

# **THE UNIVERSITY OF DODOMA**



**OFFICE OF THE DEPUTY VICE CHANCELLOR -  
ACADEMIC, RESEARCH AND CONSULTANCY**

**UNDERGRADUATE CURRICULUM GUIDEBOOK  
FOR THE 2022/2023 ACADEMIC YEAR**

**2022**

**THE UNIVERSITY OF DODOMA**  
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**2022/2023 ACADEMIC YEAR**

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# Undergraduate Curriculum Guidebook

2022/2023 Academic Year

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P. O. Box 259  
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Tel: +255 026 2323002  
E-mail: [dvc-arc@udom.ac.tz](mailto:dvc-arc@udom.ac.tz)  
Website: [www.udom.ac.tz](http://www.udom.ac.tz)

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## **PREFACE**

Welcome to the University of Dodoma (UDOM). UDOM continues to nurture a generation of professionals who are poised to address local and global challenges through novel ideas and innovative solutions across the broadest possible range of disciplines.

This curriculum document has been prepared for you to understand the courses that should be completed in a semester, academic year, and the entire study period. The curriculum document shall help you prepare for your academic work instead of taking you by surprise at the beginning of each semester or academic year.

In this valuable document, you will find important information for each degree and non-degree programme under each respective college, school, or institute. The list of courses for each academic programme comprises both core courses and electives. However, the choice of electives should be made with the assistance and guidance of the respective Heads of Departments.

We are confident that if you make good use of this document, you will achieve excellence in your academic life at The University of Dodoma.

**Deputy Vice Chancellor – Academic, Research, and Consultancy  
The University of Dodoma**

## **1.0 ADMISSION REGULATIONS AND REQUIREMENTS**

### **1.1 Admission Regulations and Procedures**

- 1.1.1** Applicants are required to lodge applications directly to The University of Dodoma through the UDOM Online Admission System (OAS) at <https://application.udom.ac.tz>. After the selection of applicants, UDOM submits lists of successful applicants to the Tanzania Commission for Universities (TCU) for approval. Upon approval, UDOM advertises the names of all applicants admitted into different study programmes. The final decision on who should be admitted is made by the university.
- 1.1.2** All new students are required to report for the orientation programme that normally takes place during the week preceding the beginning of the new academic year.
- 1.1.3** Successful applicants under self-sponsorship are registered only after they have paid the requisite university dues.
- 1.1.4** All fees paid are non-refundable.
- 1.1.5** All students, if accepted, are expected to conform entirely to the university regulations.
- 1.1.6** The deadline for registration of first year students is two weeks from the first day of the orientation week; while for continuing students, it is the Friday of the second week after the commencement of the first semester.
- 1.1.7** Except for exceptional circumstances, no student will be allowed to change subjects/courses later than the Friday of the fourth week after the beginning of the first semester. Transfers from one study programme to another shall not be allowed after admission and registration.
- 1.1.8** Students who got discontinued from one college, school, or institute on academic grounds may be allowed to apply in another college, school, or institute provided that their sponsors approve.
- 1.1.9** Discontinued students wishing to re-apply in the same college, school, or institute must show evidence of having pursued further studies satisfactory to the college, school, or institute.
- 1.1.10** Students will be allowed to be away from university studies for a maximum of two years if they are to be allowed to be re-admitted to the same year of studies where they left off.
- 1.1.11** Students who got discontinued from studies because of examination irregularities will be considered for re-admission after three years. They will be required to re-apply and compete with other applicants for re-admission into the first year.



**1.1.12** No change of names by students will be allowed during the course of study at the university. Students are required to use names as they appear on their academic certificates.

**1.1.13** No student will be allowed to postpone studies after the effective commencement of an academic year except under special circumstances. Permission to postpone studies will be considered after producing satisfactory evidence of the reasons for postponement and written approval from the sponsor. Special circumstances shall include:

- i) Sickness
- ii) Serious social problems (each case to be considered on its own merit) and
- iii) Severe sponsorship problems

## **1.2 Minimum Entry Requirements by TCU**

The prospective students are requested to consult the Undergraduate Admission Guidebook prepared annually by TCU. The document is available at [www.tcu.go.tz](http://www.tcu.go.tz). More details about entry requirements and other studentship matters could be obtained from the **Undergraduate Students' Handbook** published annually by UDOM.

