excel, Matlab etc. Laboratory projects on word processing, excel, PowerPoint, Access, configuration of a printer, scanner and some basic troubleshooting skills for software and hardware including the installation of programs. Two lecture hours and one three-hour laboratory per week.

### COMP 321 Digital Integrated Circuits

3 Credits

Study on digital integrated circuits including characteristics of logic gates, families and application of IC gates, clocks, counters, registers, displays, memories, microcontrollers and microprocessors. Laboratory consists of practical applications by experiment on the following topics: Semiconductor switching device circuits, bread boarding, truth table deigning, logic gates, Boolean algebra, clock system, flip-flops circuits, logic circuits, counters, timers, multiplexer, de-multiplexers, seven segment display and basic registry and memory. One lecture and one three-hour laboratory per week. Prerequisites: ELCT 123 and TCEM 122.

### COMP 332 Microprocessor and 2 Credits Microcontroller Circuits

A study of microprocessor, microcontrollers, computer hardware and interfacing, embedded systems, programming and their applications. Actual laboratory experiment that deal with microprocessor, microcontroller, microcomputer units and programming experience using Arduino, Atmega, Atmel modules, studio and AVR software. One lecture and one threehour laboratory per week. Prerequisite: COMP 321.

### COMP 333 Networking and Web 3 Credits Development

Strategies in wired and wireless networking, hardware structure and design, server applications, website design and development, management and security concerns, clientserver interactions, application layer protocols, TCP/IP protocol suite. Creating WWW sites and domains. Computer networking laboratories that deal with computer networking topology, designing a minimum of seven pages personal website and a development of an existing website with no less than twenty pages. Two lecture hours and one three-hour laboratory per week. Prerequisite: COMP 130.

### COMP 334 Computer Hardware

### **3 Credits**

An introduction to computer component selection and application. Topics include motherboards, video cards, memories, storage devices, BIOS input/output devices, modems, printers, and network cards and their applicability to industry applications and standards. Laboratory experiment on personal and laptop computer power supply, motherboards, bios system, storage devices, computer casing design, peripherals compatibility and computer monitors. Two lecture hours and one three-hour laboratory per week. Prerequisite: COMP 130 and COMP 332.

### ELCT 100 Basic Electronics Maintenance 1 Credit

This is a course in basic maintenance of electronic equipment and computers. The course covers principles of basic electronic circuits, electronic devices and maintenance of electronic equipment and computers. One lecture hour and one threehour laboratory per week. Credits earned in this course do not count for electronics majors and minors.

### ELCT 102 Technology for Pastors

1 Credit

**3 Credits** 

**3 Credits** 

An introduction to and practical application of various technological devices and software related to the work of a pastor. The topics include: sound system repairs and operation, lighting systems, multimedia systems, software for word processing, power point presentations, electronic drawing, spread sheets, database and theological software tools. 1 lecture hour.

### ELCT 111 Fundamentals of Electronics 3 Credits

Study of the fundamentals of electronics technology: including Ohm's, Kirchhoff's laws, series and parallel DC, AC resistive, capacitive and inductive circuits. Circuit analysis techniques of DC/AC circuits, with a study of RLC circuits and their applications. Laboratory experiments on the verification of the principles and properties of series, parallel and series-parallel resistive circuits through Ohm's, Kirchhoff's Current and Voltage laws application; Thevenin Superposition, Norton theorems; RC and RL circuit properties and troubleshooting techniques. Two lecture hours and one three-hour laboratory per week.

### ELCT 123 Analog Electronics I

Introduction to solid-state devices including diodes, BJTs, JFETs, MOSFETs and other special semiconductor devices. Emphasis in design and application of these devices, transistor biasing schemes, amplifier configurations and frequency response etc. Laboratory sessions will have emphasis is on application of solid state devices for practical circuit implementation in design of transistor biasing schemes, amplifier configurations and frequency response, linear ICs, etc. Two lecture hours and one three-hour laboratory per week. Corequisite to ELCT 111.

### ELCT 211 Analog Electronics II

Study of basic power, differential and operational amplifier circuits, electronic circuits such as regulated power supply, switching power supplies, filter circuits, oscillators, resonant circuits, mixers etc. Special emphasis is placed on the use of the operational amplifier and various applications as used in electronic circuits. Laboratory will consist of implementation and determination of the characteristics of non-inverting and inverting amplifiers; application of the OP amp as comparator, integrator, differentiator, adder, peak detector and log and antilog amplifier; Verification of the Op amp and select linear ICs for filters, voltage regulation , oscillation and communication circuits. Two lecture hours and one three-hour laboratory per week. Prerequisite: ELCT 123.

### ELCT 312 Product Development and Design 2 Credit

This is a project-based course that covers modern tools and methods for product design and development. The cornerstone is a project in which teams of management, engineering, and industrial design students conceive, design and prototype a physical product. The practical application of fabrication and construction techniques is demonstrated by the student. Class sessions are conducted in workshop mode and employ cases and hands-on exercises to reinforce the key ideas. Topics include identifying customer needs, concept generation, product architecture, industrial design, and design-for-manufacturing. Laboratory experiment on Planning, designing, modification, development of existing product in the market, developing student to be creative by producing a design product in his/ her area of specialization. One lecture hour per week and one three-hour laboratory per week. Prerequisites: COMP 321, ELCT 211, and MECT 121.

### INEL 222 Instrumentation and Measurements 2 Credits

This course is about electronic instruments and how to carry out measurements using them. It addresses the concepts and principles of measurement, focusing on the need to be knowledgeable and adept in types of instruments available and the variables they measure, emphasis on the different transducers used and their applications. Laboratory consists of verification of the principles of measurement systems and circuits; loading effects of instruments and the statistical analysis application in measurements; practical application of measurement procedures in industry. One lecture hour and one three-hour laboratory per week. Prerequisites: ELCT 211 and COMP 321.

### **INEL 232 Electrical Machines**

### **3 Credits**

This course covers the basic principles of electromagnetism, transformers (types, construction, operation and equivalent circuits), DC and AC machines: types, construction, performance, motor/generator characteristics, starting and braking methods, speed control and their applications, and special machines e.g. stepper motors, etc.) The laboratory covers the transformer, step up and step down rewinding, identification of motors and generators and its operation, identifying common parts of an induction motor. Two lecture hours and one three-hour laboratory per week. Prerequisite: ELCT 111.

### **INEL 313** Electrical Installation and Costing 3 Credits

Electrical practices including code requirements (IEE), design and layout of electrical circuits, wiring methods, and commercial applications. Laboratory experiments on basic electrical installation with building plan drafting, computations of load and consumption. Two lecture hours and one three-hour laboratory per week. Prerequisite: INEL 232.

### INEL 331 Control I

An introduction to linear control and basic principles of control system modelling, response, Laplace transforms, dynamic system models, block diagram models, steady-state errors and stability. Lab exercises make use of MatLab. 2 lecture hours per week. Prerequisites: TCEM 122 and INEL 232.

### INEL 412 Control II

### 2 Credits

**3 Credits** 

This course covers root locus analysis, frequency response, design and analysis of controllers and observers, z-transforms, discrete control representations. The laboratory covers Implementation and verification of the root locus, frequency response, and further analysis of analog controllers. Implementation and verification of the digital controller. One lecture hour and one three-hour laboratory per week. Prerequisite: INEL 331

### INEL 410 Industrial Electronic Devices, 3 Credits Circuits and Machine Drives

Introduction to power electronic devices: power diodes, power transistors, MOSFETs, Thyristor family and IGBT. Single and three

phase power conversion and applications; using switching AC-DC converters, AC-AC converters, DC-DC converters and inverters. DC and AC machine drives. Laboratory exercise to test, analyze and apply industrial electronic devices or components such as power diodes, power transistors, MOSFETs, Thyristor family and IGBT into the circuits. Two lecture hours and one three-hour laboratory per week. Prerequisite: INEL 331.

### **INEL 420** Power Systems

**3 Credits** 

An understanding economics of power generation, generating machinery, excitation systems, auxiliary supplies, overhead lines, underground cables and the power system layout and control. Laboratory consists of identification, analysis and verification of the power system through simulation software. Determination of effective power, fault location, power factor, etc of a typical power system network. Two lecture hours and one three-hour laboratory per week. Prerequisite: INEL 412.

### INEL 423 Programmable Logic Controllers 3 Credits

The course covers concepts and applications of PLC using ladder logic and relay diagrams. The contents are logic operations, the processor unit and memory, programming tools, I/O system, PLC languages, ladder logic programming and applications, communications, sizing and selection of PLCs installation and diagnosis. Laboratory covers the identification of parts of a typical PLC system, analysis and implementation through program simulation of several PLC applications. Interrogation of memory locations and PLC ladder logic synthesis and troubleshooting. Two lecture hours and one-three hour laboratory per week. Prerequisite: INEL 331.

### **MECT 121 Technical Drawing**

2 Credit

2 Credit

2 Credits

The fundamentals of drawing as applied to mechanical engineering problems. Orthographic projections, auxiliary and sectional views shape, and size description, isometric view, sketching and detail drawing, with an introduction to computer aided drawing. Laboratory covers Template on free hand writing letters, object, geometric figures, orthographic, isometric, trimetric diametric and basic software use for drawing. One lecture hour and one three-hour laboratory per week.

### MECT 232 Computer Aided Drawing

Study of the basic concepts and drawing techniques using CAD software for technology courses. Emphasis on architectural, floor-planning and general design of a workshop, electronic/ electrical and mechanical parts and systems. The laboratory covers the design of two-dimensional and three-dimensional drafting using the different kinds of command in AutoCAD. One lecture hour and one three-hour laboratory per week. Prerequisite: MECT 121.

### MTLS 122 Welding Technology

A study designed to introduce the student to various welding processes. The student will learn about metals and metal preparation and development skills to weld various joints in various positions. The laboratory involves introduction to safety in welding environment, welding environment tools and apparatus. SMAW, TIG, MIG, SPOT, BUTT, OAW welding techniques and skills. Welding consumables uses and identification. Soldering procedures, brazing procedures. One lecture hour and one three-hour laboratory per week. Prerequisite: TCED 111.

### MTLS 322 Workshop Practice

### 2 Credits

A study of metal fabrication and working processes; which includes welding, bending, shaping and milling, or forging. Quality control measures emphasized in production processes. The laboratory consists of general bench work using hand tools, sheet metal work, forging operations and machining. One lecture hour and one three-hour laboratory per week. Prerequisite: MTLS 122.

### SDEV 211 Software Engineering Principles 2 Credits

The first course in software engineering introduces principles of modern software design including the software process, system engineering, requirements engineering, analysis and design models, architectural design, component level design, user interface and testing strategies. Laboratory on UML diagrams and their use. Introduction to UML software. Introduction to semantics of drawing a use case and class diagrams using any UML software. One lecture and one threehour laboratory per week. Prerequisite: COMP 130.

### SDEV 222 Object Oriented Analysis 3 Credits and Design

The course covers software analysis and design methods, requirements analysis and modelling, object interaction, specifying operations and control, system architecture and design, patterns, human-computer interface, designing boundary classes and data management design. UML case tools are used in the design. Laboratory projects on the use of UML diagrams to model Use cases, class diagrams and other UML diagrams. Use the UML graphic knowledge to convert from model to near actual software implementation. Two lecture hours and one three-hour laboratory per week. Prerequisite: SDEV 211.

### SDEV 313 Object Oriented Programming 3 Credits in Java

Java is one of the fast evolving Object Oriented programming languages. This course covers, Java Applications, Classes and Objects, Control Statements, Methods, Arrays, Classes and Objects, Object-Oriented Programming: Inheritance, Polymorphism and GUI. Laboratory will use the knowledge gained in UML to implement using java as a language including display of numbers and figures, GUI building, call of methods in other Java classes, Use of control statements. Two lecture hours and one three-hour laboratory per week. Prerequisite: SDEV 222.