### **i. Direct Entry**

For Form Six applicants, the minimum entry qualification is two principal passes in relevant A-Level subjects, totalling 4.0 points. Specific entry requirements have been stated in each Programme.

### **ii. Equivalent Qualifications**

The equivalent entry qualifications are Ordinary Diploma (NTA Level 6) with at least a GPA of 3.0; or Diploma in Teacher Education with an average of 'B' grade; or health related awards such as Clinical Medicine and others with an average of 'B' grade.

## **1.3 Additional Requirements by Colleges, Schools, and Institutes**

Some study programmes at UDOM provide additional entry requirements to those set by TCU as shown in the undergraduate prospectus. Also, applicants are advised to carefully read the entry requirements provided for each study programme offered at UDOM before lodging their applications.

Inquiries for admission into different undergraduate programmes should be addressed to:

**Director of Undergraduate Studies**  
**The University of Dodoma**  
**P. O. Box 259, Dodoma, Tanzania.**  
**E-mail: [dus@udom.ac.tz](mailto:dus@udom.ac.tz)**  
**Tel. +255-26-2310000; +255-26-2310300**  
**Website: [www.udom.ac.tz](http://www.udom.ac.tz)**

## **2.0 ACADEMIC PROGRAMMES BY COLLEGES, SCHOOLS AND INSTITUTES**

### **2.1 COLLEGE OF BUSINESS AND ECONOMICS (CoBE)**

The College of Business and Economics (CoBE) offers the following undergraduate programmes for the attainment of bachelor degrees:

1. Bachelor of Commerce in Accounting (BCom Accounting)
2. Bachelor of Commerce in Finance (BCom Finance)
3. Bachelor of Business Administration (BBA)
4. Bachelor of Commerce in Human Resource Management (BCom HRM)
5. Bachelor of Commerce in International Business (BCom IB)
6. Bachelor of Commerce in Marketing (BCom Marketing)
7. Bachelor of Commerce in Entrepreneurship (BCom Entrep)
8. Bachelor of Commerce in Procurement and Logistic Management (BCom PLM)
9. Bachelor of Commerce in Information Management (BCom IM)
10. Bachelor of Commerce in Tourism and Hospitality Management (BCom THM)
11. Bachelor of Arts in Economics (BA Economics)
12. Bachelor of Arts in Economics and Statistics (BA ESt)
13. Bachelor of Arts in Economics and Sociology (BA ESoc)
14. Bachelor of Arts in Environmental Economics and Policy (BA EEP)

#### **2.1.1 Bachelor of Commerce in Accounting (BCom Accounting)**

##### **Programme Description**

This programme provides professional education for those wishing to become accounting professionals. It has a strong emphasis on developing analytical skills and offers a solid grounding and professional competence in all aspects of accounting and finance.

##### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Graduates of this programme are expected to:

- Prepare, analyse, evaluate, interpret, and present financial statements using IFRS and other professional pronouncements and present international dimensions of the corporate financial markets and treasury functions and assess investment performance.
- Apply lasting methods to provide information to the management for planning, performance evaluation and decision making.

- Apply principles of public finance and fiscal administration in business and non-business organizations, private and public.
- Make valuable management and apply techniques in the analysis of matters relating to the provisions of audit and assurance including business ethics and good governance.
- Apply skills and knowledge in designing and practicing strategic management for an effective strategic plan.
- Apply the theories of the firm, decision making, and different approaches to arrive at the most appropriate answers to problems.
- Apply skills and concepts of accounting and finance of the non-profit organisations.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN 112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 121	Financial Accounting	Core	9
IT 111	Introduction to Information Technology	Core	7.5
ST 1208	Statistical Analysis for Business Decisions	Core	9
MG 121	Principles and Practices of Management	Core	9
MG 122	Introduction to Business	Core	9
AF 122	Accounting Information Systems	Core	7.5
EN 122	Introductory Macroeconomic Analysis II	Core	9
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 211	Cost and Management Accounting	Core	9
AF 212	Financial Management	Core	9
AF 213	Public Sector Accounting and Reporting	Core	9
EME 211	Small Business Management and	Core	9