### **TCED 111 Engineering Materials**

### 2 Credit

This course is designed to study the structures and properties of metals, ceramics, polymers, composites, and electronic materials. It includes mechanical testing and behavior, heat treating, degradation and processing of materials. Laboratory session covers identification of common engineering materials and their behavior when subjected to heat, mechanical force and environment. Identifying practical applications of various materials e.g metals, polymeric materials, ceramics, and nonmetals. Destructive and non-destructive testing of materials, inspection of materials in service. One lecture hour and one three-hour laboratory per week.

### TCED 210 Machine and Tool Maintenance 3 Credits

A study and practical application of the principles and procedures followed in safe and efficient use, routine maintenance and repair of tools and equipment, space utilization in a technological environment. Laboratory covers workshop machine and equipment set up and repair, routine maintenance and space utilization. Two lecture hours and one three-hour laboratory per week.

### TCED 211A Practicum in Technology 1 Credit (Automotive)

Laboratory work experience or laboratory supervised experience in an assigned area of concentration in Automotive Technology. (225 hours of work experience in Auto-body Repair shop for one credit registered). Prerequisite: AUBO 221.

### TCED 211E Practicum in Technology 1 Credit (Electronics)

Laboratory work experience or laboratory supervised experience in an assigned area of concentration. (225 hours of work experience in Electronics Repair shop for 1 credit registered). Prerequisite: ELCT 211.

**TCED 220 Philosophy of Technical Education 2 Credits** A study of philosophy of general education, technical education, and Adventist education system. Special emphasis will be placed on the philosophy of technical education, and how it relates to general and Christian education. Two lecture hours per week.

### TCED 230 Industrial Safety

Introduction to the total problems of loss in Industry with emphasis on the problem of accident prevention, Safety Management Systems, health hazards, safety analysis and evaluation, safety equipment, accident investigation and control; includes organizational safety policy, identification and appraisal of accident-producing conditions and practices. Two lecture hours per week.

2 Credits

2 Credits

### TCED 231 Safety Education

A basic course in safety and the fundamentals of accident prevention in institutions, laboratories, workshops and industrial application. Accident statistics and resource information, legal responsibilities of teachers, safety requirements in relation to equipment, and environmental conditions are studied. This course is designed to meet the legal obligations placed on teachers for accident prevention and safety precautions. Two lecture hours per week.

### TCED 310 Introduction to Fluid Mechanics 2 Credits

This course is an introduction to the basic phenomena and principles of fluid flow. This includes fluid properties, statics, conversion of mass momentum and energy. With emphasis on quantitative analysis of velocities, pipe flow and overflow and viscous fluid flow. Two lecture hours per week. Prerequisite: TCEM 122.

### TCED 321A Advanced Practicum in 1 Credit Technology (Automotive)

Individualized laboratory work experience or individualized laboratory supervised experience in an assign area of concentration in Automotive Technology (225 hours of work



experience Automotive Workshop for one credit registered). Prerequisite: TCED 211A.

### TCED 321E Advanced Practicum in 1 Credit **Technology** (Electronics)

A total of 225 hours of laboratory work experience in Public Address System operation and management (112 Hrs.), advanced Radio station maintenance and repair, (113 hrs.) managing and programming of radio station. Prerequisite: TCED 211E.

#### TCED 325 Technology Entrepreneurship 2 Credits

A study of opportunities and investment options that accrue from technology related theories and practices. Two lecture hours per week. Prerequisites TCED 321 A or E

### TCED 330 Industrial Economy

2 Credits

A study of engineering decision methodology and criteria used to include economic factors in determining the best alternative in the design and selection of equipment structures, methods and processes. Two lecture hours per week. Prerequisite: TCEM 111.

### TCED 400 Independent study

1 Credit

Individual study, research, or project in some field of technology that is not covered in any course taken under the direction of a member of the departmental faculty. Prerequisite: 15 credits in technology and the instructor's permission. Can be repeated up to six credits.

### TCED 401 Topics in Technology (A, B, C) 1, 2, 3 Credits

Topics of current or special interest to faculty and students that are not covered adequately by regular courses are under this title. This course may be repeated for different topics. Prerequisite: Consent of the Department.

### **TCED 410** Thermodynamics

### **3 Credits**

Scope of classical thermodynamics. The concept of the zeroth law of thermodynamics. Concept of state functions. The first two laws of thermodynamics, boiler, condenser and turbine energy equations. The concept of heat engine, Entropy, Power production, thermodynamic cycles, Heat transfer and Heat exchangers, One and two-dimensional steady state conduction and Insulation. Three lecture hours per week.

### TCED 411 Senior Project I

A project made during the student's senior year representing his/her major area of interest and ability. The course involves title and project proposal defense. The work is to be supervised by assigned departmental faculty. The project should reflect the student's level of competence; incorporate a variety of skills and originality. Prerequisite: Must have 50 credits in major area.

### TCED 422 Senior Project II

Implementation of the approved proposed project in TCED 411. A final defense of the implemented project is required. Prerequisite: TCED 411.

### TCED 425 Fleet Management

A study of fleet management with emphasis on cost control, fleet reliability and efficiency improvement and customer care. Emphasis is given to the three components of fleet management, namely; the manager, the driver, the vehicle itself. Two lecture hours per week.

### **TCED 487** Industrial Attachment

### 2 Credits

2 Credits

This course provides the bridge between the theoretical knowledge gained from learning in the classroom setting and the practical skills required by business organizations and industries beyond those acquired in their usual learning environment. A minimum of twelve weeks of attachment is required. Prerequisites: TCED 321A, TCED 321E. Completion of required practicum hours is required and approval of the department chairman is considered.

#### TCEM 111 Engineering Mathematics I **3 Credits**

An introductory course for engineers covering basic arithmetic. algebra, trigonometric functions, exponential and logarithmic functions, limit and sequences and series. Three lecture hours per week.

#### TCEM 122 Engineering Mathematics II **3 Credits**

This course covers the following topics; complex numbers, vector algebra, matrix algebra, geometry (solid mensuration), and an introduction to discrete mathematics. Three lecture hours per week. Prerequisite: TCEM 111.

#### TCEM 211 Engineering Mathematics III **3 Credits**

Topics to be covered include: limits of functions, continuity, differential and integral calculus, and an introduction to ordinary differential equations. Three lecture hours per week. Prerequisite: TCEM 122.

#### TCEM 222 Engineering Mathematics IV **3 Credits**

An introduction to Laplace transforms, Fourier series and Z transforms, data handling and elements of probability theory. Three lecture hours per week. Prerequisite: TCEM 211.

### WOOD 100 Woodwork

The study of indigenous trees found in ecological zone of Kenya. Learning the basic hand tools used in the construction of simple furniture. The laboratory involves building a project using only hand tools with an emphasis on furniture construction. One lecture hour and one three-hour laboratory per week.

### WOOD 181 Bench Woodworking 1

2 Credits A study of wood as it pertains to furniture building with a thorough acquaintance with the proper use and maintenance of hand woodworking tools. The laboratory involves building a project using only hand tools with an emphasis on safe shop practices. One lecture hour and one three-hour laboratory per week. Prerequisite MECT 121.

WOOD 387 Furniture Design 2 Credits and Construction

Furniture, its design, construction and finishing methods. The use of jigs as related to wood-making processes. Projects are chosen in consultation with the instructor. Two lecture hours per week and one three-hour laboratory per week. Prerequisite: WOOD 181.

# SCHOOL OF SCIENCE AND TECHNOLOGY

2 Credits

2 Credits

2 Credits

# **Student Life and Services**

The University of Eastern Africa, Baraton, seeks to meet the academic, spiritual, social, and cultural needs of its students. Each student has the opportunity to develop a well-rounded personality through participation in the various campus activities.

#### **STUDENT HOUSING**

All students who do not live either with their parents or spouses are expected to live in residence halls on campus. Exceptions may be granted by the University Administration upon request. Residence halls have the basic conveniences but students are expected to provide their own mattresses and bedding. The University has limited off-campus housing for married students. Applications forms for these are available in the DVCSAS office.

#### HALLS OF RESIDENCE

Each student in the Halls of Residence is issued with a key to the room at the time of admission and is to return the key to the Residence Deans when moving out. The cash charge for a lost key is KShs. 1,000.00. The cash charge for unreturned key is Kshs. 500.00. Whenever a student moves out of the room, the room will be checked for reasonable cleanliness and normal wear. Where necessary, charges for extra cleaning and/or repairs will be made to the student's account. Day students are not permitted to use the facilities in the residence halls. Any day student using these facilities without authorization will face disciplinary action.

#### **FOOD SERVICES**

Resident students are expected to eat their meals in the University cafeteria. A vegetarian diet is provided in the boarding plan which allows for the normal three meals per day while the semester is in session. Those remaining during vacation periods are charged a daily boarding Fee. For the ones on the recommended medical diets, a selection may be made from what is available at the cafeteria. The cost of three meals a day is included in the boarding fees. Day students are not allowed to eat in the cafeteria unless they have made arrangements with the Food Services in consultation with the DVC Student Affairs and Services and the Students Finance Office. NO STUDENT OR ANY OTHER PERSON WILL BE ALLOWED TO PREPARE OR SELL FOOD IN THE HALLS OF RESIDENCE.

#### **HEALTH SERVICES**

The University operates a hospital which provides basic health care to students. Students entering the University for the first time will be required to take medical examination by the doctor chosen by the University. The results of the medical examination can be shared with the DVCSAS office, if need be. Special cases should be reported immediately to DVCSAS office. The cost of this medical examination will be charged to the student's account.

#### **STUDENT HANDBOOK**

Each student is provided with a Student Handbook which is designed to inform the students concerning rules and regulations governing them during their stay in this University. It is imperative that every student gets a copy and be acquainted with the information that is found therein.

# LIBRARY

The library aims to support the curriculum and philosophy of the University, providing relevant information in a variety of formats. The Library Handbook provides more information.

#### Working Hours

Sunday - Thursday	7:00 am - 5:30 pm and 7:00 pm - 10:30 pm
Friday	7:00 am - 2:00 pm
Public Holidays	2:00 pm - 10:30 pm
Saturday night	7:30 pm - 10:30 pm

#### STUDENT WORK STUDY PROGRAM

The University operates a number of auxiliary and vocational services where students may work part time to earn a portion of their school expenses. Students utilize these opportunities to engage in productive and useful labor which helps them to develop character traits of industry, dependability and initiative. In the process, students may also acquire valuable vocational skills.

#### **RELIGIOUS ACTIVITIES**

A fundamental objective of the University is to develop the spiritual faculties of the student. Daily worship, weekend services, as well as weekly assemblies are important parts of the University programs in pursuit of this objective. All students are required to attend these convocations. There are other religious activities which offer students additional opportunities for Christian development and service. Among these are group prayers, off-campus witnessing, and activities of the Adventist Youth Society.

#### **RECREATIONAL FACILITIES**

Facilities for volleyball, basketball, soccer, rugby, hockey, lawn tennis and table tennis are available on campus. There is also ample space on the campus for exercise, jogging, or walking. Since physical fitness aids in mental excellence, each student is encouraged to adopt a regular program of recreation and exercise.

# EXTRA-CURRICULAR ACTIVITIES AND ORGANIZATIONS

Some of the non-curricular activities available to the student are: departmental academic clubs, special interest and hobby clubs. Each of these has a faculty sponsor and a student leader. Such clubs and groups afford additional opportunity to develop leadership, spiritual vigor, physical health, mental acuity, and social aptness.

#### **STANDARD OF CONDUCT**

Detailed information about standards and expected conduct are found in the Student Handbook. Every student should become acquainted with its contents and be guided by the principles found therein. In short, students are expected to follow high standards of moral and Christian conduct, and to refrain from immoral and degrading acts or behavior such as: public display of affection (PDA), indecent conduct, profane language, the use of alcohol, tobacco or other drugs, reading pernicious literature, gambling, or attending places of amusement not approved by the University. If a Student's behavior proves detrimental to the growth and development of other students or the University, he/she will be asked to withdraw temporarily or permanently from the institution.