	Entrepreneurship		
LW 2108	Business Law and Good Governance	Core	9
MS 211	Operation Research for Business Decisions	Core	9
AF 218	Governance, Risk, and Ethics	Core	8
	<b>Total</b>		<b>62</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 227	Performance Management	Core	9
MS 221	Business Research Methods	Core	9
AF 224	Intermediate Accounting	Core	9
AF 223	Computerized Accounting Applications	Core	10
AF 229	Forensic Accounting and Fraud Investigations	Core	8
AF 221	Auditing Principles and Practice	Core	8
	One Elective Course	Elective	8
	<b>Total</b>		<b>61</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 222	Risk and Insurance	Elective	8
AF 226	Money and Capital Markets	Elective	8
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 311	Financial Reporting	Core	9
AF 316	Auditing and Assurance Services	Core	9
AF 312	Public Finance and Taxation I	Core	9
MG 313	Field Practical with Research Component	Core	12
MG 311	Strategic Management	Core	9
AF 318	Investment Analysis	Core	8
	One Elective Course	Elective	8
	<b>Total</b>		<b>64</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 313	Financial and Business Valuation	Elective	8
AF 317	Accounting for Oil and Gas	Elective	8
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 327	International Business Finance	Core	9
AF 332	Public Finance and Taxation II	Core	9
AF 329	Corporate Reporting	Core	9
AF 321	Corporate Finance	Core	9
EME 322	Innovation Management in Entrepreneurship	Core	9
AF 326	Personal Finance	Core	7.5
	One Elective Course	Elective	9

	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 323	Insurance Management	Elective	9
AF 324	Banking Operations	Elective	9

### **2.1.2 Bachelor of Commerce in Finance (BCom Finance)**

#### **Programme Description**

The overall objective of Bachelor of Commerce in Finance programme is to prepare a cadre of high-quality knowledge in the accounting, finance, and business arena. Graduates from this programme should be able to use analytical knowledge and skills for effective decision making, planning, analysis, and interpretation of financial reports and policy formulation in the context of Tanzanian accounting, corporate finance, and baking standards to comply with international standards.

#### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Graduates of this programme are expected to:

- Prepare, analyse, evaluate, interpret, and present financial statements using IFRS and other professional pronouncements and present international dimensions of the Corporate Financial Markets and Treasury functions and assess investment performance.
- Apply lasting methods to provide information to the management for planning, performance evaluation, and decision making.
- Apply principles of public finance and fiscal administration in business and non-business organizations, private and public.
- Make valuable management and apply techniques in the analysis of matters related to the provisions of audit and assurance, including business ethics and good governance.
- Apply skills and knowledge in designing and practicing strategic management for an effective strategic plan.
- Apply the theories of the firm, decision making, and different approaches to arrive at the most appropriate answers to problems.
- Apply skills and concepts of accounting and finance of non-profit organisations.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN 112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 121	Financial Accounting	Core	9
IT 111	Introduction to Information Technology	Core	7.5
ST 1208	Statistical Analysis for Business Decisions	Core	9
MG 121	Principles and Practices of Management	Core	9
MG 122	Introduction to Business	Core	9
AF 122	Accounting Information Systems	Core	7.5
EN 122	Introductory Macroeconomic Analysis II	Core	9
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 211	Cost and Management Accounting	Core	9
AF 212	Financial Management	Core	9
AF 214	Financial Services	Core	9
EME 211	Small Business Management and Entrepreneurship	Core	9
LW 2108	Business Law and Good Governance	Core	9
MS 211	Operation Research for Business Decisions	Core	9
	One Elective Course	Elective	8
	<b>Total</b>		<b>62</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 219	Law Related to Banking and Financial Services	Elective	8
AF 218	Governance, Risk, and Ethics	Elective	8
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 222	Risk and Insurance	Core	8
AF 223	Computerized Accounting Applications	Core	10
AF 226	Money and Capital Markets	Core	8