#### **UNIVERSITY APPOINTMENTS**

Attendance in student University appointments is part of the academic program of the university. University appointment meetings are provided for spiritual, academic and social benefit of the UEAB family. Each student shall be required to attend all University appointments. Exceptions to this must be sought from the DVS Student Affairs and Services.

#### **OFFICIAL UNIVERSITY APPOINTMENTS:**

- 1. Daily evening worships (Sunday, Tuesday, Thursday)
- 2. Separate residence meetings (Monday)
- 3. General Assembly (Tuesday morning)
- 4. Power Hour/Prayer meeting (Wednesday)
- 5. Friday vespers
- 6. Sabbath (Sabbath School, Lesson discussion class, Divine Service and Sundown worship)
- 7. Week of Spiritual Emphasis
- 8. Annual Camp meetings
- 9. All class/departmental related meetings
- 10. Any other meeting convened by the University authorities

#### HANDLING OF ABSENCES FROM UNIVERSITY APPOINTMENTS

- Appointments shall be recorded from the first weekend after registration commences and continue until the last weekend before the beginning of the final semester exams.
- 2. The allowable absences shall not exceed 10% of the total semester appointments.
- 3. All excusable absences shall be cleared at the Appointments Office.
- 4. Three incidences of tardiness shall constitute one absence.

#### LEAVE OF ABSENCE

When a student needs to leave the campus for any reason, proper arrangements must be made in the office of the DVC Student Affairs and Services. Leave of Absence Forms are available at the residence halls or on the University website. For detailed information about leave of absence consult the Student Handbook.

#### THE UNIVERSITY BOOKSTORE

Textbooks and wide range of stationery are available at the University bookstore. Any financial issues from the bookstore can be addressed to the Student Finance Officer.

#### MARRIAGES

As a general rule, marriages are not encouraged during the academic year. However, exceptions may be granted at special request.

#### **VACATION PERIOD CHARGE**

A room charge of Kshs. 150.00 per day and meal charge of Kshs. 150.00 per meal will be made to students remaining on campus during vacation periods.

#### **UNREGISTERED STUDENTS**

Unregistered students shall be treated as guests while residing in the halls of residence and using cafeteria services. A nonregistered student will be charged Kshs. 150.00 per meal.

# **Financial Information**

# **GENERAL FINANCIAL INFORMATION**

#### REFUNDS

Students who withdraw from any or all classes and from the Boarding Section during the semester will receive the following refunds on the charges of tuition, room and meals: 85% refund during the first and second weeks of the semester, 75% refund during the third week of the semester, 65% refund during the fourth week of the semester, 55% refund during the fifth week of the semester, 45% refund during the sixth week of the semester, 25% refund during the semester, 25% refund during the semester, 25% refund during the semester.

No refund after the eighth week except in cases of serious illness, accident, or dismissal from school where the necessary Drop Procedure has been completed at the office of the Registrar. The amount of the refund in this case will be determined by the Administrative Board.

#### **CASH WITHDRAWAL**

Fees once paid will not be withdrawn for personal use.

### TRANSCRIPTS OF CREDITS AND DEGREE CERTIFICATES

These are issued only when the student's account has been paid in full. The first transcript is issued free; each additional transcript request must be accompanied by KShs. 500.

#### **STUDENT FINANCIAL AID**

The student financial aid program at the University of Eastern Africa, Baraton has been developed to help needy and worthy students registered at the University.

#### 1. Virchel and Esther Wood Loan Fund

- a. This fund is specifically for Biology students.
- b. More details can be found in the same department.
- 2. Siphiwe E. Muze Memorial Endowment Fund
  - a. This scholarship was established to benefit students pursuing studies in Biological Sciences.
  - b. Allocation is made by the Student Financial Aid Committee in consultation with the Dean of the School of Science and Technology and the Chairperson of the Department of Biological Sciences.
  - c. To be considered, one should have been at the University for at least two semesters and have an overall GPA of not less than 3.0 in the Biological Science Major.
  - d. This scholarship was established in memory of Mrs. Siphiwe E. Muze, former lecturer in the Department of Biological Sciences. Its availability is contingent upon donations from well wishers.

#### 3. Work Program

- a. The University provides assistance to a limited number of students through the work program. However, it should be noted that it is not possible for students to wholly rely on the work program to meet all their financial obligations to the University.
- b. Application for the work program should be made through the Student Labor Office.

#### 4. Literature Evangelism Ministry

 a. Students can earn money towards their University fees by engaging in the Literature Ministry during the holidays. This can be done in a number of territories in the Eastern-Central Africa Division, and even outside of Africa, e.g. in Scandinavian countries

#### 5. Bonus Program

- a. The Bonus Program has been established by the University to assist students who are members of the Seventh-day-Adventist Church. This program is subject to availability of funds and when available students are expected to work for specified number of hours as determined from time to time by the Student Financial Aid Committee.
- b. The amount they earn from work is usually supplemented by a bonus which enable the student to meet their tuition fees for the next semester. Students who are interested should see the DVC Student Affairs for further information.

### FEE STRUCTURE AND FEE PAYMENT

For information about Fee payments and Fee Structure, visit our website; www.ueab.ac.ke.

(For fee structures, go to Links and Downloads, then select Fee Structures to download a fee structure that apply to your area/ level of study)

# The Universities Act (Cap. 210B)

# CHARTER OF THE UNIVERSITY OF EASTERN AFRICA, BARATON

A Charter to provide for the establishment, control governance and administration of the University of Eastern Africa, Baraton; and for connected purposes.

# MEMBERSHIP AND GOVERNANCE OF THE UNIVERSITY

The Members of the University shall be;

- 1. The Board of Trustees
- 2. The Chancellor
- 3. The Vice-Chancellor
- 4. The Members of the University Council
- 5. The Deputy Vice-Chancellor (DVC)-Academics
- 6. The Deputy Vice-Chancellor (DVC)-Finance and Admin.
- 7. The Deputy Vice-Chancellor (DVC)-Student Affairs and Services
- 8. The Registrar of Admissions and Records
- 9. The Associate Administrators
- 10. The University Chaplain
- 11. The Directors of Extension Campuses and Principals of Constituent Colleges
- 12. The Professors and Lecturers of the University
- 13. The Librarian
- 14. The Students
- 15. Such other members of staff of the University, the alumni, or any other body formally admitted into association with the University.

#### **GOVERNANCE**

The governance and control of the University shall rest in the following bodies:-

- 1. The Constituency
- 2. The Board of Trustees
- 3. The Chancellor
- 4. The University Council
- 5. The Administrative Board
- 6. The University Senate
- 7. The School Boards
- 8. The Departmental Boards
- 9. The University Committees
- 10. The Faculty and Staff Committees

# The Constituency

The Constituency of the University shall have and exercise the following functions:

- 1. To appoint every five years the non-ex-officio members of the University Council;
- 3. To outline and enact the general policies controlling the University in harmony with the standards and policies of the Seventh-day Adventist church, and this Charter;
- 3. To receive reports on the operation and progress of the University from the Vice-Chancellor and to determine whether the purpose and objectives for which the University was established are being met.
- 4. To carry out any other business that shall be deemed necessary for the successful running of the University.

# The Chancellor

- 1. The President of the East-Central Africa Division (ECD) of the Seventh- day Adventist Church shall be the Chancellor.
- 2. The Chancellor shall be appointed every five years by the Constituency represented by the Executive Committee of the East-Central Africa Division.
- 3. The Chancellor shall award certificates, diplomas and degrees.
- 4. In circumstances where he is unable to do so, the Vice-Chancellor will award the certificates, diplomas, and degrees upon the request of the Chancellor.

#### The Board of Trustees

The members of the Board of Trustees shall be appointed by the Constituency.

- 1. The Board of Trustees shall consist of the following members:
  - a. President of East Kenya Union Conference (Chair);
  - b. Education Director of East-Central Africa Division (Secretary)
  - c. Executive Secretary of West Kenya Union Conference;
  - d. Treasurer of East Kenya Union Conference;
  - e. Lay Representative (Academic)
  - f. Lay Representative (Corporate);
  - g. Lay Representative (Legal Advisor):
  - h. Lay Representative (Health Sciences):
  - University of Eastern Africa, Baraton, Vice-Chancellor (Exofficio).
  - j. Chancellor (Ex-officio)
- 2. The Board of Trustees of the University shall have and exercise the following functions:
  - a. to meet at least twice in a year to transact university business;

- - b. to appoint members of the University Council every five years;
  - c. to process, consider recommendations of the University Council on appointment, transfer and dismissal of the University Vice-Chancellor, every five years and/or when a vacancy arises;
  - d. to raise funds for the benefit of the University;
  - e. to promote objects of the University;
  - f. to outline and enact the general policies controlling the University in harmony with the standards and policies of the Seventh-day Adventist Church, and this Charter;
  - g. to receive reports on the operation and progress of the University from the Vice- Chancellor; to carry out any other function that shall be deemed necessary for the successful running of the University.

### **The University Council**

- 1. The University Council shall consist of the following members:
  - a. President of West Kenya Union Conference (Chair);
  - b. Vice-Chancellor of UEAB (Secretary);
  - c. Executive Secretary of East-Central Africa Division (Ex-officio);
  - d. Treasurer of East-Central Africa Division (Ex-officio);
  - e. Director of Education of East-Central Africa Division; (Ex-officio);
  - f. President of Greater Rift Valley Conference;
  - g. Executive Secretary of East Kenya Union Conference;
  - h. Treasurer of West Kenya Union Conference;
  - i. Director of Education of West Kenya Union Conference;
  - j. Director of Education of East Kenya Union Conference;
  - k. Lay Representative (Academic);
  - I. Lay Representative (Health Sciences)
  - m. Lay Representative (Legal Advisor)
  - n. Lay Representative (Corporate)
  - o. Lay Representative (Finance)
  - p. An Alumnus of UEAB;
  - q. A faculty representative of UEAB.
- 2. The Council of the University shall have and exercise the following functions:
  - a. to meet at least twice annually to transact University business;
  - b. to employ faculty and staff;
  - c. to approve the statutes and policies of the University;
  - d. to approve the budget;
  - e. to recommend to the Board of Trustees the appointment, transfer or dismissal of the Vice-Chancellor, every five years and/or when a vacancy arises;
  - f. to appoint, transfer or dismiss the Deputy Vice Chancellors; Business Manager, Dean of Student Affairs and Services, School Deans, Directors, department chairpersons, Extension Campus Administrators and other office bearers;
  - g. to establish schools, campuses, constituent colleges and affiliate colleges;
  - h. to approve requirements for awarding degrees;
  - i. to approve the description of degrees;
  - j. to approve/set the terms and conditions of service including appointments, dismissals, remuneration and retirement benefits of the staff and faculty of the University;
  - k. to approve any changes to the academic bulletin, employees' handbook and students' handbook as recommended by the University Senate;

- to ensure the operation of the University as a whole and all its departments are in harmony with the general policies of the Seventh-day Adventist Church;
- m.to establish and ensure that operational policies and purposes of the University are being realized;
- n. to provide facilities and to maintain physical facilities adequate to meeting the needs of the planned students' enrollment in the various academic and vocational program which shall be adopted;
- to transfer, or dismiss administrative officers, faculty and staff members of the University;
- p. to prescribe the duties, terms and conditions that shall apply on recommendations by the senate or Administrative Board.
- q. to make such other appointments, paid or honorary, as may be necessary for the operation of the University;
- r. to promote qualified faculty and staff to appropriate ranks and positions as recommended by the University Senate and/or Administrative Board;
- s. to set rates for tuition, board, room, fees and the policies governing financial and scholarship relationships of the students to the University.
- t. to require and adopt annual operating budget for the University, which shall govern the financial activities and decisions in the operation of the University;
- u. to approve the financial record system of the University and to require an audit of these accounts annually by independent auditors;
- v. to receive, review and approve periodical financial statements of the University's operation;
- w. to administer the property and funds of the University both movable and immovable in a manner and for purposes which shall promote the best interest of the University;
- x. to receive on behalf of the University donations, endowments and grants;
- y. to signify the acts of the University by use of a Common Seal;
- to approve the composition of the major staff committees of the University;
- a. to present a report of the operations of the University to the Board of Trustees through the Vice-Chancellor;
- b. Approve rules and regulations for student Associations;
- c. to perform such other functions as may be conferred upon it by this Charter and the statutes.