AF 227	Performance Management	Core	9
AF 228	Microfinance	Core	8
MS 221	Business Research Methods	Core	9
AF 221	Auditing Principles and Practice	Core	8
	One Elective Course	Elective	8
	<b>Total</b>		<b>68</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 224	Intermediate Accounting	Elective	8
MG 221	Organizational Behaviour	Elective	8
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 312	Public Finance and Taxation I	Core	9
AF 313	Financial and Business Valuation	Core	8
AF 314	Security Analysis and Portfolio Management	Core	8
AF 318	Investment Analysis	Core	8
MG 311	Strategic Management	Core	9
MG 313	Field Practical with Research Component	Core	12
	One Elective Course	Elective	8
	<b>Total</b>		<b>62</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 315	Bank Financial Management	Elective	8
AF 317	Accounting for Oil and Gas	Elective	8
AF 319	Entrepreneurial Finance	Elective	8
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 321	Corporate Finance	Core	9
AF 323	Insurance Management	Core	9
AF 325	Lending Management	Core	8
AF 326	Personal Finance	Core	7.5
AF 327	International Business Finance	Core	9
AF 332	Public Finance and Taxation II	Core	9
EME 322	Innovation Management in Entrepreneurship	Core	9
	<b>Total</b>		<b>60.5</b>

## Special Programme Requirements

### Field Practical Attachment

Field Practical and Research Component (FP&RC) provides students with an excellent opportunity to witness and take part in the real life implementation of theories taught in class. This is a 6-week programme conducted towards the end of

the academic year after the completion of second semester examinations. Students are allocated to pertinent organizations, firms, agencies, etc. in order to gain hands-on experience in all works related to the theory and practice of the programme.

During the PT, students work and write a comprehensive report under close supervision of professional training officers at their respective placements. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the college/department, at least once. To ensure adequate coverage in terms of depth and breadth of the training, the students are given exposure to a wide variety of activities pertaining to the Programme. Basically, the FP&RC is part and parcel of the assessment requirement of the course; namely, Field Practical with Research Component (MG 313) which provides students with an excellent opportunity to link the theories taught in class to practice through research undertaking procedures, including proposal writing, preparation of data collection tools, field data collection, data analysis, and report writing.

### **2.1.3 Bachelor of Business Administration (BBA)**

#### **Programme Description**

The Bachelor of Business Administration is a three-year programme. It is an innovative programme that combines different specializations. The Bachelor of Business Administration Programme will:

- Prepare staff at entry level management positions in varied business career paths.
- Develop a comprehensive understanding of good business practices.
- Learn current business computer applications that enhance marketability in an ever-changing business environment.
- Focus on building leadership capability and technical competence.
- Learn to think and act strategically.

#### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Upon successful completion of the programme, the graduate should be able to:

- Identify, analyse, formulate, and serve the needs of individuals and society creatively and innovatively.



- Work effectively both on own initiatives and with others as a member of a team, group, organisation, community, and contribute to the group output in tasks growing out of the business, commerce and management fields.
- Manage and organise activities and life responsibly and effectively, including studies within the distance context.
- Collect, analyse, organise and critically evaluate information, as required in the pursuit of BBA.
- Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written presentation in often extensive pieces of sustained discourse.
- Utilize science and technology effectively and critically show responsibility towards the environment and health and well-being of others in community, national, and global contexts.
- Demonstrate knowledge in the functional areas of business.
- Apply management principles in a work-based context.
- Anticipate and analyse trends in the business environment.
- Integrate theory and application from various functional areas in an interdisciplinary approach.
- Demonstrate an understanding of the world as a set of related systems recognising that problem solving contexts do not exist in isolation, and by acknowledging their responsibilities to those in the local and broader community.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
EN 122	Introductory Macroeconomic Analysis II	Core	9
MG 121	Principles and Practices of Management	Core	9