#### The Administrative Board

- 1. The Administrative Board shall consist of thirteen members as follows:
  - a. Vice-Chancellor, (Chairperson);
  - b. Deputy Vice-Chancellor for Academics, (Vice Chairperson);
  - c. Deputy Vice-Chancellor for Finance, Planning and Administration:
  - d. Deputy Vice-Chancellor for Student Affairs and Services;
  - e. Registrar, (Secretary);
  - f. University Chaplain;
  - g. The Director of Development and Alumni Affairs;
  - h. The Human Resource Manager;
  - i. The General Manager, Auxiliary Enterprises;
  - j. The Director of Quality Assurance
  - k. The Director of Corporate Affairs;
  - I. Librarian;
  - m. One Dean of School on one year's rotation.

- - 2. The functions of the Administrative Board shall be:
    - a. to implement University policies and Council actions;
    - b. to carry out the day-to-day operations of the University;
    - c. to make recommendations to the University Council;
    - d. to handle any other matter related to the running of the University.

# The University Senate

- 1. The Senate of the University of Eastern Africa, Baraton shall consist of:
  - a. Vice-Chancellor, (Chairman);
  - b. Deputy Vice-Chancellor for Academics, (Vice Chair);
  - c. Registrar (Secretary);
  - d. Deputy-Vice Chancellor for Finance and Planning and Administration;
  - e. Deputy-Vice Chancellor for Student Affairs and Services;
  - f. Director of Development and Alumni Affairs;
  - g. University Chaplain;
  - h. Librarian;
  - i. Deans of Schools;
  - j. Chairpersons of academic departments;
  - k. A representative not below the rank of a lecturer from each school selected by the faculty or the school;
  - I. Human Resource Manager;
  - m. Director of Affiliations, Linkages and Extension Programs;
  - n. Director of Graduate Studies;
  - o. Director of Research and Publications;
  - p. Auxiliary Enterprises General Manager;
  - q. President, Student Association;
  - r. Secretary General, Student Association;
  - s. Director of Quality Assurance;
  - t. University Professors;
  - u. Director of Corporate Affairs;
  - v. Directors of Extension Campuses.
- 2. The Senate shall have and exercise the following functions:
  - a. to recommend to University Council the approval of academic programs;
  - b. to recommend to the University Council the review of curricula;
  - c. to serve as the final academic board of examiners for graduating seniors as recommended by Boards of Examiners at Department and School levels;
  - d. to recommend to the University Council academic and related policies;
  - e. to review existing policies and/or set new policies on broad academic related issues;
  - f. to recommend annual budget to the University Council;
  - g. to recommend to the University council statutes on social, spiritual and academic policies;
  - h. to receive reports on the operation of any aspect of the university as deemed necessary;
  - i. to receive reports from faculty members who are engaged in research projects and publications;
  - j. to consider such other matters as may be delegated to it by the University administration.

# Committees

The University Council may, by statute, establish such Committees as are necessary for the efficient discharge of the functions of the University.

# **Statutes**

In performance of its functions under the University of Eastern Africa Baraton Charter 1991, the University Council makes the following statutes for the governance, control and administration of the University.

These statutes shall be cited as the University of Eastern Africa Statutes 1991, and shall come into effect on 29 March 1991 and upon approval of subsequent amendments by the Commission for Higher Education or the Government of the Republic of Kenya.

# **STATUTE I**

# DEFINITIONS

The terms in these Statutes shall be defined in context or in accordance with the definitions such terms have in the Charter.

# **STATUTE II**

# THE CHANCELLOR

The Chancellor shall be the President of the East-Central Africa Division (ECD) of the General Conference of the Seventhday Adventist Church and shall hold office for five (5) years concurrently with his appointment as the President of East Central Africa Division.

- 1. The Chancellor advises the Vice-Chancellor and the Chairman of Council on the Constituency's expectation of the University;
- 2. The Chancellor chairs Board of Trustees meeting to appoint the Members of the Council, and the Vice-Chancellor as recommended by the University Council;
- The Chancellor monitors the progress/performance of the University and advises the Council/Vice-Chancellor accordingly;
- 4. The Chancellor represents the interests of the University to the Constituency and the World Church as a whole;
- The Chancellor confers degrees at congregations; and in his inability to do so, the Vice-Chancellor shall award them;
- 6. The Chancellor co-signs degree certificates with the Vice-Chancellor;
- 7. The Chancellor is an ex-officio member of the University Council.

# **STATUTE III**

# THE VICE-CHANCELLOR

- 1. The Vice-Chancellor shall be appointed every five years by the University Board of Trustees upon the recommendation of the University Council.
- 2. The Vice-Chancellor shall be the Chief Spiritual, Administrative and Academic head of the University.
- 3. The Vice-Chancellor shall be the Secretary of the University Council.
- The Vice-Chancellor awards certificates, diplomas and degrees in the absence of the Chancellor, upon the latter's request.
- 5. The Vice-Chancellor may assign or delegate any of his duties to a committee or to a member of the University faculty or staff and may withdraw any such delegation or assignment at will.

- - 6. The Vice-Chancellor may re-assign responsibilities or transfer/re-deploy any member of the administrative board and recommend to the University Council for approval.
  - 7. The Vice-Chancellor shall by virtue of his or her office, be a member of every committee functioning in the University.
  - 8. The Vice-Chancellor shall carry out any other responsibility as pertains to his/her office.
  - 9. The term for the Vice-Chancellor is five (5) years, and may be reviewed by the University Council.

### **STATUTE IV**

#### THE DEPUTY VICE-CHANCELLOR FOR ACADEMIC AFFAIRS

- 1. The Deputy Vice-Chancellor for Academic Affairs shall be appointed by the University Council.
- 2. The Deputy Vice-Chancellor for Academic Affairs' primary function shall be in the area of academic administration.
- The Deputy Vice-Chancellor for Academic Affairs shall chair the Academic Standards Committee and Board of Graduate Studies of the University.
- 4. The Deputy Vice-Chancellor for Academic Affairs shall be an ex-officio member of every committee of the University related to academic matters.
- 5. The Deputy Vice-Chancellor for Academic Affairs reports to the Vice-Chancellor.
- 6. The term for Deputy Vice-Chancellor for Academic Affairs is five (5) years, and may be reviewed by the University Council.

### **STATUTE V**

# THE DEPUTY VICE CHANCELLOR FOR FINANCE, PLANNING AND ADMINISTRATION

- The Deputy Vice-Chancellor (DVC) for Finance, Planning and Administration shall be appointed by the University Council on such terms and conditions of service as recommended by the Council.
- The Deputy Vice-Chancellor for Finance, Planning and Administration's primary function shall be in the area of Business management, finance and planning.
- 3. The Deputy Vice-Chancellor for Finance, Planning and Administration reports to the Vice- Chancellor.
- 4. The term for Deputy-Vice Chancellor for Finance, Planning and Administration is five (5) years, and may be reviewed by the University Council.

# **STATUTE VI**

# THE DEPUTY VICE CHANCELLOR FOR STUDENT AFFAIRS AND SERVICES

- The Deputy Vice-Chancellor (DVC) for Student Affairs and Services shall be appointed by the University Council on such terms and conditions of service as recommended by the Council.
- The Deputy Vice-Chancellor for Student Affairs and Services' primary function shall be in the area of student social services, accommodation, and deportment.
- 3. The Deputy Vice-Chancellor for Student Affairs and Services reports to the Vice-Chancellor.
- The term for Deputy Vice-Chancellor for Student Affairs and Services is five (5) years, and may be reviewed by the University Council.

#### **STATUTE VII**

#### THE UNIVERSITY CHAPLAIN

- 1. The University Chaplain shall be appointed by the University Council on such terms and conditions of service as the Council may prescribe.
- The University Chaplain's primary function is to provide spiritual leadership and to coordinate all religious activities of the University.
- 3. The University Chaplain shall be an ordained minister of the Seventh-day Adventist Church.
- The University Chaplain shall have diversified ministry trainings including pastoral experience and clinical pastoral education.
- 5. The minimum required qualification for this position is M.A. Theology/Religion/Pastoral Ministry degree after completion of B.A. Theology/Religion degree. The term for the University Chaplain is five (5) years.
- 6. The University Chaplain is responsible to the Vice-Chancellor for the following functions:
  - a. Serves as the pastor of the University Church in accordance with the Church Manual and the policies of the Seventh-day Adventist Church.
    - i. Works with the elected leaders of the Church in planning and implementation of all the services of the Church.
    - ii. Prepares a sermonic year for the Church and models for the students a well ordered pulpit and Church program.
    - iii. Serves as a liaison between the University Church and the Greater Rift Valley Conference.
  - b. Provides specialized services to the University faculty/ staff and students:
    - i. Teaches up to four credit hours per semester as may be requested by the University administration.
    - ii. Leads out in visitation, weddings, funerals, baptisms, etc.
    - iii. Leads out in staff/faculty and student visitations, counseling (premarital, marital, career, spiritual, psychological etc).
    - iv. Provides periodic written Reports to the University administration through the Vice-Chancellor.
    - v. Provides specialized ministerial services to students based on theology of presence and evangelism.
    - vi. Serves as a member of the following committees:
      - 1. Religious Affairs Committee (Chairperson);
      - 2. Administrative Board;
      - 3. University Senate;
      - 4. Student Aid Committee;
      - 5. Student Affairs Committee;
      - 6. Peer Counseling Committee;
      - 7. HIV and AIDS Committee;
      - 8. Any other committee as may be assigned by the Vice-Chancellor.
  - c. Carries out any other duties as may be specified by the Administrative Board.

# **STATUTE VIII**

#### THE DIRECTOR OF QUALITY ASSURANCE

- 1. The Director of Quality Assurance shall be appointed by the University Council.
- 2. The Director of Quality Assurance is responsible to the Vice Chancellor.

- 3. The minimum required qualification for this position is PhD degree and the term for the Director of Quality Assurance is three (3) years.
- The Director of Quality Assurance has the following major duties:
  - a. Assist with some teaching;
  - b. Chairs the University Quality Assurance Committee meetings;
  - Manages the Quality Assurance Directorate on behalf of the Vice Chancellor;
  - Leads out in the preparation of Self-Assessment/Self-Study documents required for Institutional Evaluation and External Quality Assurance assessment;
  - e. Leads out in verifying the extent to which the University conforms to the standards and guidelines of the Department of Education of the Seventh-day Adventist Church, Commission for University Education, and Inter-University Council for Eastern Africa;
  - Leads out in the coordination of training the staff, faculty, and community to ensure quality service delivery and customer satisfaction;
  - g. Attends internal and external meetings and conferences on quality assurance;
  - Follows up recommendations of Quality Assurance findings, recommendations of accrediting bodies, professional bodies, and tracer studies;
  - Monitors the performance of quality assurance committees at school, academic and non- academic departments, extension campuses and affiliated institutions;
  - k. Keeps, administration, faculty, staff and students awareness of Quality Assurance issues and best practices in university education;
  - I. Assists as appropriate in servicing validation, inspection and monitoring of academic programs;
  - m. Coordinates faculty evaluation, peer review and staff assessment;
  - n. Carries out any other responsibility assigned to him/her by the University Administration.
- The Director of Quality Assurance shall serve as a member of the following Committees:
  - a. Admissions Committee;
  - b. Academic Standards Committee;
  - c. Board of Graduate Studies;
  - d. University Senate.
  - e. Any other committee as may be assigned by the Vice-Chancellor.

#### **STATUTE IX**

#### THE REGISTRAR

- The Registrar shall be appointed by the University Council on such terms and conditions of service as the Council may prescribe.
- 2. The Registrar chairs the Admissions Committee.
- The Registrar shall be the custodian of all academic records, and regalia.
- 4. The Registrar authenticates students' satisfactory fulfillment of graduation requirements.
- 5. The Registrar reports to the Deputy Vice-Chancellor for Academic Affairs.

- 6. The Registrar shall be the Secretary to the Administrative Board and University Senate.
- 7. The minimum required qualification for the Registrar position is Master's degree and the term is for three (3) years.

#### **STATUTE X**

# DIRECTOR/COORDINATOR OF EXTENSION CAMPUS

The Director/Coordinator of Extension Campus shall report to the Vice-Chancellor. He/She shall be appointed by the University Council upon recommendation by the Administrative Board. The minimum required qualification is Master's degree and the term for the Director is three [3] years while for the Coordinator of Extension Campus is two [2] years.

### **STATUTE XI**

#### SCHOOL DEAN

The Dean shall be appointed by the University Council upon recommendation of the Administrative Board on such terms and conditions of service as the Council may prescribe. The Dean of a School is the chief academic officer of the School and reports to the Deputy Vice-Chancellor. The minimum required qualification for this position is PhD degree with the rank of at least Senior Lecturer. The term for the School Dean is three [3] years.

### **STATUTE XII**

#### **CHAIRPERSON OF A DEPARTMENT**

The Chairperson of a department shall be appointed by the University Council upon recommendations by the Administrative Board through the appointments and promotions Committee on such terms and conditions of service as the Council may prescribe. The Chairperson is the chief academic officer of the Department and reports to the School Dean.

The minimum required qualification for this position is Master's degree with the rank of at least Senior Lecturer. The term for the Chairperson is two (2) years for those with Masters degrees and three years (3) for those with PhD degrees..

#### **STATUTE XIII**

#### THE LIBRARIAN

The Librarian shall be appointed by the University Council upon recommendations by the Senate on such terms and conditions of service as the Council may prescribe. The Librarian directs the total operation and services of the library and shall be responsible to the Deputy Vice-Chancellor for Academic Affairs. The minimum required qualification for this position is Master's degree. The term for the Library is five (5) years.

#### **STATUTE XIV**

#### **TERMS AND CONDITIONS OF SERVICE OF STAFF**

The University Council shall prescribe the duties, term, and conditions of service of such academic and administrative staff (whether paid or honorary) as it may deem necessary for the efficient functioning of the university. In addition, the Council may transfer or discharge administrative officers, faculty, and staff members as and when it deems necessary.

#### **STATUTE XV**

#### THE UNIVERSITY COUNCIL

- 1. The University Council shall report to the Board of Trustees.
- 2. The membership, powers, and functions of the University Council shall be as prescribed in the University of Eastern Africa, Baraton Charter, 1991, and as revised in October 2014 in accordance with the Universities Act, 42 of 2012.
- The University Council shall meet at least twice during an academic year and one of these meetings shall be on the campus of the University. The quorum shall be at least half of the total membership.
- Decisions of the Council shall be by a simple majority vote of those present and voting, provided that the chairman of the Council shall have an original and a casting vote.
- 5. The Chairman, may at any time, call a meeting of the Council, and shall call a meeting within 30 days of receiving a request for that purpose addressed to him and signed by at least a third of the membership of the Council.
- 6. The Council may, subject to such limitations as it may think fit, delegate any of its duties to the Chairman or to committees consisting of such members of the Council and other persons as it may think fit. The Council may empower any such committee to act jointly with any other committee provided that the Council shall not delegate to the Chairman or to a committee the power to approve without further reference to the Council, the Annual Operating Budget.
- 7. The Chairman or, in his absence, a Vice Chairman, shall preside at all meetings of the Council.
- The Council may, at the discretion of the Chairman, transact any business by the circulation of papers or electronic mail and any decision so taken shall be submitted for ratification at the next meeting of the Council.
- The Secretary of the Council shall keep the minutes of the Council's deliberations, which must be ratified at a subsequent meeting.
- 10. The Council may invite members of the administrative board and any other person.

# **STATUTE XVI**

#### THE SUBCOMMITTEES OF THE COUNCIL

The Council shall have the right to create sub-committees which shall include but not limited to the following: Academic, Finance and Development, and Student Affairs Services and Spiritual Affairs.

#### **STATUTE XVII**

#### THE ADMINISTRATIVE BOARD

- 1. The Administrative Board manages the day-to-day operations of the University and shall meet at least twice a month.
- 2. A quorum of the Administrative Board shall be at least half of its membership.

# **STATUTE XVIII**

#### THE SENATE

- 1. The powers and functions of the Senate are as prescribed in the University of Eastern Africa Baraton Charter, 1991 and revised in October 2014 in harmony with the Universities Act, no. 42, of 2012.
- 2. The Senate shall meet at least once a semester.

# **STATUTE XIX**

#### QUORUM

All University Committee and sub-committee meetings shall have a quorum of at least half the number of its membership.

# **STATUTE XXI**

#### **TERMS OF SERVICE**

- All administrative and associate officers shall have a term of five years or as may be revised by the University Council, during which they shall be subject to assessment of their performance to determine their effectiveness;
- University Administration shall reserve discretion to recommend to the University council for a decision in respect to evaluation outcome.

### **STATUTE XXII**

#### APPOINTMENT AND REMOVAL OF THE VICE CHANCELLOR FROM OFFICE

- 1. Appointment to the office
  - a. The Vice-Chancellor shall be appointed by the Board of Trustees upon the recommendation of the University Council, for a period of five years;
  - b. The Vice-Chancellor shall be appointed from persons qualified with extensive teaching, administrative and research experience;
  - c. The Vice-Chancellor shall uphold the philosophy, vision, mission and values of the University and the beliefs of the Seventh-day Adventist Church.
- 2. Removal from office
  - a. The University Council shall reserve the right to recommend to the Board of Trustees the removal/ suspension of the Vice Chancellor from office before expiry of term of service;
  - b. The Board of Trustees shall determine the case within three months;
  - c. The Vice-Chancellor shall be removed/suspended from office due to any of the following reasons:
    - i. medical incapacitation;
    - ii. gross misconduct, insubordination, violation of established ethical standards, non-performance;
    - iii. any other actions that contravene the rules, policies, and regulations that govern the office.

# STATUTE XXIII

#### DEPARTMENTS, INSTITUTES AND SCHOOLS

There shall be such Departments, institutes and Schools within the University as the Council may from time to time decide. The University Master Plan calls for the establishment of the following schools and directorates:

- 1. Applied Sciences and Technology
  - a. Agriculture
  - b. Industrial Technology
  - c. Family & Consumer Sciences
  - d. Computer Science
  - e. Information Technology
  - f. Veterinary Medicine
- 2. Business
  - a. Accounting
  - b. Economics

- c. Finance
- d. Human Resource Management
- e. Management
- f. Marketing
- g. Secretarial Studies
- 3. Education
  - a. Adult Education
  - b. Arts Education
  - c. Counseling Psychology
  - d. Educational Psychology
  - e. Primary Education
  - f. Psychology
  - g. Science Education
  - h. Secondary Education
- 4. Directorate of Graduate Studies
  - a. Master of Arts
  - b. Master of Arts in Education
  - c. Master of Business Administration
  - d. Master of Business Management
  - e. Master of Education
  - f. Master of Public Health
  - g. Master of Science
  - h. Master of Science in Education
  - i. Master of Science in Nutrition and Dietetics
  - j. Master of Science in Nursing
  - k. Doctor of Business Admission
  - i. Doctor of Business Management
  - m. Doctor of Education
  - n. Doctor of Philosophy
- 5. Health Sciences
  - a. Biomedicine
  - b. Clinical Medicine
  - c. Medical Laboratory Sciences
  - d. Medical Technology
  - e. Nursing
  - f. Public Health
  - g. Pharmacy
- 6. Natural Sciences
  - a. Biology
  - b. Mathematics
  - c. Chemistry
  - d. Physics
- 7. Humanities & Social Sciences
  - a. English
  - b. Development Studies and Social Services
  - c. French
  - d. Geography
  - e. History
  - f. Kiswahili
  - g. Music
  - h. Mass Communication
- 8. Medicine
- 9. Dentistry
- 10. Computing and Information Technology
- 11. Theology and Religious Studies
- 12. Law

# **STATUTE XXIV**

# THE STUDENT ASSOCIATION

 A Student Association may be organized each academic year on the basis of democratic elections of the student leaders by the students themselves as shall be outlined in the constitution of the Student Association of the University observing the following:

- a. The top student leadership (officers) of the Student Association shall be elected by the students directly from the general student body. The Student Association leader shall be a member of the Seventh-day Adventist Church.
- b. Each academic department shall have one representative on the Student Association for every 100 students or major fraction thereof, provided that each department shall have at least one representative regardless of enrolment.
- The purpose of the Student Association shall be to provide students with orderly avenues through which they can share concerns and suggestions with the University administration.
- 3. The Student Association shall have two faculty advisors appointed by the Administrative Board, in consultation with the student leadership. The Student Association shall function under the jurisdiction of the Dean of Student Affairs and Services and/or the Deputy Vice Chancellor for Student Affairs and Services.

# **STATUTE XXV**

# COMMITTEES

- 1. The University Council and/or the Administrative Board shall create or dissolve committees as the need may arise.
- 2. There shall be two major administrative organs for the University. These are:
  - a. The Administrative Board: The Administrative Board is responsible for all administrative matters of the University. The Administrative Board shall have several committees.
  - b. The Senate: The Senate is responsible for the academic administration of the University and all the academic matters. The Senate shall have several committees.
- 3. Administrative Board Committees: The following committees and any other that the Council or the Administrative Board may deem necessary shall function regularly and report to the Administrative Board through the Vice Chancellor:
  - a. Appointments and Promotions Committee: carries out the faculty and staff recruitment process and make recommendations to the Administrative Board; deals with academic ranking and promotion and makes recommendations to the Administrative Board.
  - b. Auxiliary Enterprises Board: Monitors the performance of auxiliary enterprises and makes recommendations to the Administrative Board.
  - c. BIS Management Board: Oversees the functions of the Baraton International School. The Board shall plan for the development of the School and supervise that effective teaching and efficient service delivery is provided.
  - d. Building & Development Committee: Plans and advises the University administration on development projects and the construction of physical structures.
  - e. Campus Beautification Committee
  - f. Campus Security Committee: Monitors and advises the administration on the security situation on campus.
  - g. Counseling and Advisory Committee
  - h. Disposal Committee
  - i. Employee Disciplinary Committee:

- - j. The Vice Chancellor shall constitute a disciplinary committee to investigate misconduct or any other case involving faculty or staff members. The recommendations of the committee shall be submitted to the Vice Chancellor and appropriate disciplinary action shall be taken by the Administrative Board
  - k. Employee Handbook Review Committee:
  - I. Estate Management Committee
  - m. Faculty and Staff Grievance Committee
  - n. Faculty and Staff Social Committee
  - o. Farm Committee
  - p. Financial Statements Review Committee
  - q. Food Services Committee
  - r. Fundraising and Alumni Committee
  - s. HIV/AIDS Committee: Creates HIV/AIDS awareness, offers counseling and support and creates channels of referral for the infected and affected members of the University Community and its environs.
  - t. Housing Committee
  - u. Industry Linkages Committee
  - v. IT Services Committee
  - w. Jeremic Hospital Board
  - x. Media Center Management Committee
  - y. Newsletter Editorial Board
  - z. Planning and Budget Committee: Carries out budgeting and financial planning and make recommendations to Council through the Administrative Board.
  - a. Procurement Committee
  - b. Religious Activities Committee: Coordinates the religious activities of the University within the framework of the tenets of the Seventh-day Adventist Church.
  - c. Safety and Health Committee
  - d. Scholarships and Bursaries Committee
  - e. Sports Committee
  - f. Strategic Plan Evaluation Committee
  - g. Student Affairs and Services Committee: advises the Administration on the non-academic aspects of student life, e.g. accommodation, deportment, recreation, etc.
  - h. Student Disciplinary Committee: handles student disciplinary cases and advises the administration accordingly.
  - i. Student Financial Aid Committee: handles aid to worthy and needy students.
  - j. Student Work Program Committee: Coordinates student work program activities.
  - k. Transport Committee
  - 4. Senate Committees: The following committees and any other that the Council or the Administrative Board may deem necessary shall function regularly and report to the Senate through the Vice Chancellor:
    - a. Academic Bulletin Review Committee
    - b. Academic Standards Committee: sets and monitors the standards for curricular and academic matters.
    - Admissions Committee: in charge of admission process, selection of applicants and entry requirements verifications.
    - d. Affiliations and Extensions Committee: handles all matters related to affiliation and extensions.
    - e. Board of Graduate Studies: Coordinates graduate studies programs in a particular school and/or department.
    - f. Books and Publications Committee
    - g. Curriculum Review Committee
    - h. Examinations Committee

- i. Graduation Committee: Plans and coordinates all graduation activities.
- j. Instructional Technology Committee
- k. Library Committee: Supervises the library operations and advises the Librarian on matters pertaining to the efficient operation of the Library.
- I. Peer Review Committee
- m. Quality Assurance Committee
- n. Research and Conferences Committee: coordinates and facilitates research conferences and professional growth activities for faculty and staff.
- o. Research Ethics Committee.
- The University Council or the Administrative Board may, from time to time, approve or discontinue other committees as it deems fit.

# **STATUTE XXVI**

#### **ADMISSION CRITERIA**

- 1. The admission criteria shall be determined from time to time in line with government regulations, by the University Council upon recommendation by the University Senate.
- 2. International Applicants must satisfy all Immigration formalities in force and obtain a Pupil's Pass from the Kenya Immigration Department.
- Admission is subject to meeting the required minimum mean grade of C+ in KCSE (or its equivalent), course cluster requirements, character recommendations and the availability of classroom.
- From time to time, the University shall prescribe the level of performance that will be accepted as minimum qualifications for entry into any level of University program.

# **STATUTE XXVIII**

#### **GRADUATE PROGRAMS**

- Candidates for Admission to Graduate programs must fulfill admission requirements which will be in force at the time of application.
- For master's degrees, applicants must hold a bachelor's degree from UEAB or an equivalent qualification from other institutions recognized by UEAB.
- The University, from time to time, shall prescribe the level of performance in the bachelor's program that will be accepted as minimum qualification for entry into a master's program.

# STATUTE XXIX

#### **DESIGNATION OF DEGREES**

- 1. The University shall have power to confer the following degrees:
- TO BE DENOTED BY THE FOLLOWING LETTERS:

#### **School of Applied Science and Technology**

Bachelor of Science	B.Sc.
Bachelor of Science in Industrial Technology	B.ScIT
Bachelor of Technology	B.T.
Master of Science	M.Sc.
Doctor of Philosophy	Ph.D
Doctor of Science	D.Sc.

#### **School of Business**

Bachelor of Business Administration	BBA
Master of Business Administration	MBA
Doctor of Philosophy	PhD

#### **School of Education**

Diploma in Education	Dip. Ed.
Post-Graduate Diploma in Education	PGDE
Bachelor of Arts	BA
Bachelor of Education	B. Ed
Master of Arts	MA
Master of Education	M. Ed
Doctor of Education	Ed.D
Doctor of Philosophy	PhD

#### School of Health Sciences

Bachelor of Science	BSc
Bachelor of Public Health	BPH
Master of Science	M.Sc
Master of Public Health	MPH

#### School of Humanities and Social Sciences

Bachelor of Arts	BA
Master of Arts	MA
Doctor of Philosophy	PhD

#### **School of Medicine**

Bachelor of Medicine	BMed
Bachelor of Pharmacy	BPharm
Bachelor of Medicine and Bachelor of Surgery	MBChB
Bachelor of Pharmacy	BPhM
Master of Medicine	MMed

#### **School of Natural Sciences**

Bachelor of Science	B.Sc
Master of Science	M.Sc
Doctor of Philosophy	PhD

#### School of Theology and Religion

Bachelor of Arts	BA
Master of Arts	MA
Master of Divinity	MDiv
Master of Pastoral Studies	MPS
Doctor of Ministry	DMin
Doctor of Philosophy	PhD
Doctor of Theology	ThD

#### School of Law

Bachelor of Law	LLB
Master of Law	LLM
Doctor of Law	LLD

 Every degree certificate shall incorporate a brief description of the course or subject of specialization.

#### **STATUTE XXX**

#### AWARDING DEGREES, DIPLOMAS, CERTIFICATES

- The University shall award degrees to students who have qualified for admission to certain degree levels, the standards of which are established for each program by respective schools and ratified by the University Council.
- Upon the approval of the Senate, the University shall award degrees to students who will have satisfactorily fulfilled the requirements for each particular degree offered as established by respective departments and schools and ratified by the University Council.

3. The University may grant honorary degrees for meritorious achievement. A recommendation to grant an honorary degree shall originate from the Senate and shall be presented by the Vice-Chancellor to the University Council for approval. The criteria for granting honorary degrees shall be formulated by the Senate and approved by the University Council.

#### **STATUTE XXXI**

#### **CONFERRING DEGREES**

- Graduation ceremony of the University of Eastern Africa Baraton shall be held at least once a year and shall be presided over by the Vice-Chancellor or any other person nominated by the Vice-Chancellor in consultation with the Chancellor.
- 2. The Chancellor confers degrees at congregations; and in his inability to do so, the Vice-Chancellor shall award them.
- A candidate shall not be granted a degree, other than an honorary degree, unless the candidate has paid such fees as may be prescribed by the Council, and Senate ratifies that such candidate has fulfilled all the requirements prescribed for such degree.
- 4. The procedure for conferring of degrees, the regalia to be worn and all other matters regarding Graduation Exercise shall be determined by the Senate and approved by the University Council.

#### **STATUTE XXXII**

#### **REVOCATION OF DEGREES**

The University reserves the right to revoke any degree, diploma or certificate upon evidence of forgery, plagiarism, and/or impersonation.

#### **STATUTE XXXIII**

#### UNIVERSITY EXAMINATIONS

- 1. The University Examinations shall be conducted under the control of the Academic Standards Committee.
- The Academic Standards Committee shall promulgate regulations which will safeguard the Academic integrity of the University.
- 3. In the event of any alleged examination irregularity, the Academic Standards Committee shall investigate the case and report it to the Vice-Chancellor for action on behalf of the Senate; provided the aggrieved party shall always be given a hearing.

#### **STATUTE XXXIV**

#### **FINANCIAL REGULATIONS**

- 1. All the funds, assets and property, movable and immovable, of the University shall be managed and utilized by the Council in accordance with the University Charter, 1991.
- 2. Sources of funds shall be:
  - a. Annual grants and appropriations from the East Kenya Union Conference, West Kenya Union Conference, and any other Union Conference to be established in Kenya and the East-Central Africa Division of the General Conference of the Seventh-day Adventist Church.
  - b. Endowments, gifts and trusts.
  - c. Research grants.

- - d. Tuition and fees.
  - e. Income from University auxiliary enterprises and investments.
  - f. Such other sources as the University may from time to time identify.
  - 3. The financial year of the University shall be the period of twelve (12) months commencing September 1 of a given year and ending August 31 of the following year.
  - 4. Before the commencement of a financial year, the Vice-Chancellor shall through the office of Deputy Vice-Chancellor for Finance, Planning and Administration in consultation with the Deputy Vice-Chancellor and other personnel, prepare a budget detailing the estimated revenues and expenditures during the financial year.
  - 5. The Annual budget shall be presented to the University Council for approval prior to the beginning of the new financial year.
  - 6. The Deputy Vice-Chancellor for Finance, Planning and Administration shall provide members of the Administrative Board and the University Council with a detailed monthly statement of all revenues and expenditures.
  - 7. The accounting records of the University shall be audited regularly by the General Conference Auditing Services.
  - 8. The University shall have the right to withhold the conferment of any degree, certificate or award, or the release of any transcripts of Academic record until any outstanding fees are settled with the University.

# STATUTE XXXV

#### **GENDER EQUITY**

Gender equity shall be maintained at all levels of administration and governance.

#### **STATUTE XXXVI**

#### **MISCELLANEOUS**

- 1. These revised statutes shall go into effect on the day after the day the University of Eastern Africa. Baraton Charter has been approved by the Commission for University Education.
- 2. The University Council may recommend to the Board of Trustees amendments, nullifications or additions to any Statute as and when it deems fit/necessary.
- 3. The University Council reserves the right to recommend to the Board of Trustees to create and/or dissolve any office that it shall deem necessary for the proper functioning of the University.
- 4. The University Board of Trustees reserves the right in consultation with the University Council to amend, nullify and/or add to any Statute as/and when it deems fit/ necessary.
- 5. Civil Jurisdiction in case of legal disputes : When there are disputes with the University, cases must be filed within the region where the University is located at Kapsabet Law Courts in Nandi County and/or Eldoret Law Courts in Uasin Gishu County only.

# **Administration of the University**

# THE VICE CHANCELLOR

The Vice-Chancellor shall be the administrative and Academic Head of the University

# THE DEPUTY VICE-CHANCELLOR, ACADEMICS

The Deputy Vice-Chancellor, Academics shall have such functions and powers as the University Council may, by statute, define.

### THE DEPUTY VICE-CHANCELLOR, FINANCE AND **ADMINISTRATION**

The Deputy Vice-Chancellor, Finance and Administration shall be the Chief Financial Officer of the University

### THE DEPUTY VICE-CHANCELLOR, STUDENT AFFAIRS AND SERVICES

The Deputy Vice-Chancellor, Student Affairs and Services shall be responsible for all student services other than those related to finances.

#### THE REGISTRAR

The Registrar of Admissions and Records shall have such functions and powers as the University Council may, by statute, define.

#### **ADMINISTRATORS**

Phillip Maiyo	Vice-Chancellor, VC
Korso Gude Butucha	DVC, Academics
Amos Mule	Business Manager
Paul Wahonya	DVC, Student Affairs and Services
Carolyn Hurst	Registrar

#### ASSOCIATE ADMINISTRATORS

Alfeo Ateka	Directorof Development and Alumni Affairs
Prisca Misoi	Chief Accountant
Rei Kesis	Chaplain
	Human Resource Manager
Paul Kirwa	General Manager, Auxiliary
	Enterprises
Yona Balyage	Director of Quality Assurance
Hellen Magut	Chief Librarian

#### ASSISTANTS IN ADMINISTRATION

Amon Chepkwony	Corporate Affairs Officer
	Medical Director
Wilfred Mugeke	Dean of Men
	Food Service Manager
Alice Ouma	Dean of Women

#### ADMINISTRATION ASSISTANTS

Cosmus Maweu	Physical Plant Manager
Sara Biru	Supervisor, Bookstore and
	Supermarket
Samson Ooko	Assistant Registrar, Registration
	and Records

**Flizabeth Metto** John Chacha Helen Magut

Assistant Registrar, Admissions Assistant Registrar, Examinations Librarian

#### **DEANS OF SCHOOLS**

Corazon Banaga Daniel Allida

**Jackie Obev** Mary Nieru (Ag) **Ramesh Francis**  School of Business School of Education, Humanities and Social Sciences School of Health Sciences School of Nursing School of Sciences and Technology

#### DIRECTORS OF OTHER ACADEMIC SERVICES

Director, Ellen G. White and lames Mutua Adventist Heritage Research Center **Director of Research and Graduate Studies** Director of Affiliations, Linkages and Extension Programs

#### VICE-CHANCELLORS WHO HAVE SERVED THE UNIVERSITY

Dr. Percy Paul Dr. Svein Mykelbust Dr. Roland McKenzie Dr. Mishael Muze Prof. J. K. Mutinga Prof. T. McDonald Dr. Nathaniel Walemba Prof. Miriam Mwita Prof. Phillip Maiyo

1980-1982 1983-1988 1989-1992 1993-1995 1996-2003 2004-2006 2007-2010 2011-2014 2014-

# **Faculty Listing**

Abunda, Joshua 2014 **Tutorial Fellow in Management** BCom., Mohanian Sukhadia University, India MCom., Mohanian Sukhadia University, India

Abuto, Edgar 2011 **Tutorial Fellow in Chemistry** BSC., Jomo Kenyatta University of Agriculture and Technology MPhil., Moi University

Adero Delvine 2015 Clinical Instructor in Nursing BScN., University of Eastern Africa, Baraton

Akinyi, Edina Akuru

2014

2014

Graduate Assistant in Nursing BSc., University of Eastern Africa, Baraton MScN., in progress

Allida, Daniel 2014 Lecturer in Education AB., Adventist University of the Philippines BTh., Adventist University of the Philippines MA., Northern Luzon Adventist College, Philippines PhD., Adventist International Institute of Advanced Studies, Philippines

Allida, Vencie Lecturer in Education **BEE.**, Philippine Union College MAED., Northern Luzon Adventist College, Philippines PhD., Northern Luzon Adventist College, Philippines

Amba, Pamela Orondo 2015 Teaching Assistant in Humanities and Social Sciences BLA., Spicer Adventist University

2001 Amenva, Hulda Lecturer in English BA., Andrews University USA, UEAB Campus MA., Andrews University, USA PhD., Purdue University, USA

Amimo, Catherine 2005 Lecturer in Education BEd., University of Eastern Africa, Baraton Med., University of Eastern Africa, Baraton PhD., University of Eastern Africa, Baraton

Angwenyi Esther 2012 **Tutorial Fellow in Development Studies** BA., University of Eastern Africa, Baraton MSA., Andrews University, USA PhD., in progress

Angwenyi, Noah 1992 Lecturer in Agriculture BSc., University of Nairobi MS., Texas A & M University, USA

Ateka, Rhoda Teaching Assistant in Office Administration BBA., University of Eastern Africa, Baraton

Atuva, Gershom 2014 **Tutorial Fellow** BSc., Jomo Kenyatta University of Agriculture and Technology MSc., Jomo Kenyatta University of Agriculture and Technology

Ayiemba, James 2002 Lecturer in Electronics BST., University of Eastern Africa, Baraton MSc., University of Applied Sciences, Westfalia

2007 Ayiemba, Jane **Tutorial Fellow in Education** BEd., Bugema University, Uganda MEd., University of Eastern Africa, Baraton PhD., in progress, University of Eastern Africa, Baraton

2014 Bakker Daniel Kiche Tutorial Fellow in Mathematics BSc., University of Eastern Africa, Baraton MSc., Maseno University

Balyage, Eseza Muhindo 2017 Tutorial Fellow in Accounting BBA., Bugema University, Uganda MBA., University of Eastern Africa, Baraton PhD., in progress

Balvage, Yona 2003 Professor in Education BLA., Spicer Memorial College, India MA., Philippine Union College, Philippines PhD., Central Luzon State University, Philippines Banaga, Corazon2004Associate Professor in ManagementBSc., Philippine Union College, PhilippinesMBA., Philippine Christian University, PhilippinesPhD., University of Santo Thomas, Philippines

Baongoli, Mungengo 2004 Lecturer in English BA., University of Eastern Africa, Baraton MA., University of Nairobi PhD. in progress, University of Nairobi

Barno, Hellen 2012 Tutorial Fellow in Kiswahili BA., University of Eastern Africa, Baraton MPhil., Moi University

Barongo, Asenath 2006 Tutorial Fellow in Public Health B.Sc., Moi University MPH., Moi University PhD., in progress, Kuopio University, Finland

Boor, Felix 2013 Tutorial Fellow in Foods, Nutrition and Dietetics BSc., University of Eastern Africa, Baraton MSc

Bosire, Thomas Mong'are2018Tutorial Fellow in TechnologyBSc., University of Eastern Africa, BaratonMEd., University of Eldoret

Bundi, Deborah Kemunto 2012 Graduate Assistant in Foods, Nutrition and Dietetics BSc University of Eastern Africa, Baraton

Butucha, Korso Gude 2013 Associate Professor in Education BLA., Spicer Memorial College, India MA., Andrews University, (Spicer Memorial College campus), India PhD., Adventist International Institute of Advanced Studies, Philippines

2005

1996

Bwonda, Daniel Lecturer in Finance BSc., Jersey City State College,USA MBA., Johns University, NY, USA PhD., in Progress, University of Nairobi

Chepkwony, Amon Lecturer in Education BEd., University of Nairobi MA., Bristol University, UK. PhD., in progress

Chebos, Caroline Chebichi 2015 Tutorial Fellow in Mathematics BSc., University of Eastern Africa, Baraton

MSc., Jomo Kenyatta University of Agriculture and Technology

Chemis, Lena Jerotich 2015 Graduate Assistant in Agriculture BSc., University of Eastern Africa, Baraton Cherop, Eunice 2011 Graduate Assistant in Foods, Nutrition and Dietetics BSc., University of Eastern Africa, Baraton Cheruiyot, Dorcas 2011 Teaching Assistant in Office Administration BSc., University of Eastern Africa, Baraton 2008 Deva, David Tutorial Fellow in Nursing BScN., University of Eastern Africa, Baraton. MScN., University of Eastern Africa, Baraton. 2012 Fanta, Aster Lecturer in Public Health BSSA., Adventist University of the Philippines MA., Adventist University of the Philippines Francis, Gracelyn 2010 **Tutorial Fellow in Biology** BSc., University of Madras, India MSc., University of Madras, India PhD in progress Francis, Paul Samuel 2012 Associate Professor in Mathematics BSc., Bharathiar University, India MSc., Bharathiar University, India MPhil., Bharathiar University, India PhD., Bharathiar University, India Francis, Ramesh 2010 Associate Professor in Biology BSc., Bharathiar University, India MSc., Bharathiar University, India MPhil., Bharathiar University, India PhD., Bharathiar University, India Giftson, Susan 2015 Tutorial Fellow in Nursing BScN., Tamil Nadu Dr MGR Medical University, India MScN., Tamil Nadu Dr MGR Medical University, India Jacobs, Christober G 2015 Tutorial Fellow in Information Systems and Computing BSc., Bangalore University, India MBA., IIBMS Mumbai University, India lilo. Chala Tura 2017 **Tutorial Fellow in Information Systems** BSc., Jimma University, Ethiopia MTech., Osmania University, India Juma, Mahlon Nyongesa 1997 Tutorial Fellow in Psychology/Theology BTh., Bugema University, Uganda Med., Kampala International University, Uganda MA., Uganda Christian University

Kamau Anthony G 2005 Teaching Assistant in Information Systems and Computing BST., University of Eastern Africa, Baraton

PhD., in progress

Kamau Susan 2015 Tutorial Fellow in Nursing BScN., University of Eastern Africa, Baraton MScN., Wilmington University, USA

Kansiime, Elaine Pamela 2012 Tutorial Fellow in Information Systems and Computing BBA., Bugema University, Uganda MIS., Sikkimanican University, India

2007

Kariuki, Samuel Ngugi Lecturer in English BEd., University of Nairobi MA., Kenyatta University

Kayiita, Zachary 2009 Assistant Lecturer in Mathematics BSc., University of Eastern Africa, Baraton MSc., Masinde Muliro Unversity of Science and Technology

Kemboi, Willy Kipchirchir 2013 Tutorial Fellow in Biology BSc., University of Eastern Africa, Baraton MSc., University of Eastern Africa, Baraton

Kesis, Rei 2006 Senior Lecturer in Theology BA., University of Eastern Africa, Baraton MA., Adventist University of Africa PhD., Kenyatta University

Kinuthia, Benson 2002 Lecturer in Education BST., University of Eastern Africa, Baraton M.Ed., University of Eastern Africa, Baraton PhD., in progress

Kirui, Jackson Seroney 2016 Tutorial Fellow in Biology BSc., University of Eastern Africa, Baraton MSc., University of Eastern Africa, Baraton

Kittur, Abraham 2013 Assistant Lecturer in Medical Laboratory Sciences BSc., University of Eastern Africa, Baraton MSc., Moi University

Koech, Silas 2017 Graduate Assistant in Agriculture BSc., University of Eastern Africa, Baraton

Kombo, Frank2015Assistant Lecturer in BiologyBSc., Karnatak University, IndiaMSc., Bishop Heber College, India

Korir, Isaac Kipchumba 2016 Tutorial Fellow in Nursing BScN., San Carlos University, Philippines MScN., University of Cebu Normal, Philippines

Leleiy, William K. 2001 Graduate Assistant in Technology BST., University of Eastern Africa, Baraton MSc., in progress, Moi University Machogu, Obed O. Lecturer in English BEd., Moi University MA., University of Nairobi

Magondu, Richard Ngaru 2015 Graduate Assistant in Medical Laboratory Sciences Diploma Kenya Polytechnic BSc University of Eastern Africa, Baraton

Magubu, Elly Naomba 1991 Lecturer in Nursing BScN., Adventist University of the Philippines MPH., Loma Linda University, USA MScN., Loma Linda University, USA

Magubu, Zachariah Tutorial Fellow in Biology BSc., Mountain View College, Philippines MSc., Central Mindanao State University, Philippines

Magut, Hillary 2009 Tutorial Fellow in Chemistry BSc., University of Eastern Africa, Barton MSc., University of Eldoret

Maiyo Grace 2014 Lecturer in Foods, Nutrition and Dietetics BSc Guru Nanak Dev University, India MSc Guru Nanak Dev University, India

Makori, Timothy 2015 Field Instructor in Public Health BSc., University of Eastern Africa, Baraton

Malayi, Alex 2012 Lecturer in Counseling Psychology BA., University of Eastern Africa, Baraton MPhil., Moi University MA., Andrews University

Mambo, Martha Lecturer in French BA., University of Nairobi MA., Kenyatta University

Mambo, Richard 2011 Tutorial Fellow in Management BBA., University of Eastern Africa, Baraton MBA., Aston University, United Kingdom PhD. in progress, University of Nairobi

Maweu, Peninah 1999 Laboratory Assistant in Foods, Nutrition, and Dietetics BSc., University of Eastern Africa, Baraton

Mbata Kevin Mayaka 2009 Tutorial Fellow in Information Systems and Computing BCA., Perivar University, India MSc., Bharathidsan University, India

Mbithi, Geraldine 2014 Teaching Assistant in Foods, Nutrition and Dietetics BSc., University of Eastern Africa, Baraton

2007

2002

Metto, Elizabeth 2004 Lecturer in Education BEd., Moi University Med., University of Eastern Africa, Baraton PhD in progress

Metto Joseph Tutorial Fellow in Psychology BA., Bugema University, Uganda MA., Bugema University, Uganda

Mitaki, Ruth Assistant Lecturer in Chemistry BSc., Periyar University, India MSc., Periyar University, India 2014

2010

Miyayo, Lameck M. 2004 Senior Lecturer in Theology BA., Theology, Andrews University (UEAB Campus) MA., Adventist International Institute of Advanced Studies, Philippines PhD., Adventist International Institute of Advanced Studies, Philippines

Miyayo, Yunia 2006 Tutorial Fellow in Management BSSA., Philippine Union College, Philippines MBA., University of Eastern Africa, Baraton MEd., University of Eastern Africa, Baraton PhD in Progress

Mkandawire, Frackson 1988 Senior Lecturer in Agriculture Dip., Bunda College, University of Malawi BSc, Andrews University (UEAB Campus) MSc., Sokoine University of Agriculture, Tanzania PhD in progress

Mkandawire, Philles 1997 Tutorial Fellow in Foods, Nutrition and Dietetics BSc., University of Eastern Africa, Baraton MSc., Solusi University, Zimbabwe PGDE., University of Eastern Africa, Baraton

Mocha Evans Motanya 2015 Teaching Assistant in Nursing BScN., Adventist University of the Philippines

Mooka, Edward 2006 Lecturer in English BEd., University of Eastern Africa, Baraton MA., University of Witwatersrand, South Africa PhD., in progress

Muchee, Tabitha 2004 Senior Lecturer in Foods, Nutrition and Dietetics BA., University of Eastern Africa, Baraton MSc., Central Luzon State University, Philippines PhD., University of the Philippines, Philippines

Muga, Miriam Adoyo 2017 Lecturer in Foods, Nutrition, and Dietetics BSc., University of Eastern Africa, Baraton MCHD., Great Lakes University PhD., Taipei Medical University, Taiwan Mule, Amose2012Tutorial Fellow in ManagementBBA., University of Eastern Africa, BaratonMBA., Solusi University ZimbabwePhD in progressMusema, Lily2011Assistant Lecturer in Development Studies

Assistant Lecturer in Development Studies BA., University of Eastern Africa, Baraton MA., Bugema University, Uganda

Mutanu, Prudence 2013 Teaching Assistant in Foods, Nutrition and Dietetics BSc., University of Eastern Africa, Baraton

Mutua, James 2016 Lecturer BA., University of Eastern Africa, Baraton MDiv., Andrews University PhD., Andrews University

Mutunga, Evalyne 2011 Graduate Assistant in Development Studies BA., University of Eastern Africa, Baraton MSc., Moi University

Mwangi, Petronila2005Lecturer in EducationBSc., University of Eastern Africa, BaratonPGDE., University of Eastern Africa, BaratonMEd., University of Eastern Africa, BaratonPhD., University of Eastern Africa, Baraton

Mwanza, Judith Nzilani 2015 Clinical Instructor in Nursing BScN University of Eastern Africa, Baraton MScN in progress

Mwita, Miriam 1992 Associate Professor of Kiswahili B.A., University of Nairobi PGDE, University of Eastern Africa, Baraton M.A., University of Nairobi DPhil., Moi University

Ndiku, Hellen Mueni2000Associate Professor in Foods, Nutrition, and DieteticsB.A., Andrews University, (UEAB Campus)B.B.A., Andrews University, (UEAB Campus)M.Sc., Solusi University, ZimbabweMPH., Loma Linda University (UEAB Campus)DrPH., Loma Linda University, USA

Ngalo, Susan Lecturer in Agriculture BSc., Egerton University MBA., Solusi University, Zimbabwe 2009

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Njagi, Esther Wanjiru 2014 Tutorial Fellow in Medical Laboratory Sciences BSc., University of Eastern Africa, Baraton MSc., University of Nairobi

Nieru, Marv 2003 Lecturer in Nursing BScN., Mater School of Midwifery MScN., University of Southern Africa PhD in progress Nyamwamu, Roseline 2006 Graduate Assistant in Information Systems BBIT., University of Eastern Africa, Baraton MPhil, in progress, Moi University Nyamwaya, Onsongo 2006 Lecturer in Networks and Communications BBA., Solusi University, Zimbabwe MIT., Deakin University, Australia Nyang'au, Joshua Gwaro 2016 Graduate Assistant in Nursing BScN., University of Eastern Africa, Baraton Nyarangi, Joel 2006 Lecturer in Theology BLA., Spicer Memorial College, India MA., Solusi University, Zimbabwe Nyaundi, Nehemiah 1996 Professor of Religion BTh., Bugema Adventist College, Uganda MA., Newbold College, UK MTh., University of Lund, Sweden ThD., University of Lund, Sweden Obaga, Juliet 2005 Laboratory Technician Diploma, Nyanchwa Adventist College Obey, Jackie 2000 Associate Professor in Medical Laboratory Sciences BSc., University of Eastern Africa, Baraton MPhil. Moi University PhD., Moi University Ochuodho, Samuel 2011 (Study Leave) **Tutorial Fellow in Development Studies** BA., University of Eastern Africa, Baraton MA., University of Nairobi Odek, Rabach Symon 1999 Lecturer in Theology BLA., Spicer Memorial College, India M.A., Andrews University, USA PhD., Adventist International Institute of Advanced Studies, Philippines Odek, Salome Njagi 1999 Lecturer in Education BSE., Philippine Union College, Philippines MA., Philippine Union College, Philippines PhD., Adventist International Institute of Advanced Studies, Philippines Odhiambo, Rosemary Akinyi 2013 Graduate Assistant in Nursing BScN., University of Eastern Africa, Baraton

Odhiambo, Samuel Okumu 2015 **Tutorial Fellow in Agriculture** BSc., University of Poona, India MSc., Jawaharial Nehru Agriculture University, India Oganga, Jeff Katieno **Tutorial Fellow in Accounting** BBA., Maseno University MBA., University of Eastern Africa, Baraton 2004 Ogot, Amy A. Lecturer in Medical Laboratory Sciences BS., Andrews University, USA MS., Andrews University, USA 2015 Ogutu, Walter Amulla Graduate Assistant in Public Health BSc., Moi University MPH in progress 2007 Ojunga, Michaiah Lecturer in Biology BSc., University of Eastern Africa, Baraton PGDE., Kenyatta University MSc., Moi University PhD. in progress, Moi University Oiwang, Millicent 2001 Senior Lecturer in Education BA., Andrews University, USA (UEAB Campus) MEd., University of Eastern Africa, Baraton PhD. University of Eastern Africa, Baraton Okerio, Jaspher Mosomi 2017 Lecturer in Chemistry BSc, Egerton University MSc, Nelson Mandela Metropolitan University of South Africa PhD, Nelson Mandela Metropolitan University of South Africa Oketch, Beryl Akoth 2014 Clinical Instructor in Nursing BScN University of Eastern Africa, Baraton Oluoch, Evance Odiwuor 2011 Field Instructor in Public Health BSc University of Eastern Africa, Baraton Omambia, Andrew Aunda 1997 Tutorial Fellow in Information Systems and Computing BBIT., University of Eastern Africa, Baraton MIS., Kisii University Omari, Herbert 1999 Lecturer in Geography BSc., University of Nairobi MSc., University of Nairobi PhD. in progress, University of Eldoret Omari, Peter 2010 Lecturer in History BA., University of Eastern Africa, Baraton MEd., University of Eastern Africa, Baraton Ombete, Willis 2012 Graduate Assistant in Nursing Department BScN., University of Eastern Africa, Baraton MScN in progress

Omondi, Richard 2011 Tutorial Fellow in Management BCom., Kenyatta University MBA., University of Eastern Africa, Baraton PhD. in progress, Jomo Kenyatta University of Agriculture and Technology

2002

2012

Omware, Jackline 2011 Graduate Assistant in Foods, Nutrition and Dietetics BSc., University of Eastern Africa, Baraton

Ondari, Hellen Lecturer in Linguistics BA., Andrews University (UEAB Campus) MPhil., Moi University

Ondari, William 1993 Senior Lecturer in Economics BA., University of Nairobi BPhil., University of Nairobi MSc., University of Missouri Columbia, USA PhD., Moi University

Ong'eta, Jackson Tutorial Fellow in Accounting B.Ed., University of Nairobi MBA., Egerton University PhD. in progress, Kabarak University

Onkoba, Eric 2012 Laboratory Assistant in Chemistry BSc., University of Eastern Africa, Baraton MSc., in progress, University of Nairobi

Onyango, Dorothy 2004 Lecturer in Foods, Nutrition and Dietetics BSc., University of Eastern Africa, Baraton MPH., Loma Linda University (UEAB Campus) PhD., Moi University

Onyango, Nicholas 1998 Senior Lecturer in Guidance and Counselling BA, University of Eastern Africa, Baraton MA, Nairobi International School of Theology DMin, Trinity Theological

Ooko Samson Otieno 2010 Graduate Assistant in Information Systems and Computing BSc., Moi University MSc. in progress, Moi University

Opondo, Brenda 2013 Field Instructor in Public Health BSc., University of Eastern Africa, Baraton

Otewa, Meshack Owendo 2014 Graduate Assistant in Nursing BScN University of Eastern Africa, Baraton

Otore, Neema 2014 Graduate Assistant in Foods and Consumer Sciences BSc University of Eastern Africa, Baraton

Ouma, James 2011 Tutorial Fellow in Theology BA., Spicer Memorial College, India MA., Andrews University, (Spicer Memorial College Campus) Owino, Joyce 2013 Senior Lecturer in Nursing Higher Diploma in Professional Studies in Nursing, University of East London MA in Health and Nursing Studies, Reading University PhD., Great Lakes University of Kisumu

Owili, Patrick Opiyo 2017 Lecturer in Public Health BA., University of Eastern Africa, Baraton MBA., Taipei Medical University, Taiwan PhD., National Yang-Ming University, Taiwan

Oyiengo, Jack 2008 Tutorial Fellow in Music BA., University of Eastern Africa, Baraton MA., Adventist University of the Philippines

Panulo, Benford 2005 Lecturer in Medical Laboratory Sciences Diploma, Malamulo College of Health Sciences, Malawi ASc., Kettering College of Medical Arts, USA BSc., University of Dayton, USA MSc., University of Massachussettss, USA

Ramasamy, Poornima 2012 Assistant Lecturer in Nursing BScN., the Tamil Nadu Dr. M.G.R Medical University, India MScN., the Tamil Nadu Dr. M.G.R. Medical University, India PhD. in progress

Role, Elizabeth2006Professor of Mathematics EducationBSE., Philippine Union College, PhilippinesMAT., University of the Philippines, PhilippinesPhD., University of the Philippines, PhilippinesRole, Jesse2006Associate Professor of ElectronicsBSIE-EL., Guzman Institute of TechnologyBA., Adventist University of the PhilippinesPhilippinesMATTE-EL., Technological University of Philippines, PhilippinesPhD. TM., Technological University of Philippines, Philippines

1989

Rotich, Job Tutorial Fellow in Theology BLA., Spicer Memorial College MA., Adventist University of Africa

Rotich, Joseline Chemutai 2013 Field Instructor in Public Health BSc., University of Eastern Africa Baraton MPH. in progress

Ruto, Joan Chemtai 2011 Graduate Assistant in Foods, Nutrition and Dietetics BSc., University of Eastern Africa, Baraton MSc in progress

Sang', Monicah 2011 Tutorial Fellow in Office Administration BBA., University of Eastern Africa, Baraton MBA. University of Eastern Africa, Baraton PhD in progress Soi, Eric Bartai 2001 Lecturer in Technology BSc., University of Eastern Africa, Baraton MSc., Jomo Kenyatta University of Agriculture and Technology

Too, Samuel 2012 Tutorial Fellow in Kiswahili BEd., Moi University MPhil., Moi University Wahonya, Paul 1995 Lecturer in Theology BA., Andrews University, USA (UEAB Campus) MA., Andrews University, USA (Solusi Campus, Zimbabwe) PhD., Andrews University, USA Wakoli, Albert 2012 Lecturer in Foods. Nutrition and Dietetics BSc., Egerton University MPhil., Moi University Walela, Preston 1996 Lecturer in Electronics BST., University of Eastern Africa, Baraton MS., Coventry University, England PhD., in progress, Moi University Wamalika, Caesar 2006 Lecturer in Theology BA., Andrews University, (Solusi Campus, Zimbabwe) MA., Adventist International Institute of Advanced Studies, Philippines PhD. in progress, University of Cape Town, South Africa Wanderi Jessie 2016 **Tutorial Fellow** BA., University of Eastern Africa, Baraton MA., Kenyatta University Wechuli, David 2009 Tutorial Fellow in Biology BSc., University of Eastern Africa, Baraton MSc., University of Eldoret Wekesa, Euginia 2014 Graduate Assistant in Biology BSc., University of Eastern Africa, Baraton MSc in progress

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