MG 122	Introduction to Business	Core	9
HR 121	Principles and Practices of Human Resources Management	Core	9
ST 1208	Statistical Analysis for Business Decisions	Core	9
AF 121	Financial Accounting II	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 211	Cost and Management Accounting I	Core	9
AF 212	Financial Management I	Core	9
MS 211	Operation Research for Business Decision	Core	9
EME 211	Small Business Management and Entrepreneurship	Core	9
LW 2108	Business Law and Good Governance	Core	9
EMM 211	Services Marketing	Core	7.5
	One Elective	Elective	9
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 211	Business Organisation and Systems		9
MG 212	Business Ethics		9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 221	Organizational Behaviour	Core	9
MG 222	Negotiation Skills for Managers	Core	9
EN 224	Industrial Economics	Core	7.5
MS 123	Procurement Management	Core	9
MS 221	Business Research Methods	Core	9
AF 228	Microfinance	Core	9
AF 227	Performance Management	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 311	Strategic Management	Core	9
MG 312	Organisational Risk Management	Core	9
EMM 313	Marketing Communication	Core	9
MG 313	Field Practical Training	Core	12
AF 313	Public Finance and Taxation I	Core	9
MS 315	Quality Management and Control	Core	7.5
AF 316	Auditing and Assurance Services I	Elective	9
	<b>Total</b>		<b>64.5</b>

<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 321	Operation Management	Core	7.5
MG 322	Management Consulting	Core	9
MG 323	Import and Export Management	Core	9
IM 325	Management Information System	Core	7.5
AF 332	Public Finance and Taxation II	Core	9
EME 323	Business Planning and Development	Core	9
	One Elective	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 321	Sales Management	Elective	9
EMM 325	Industrial Marketing	Elective	9

### **2.1.4 Bachelor of Commerce in Human Resource Management (BCom HRM)**

#### **Programme Description**

Human Resource Management (HRM) is about managing people effectively for the benefit of an individual, organization, or society. On a strategic level, HRM focuses on the organization's strategy, mission, and goals. It provides skilled, motivated, flexible, and cost effective-workforce to organizations and contributes to a high quality of working life and ensures full legal compliance. HRM professionals help organization to gain a competitive advantage. At the operational level, the goals of HRM are to attract and retain the right talents, as well as train, motivate and downsize the organization when the need arises.

#### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Upon successful completion of the programme, the graduate should be able to:

- Apply the theoretical and practical aspects of human resource management to formulate strategies that will enable organisations to achieve both operational and strategic goals related to the organisation's human capital.
- Deploy appropriate HRM analysis to make informed decisions that enhance effectiveness of recruitment, training, development, and retention of human resources and align the HRM strategy with the overall organisational strategy and purpose.

- Appraise and apply techniques in talent management that human resource professionals may use to facilitate effective position planning, talent selection, placement, compensation, rewards, as well as retention.
- Demonstrate negotiation strategies that lead to positive ethical outcomes and demonstrate careful consideration of perceived points of conflict; and differences in values, beliefs, and cultures; or divergence of goals.
- Assess opportunities to improve and sustain organisational performance through strategic thinking and management, the development of human capital, and the allocation of physical and financial resources.
- Propose systematic and sustainable solutions to complex business problems related to human capital and human resources needs and issues by applying critical-thinking and analytical skills.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
EN 122	Introductory Macroeconomic Analysis II	Core	9
MG 121	Principles and Practices of Management	Core	9
MG 122	Introduction to Business	Core	9
HR 121	Principles and Practices of Human Resources Management	Core	9
ST 1208	Statistical Analysis for Business Decisions	Core	9
AF 121	Financial Accounting II	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HR 211	Human Resource Planning	Core	8
AF 211	Cost and Management Accounting I	Core	9

AF 212	Financial Management I	Core	9
MS 211	Operation research for Business Decision	Core	9
EME 211	Small Business Management and Entrepreneurship	Core	9
LW 2108	Business Law and Corporate Governance	Core	9
	One Elective Course	Elective	9
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 211	Business Organization and Systems		9
MG 212	Business Ethics		9
	<b>Total</b>		<b>62</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 223	Organization Innovation and Management	Core	10
MG 221	Organizational Behaviour	Core	9
HR 221	Recruitment and Selection Practices	Core	7.5
HR 222	Performance Management	Core	8
HR 223	Staff Training and Development	Core	8.5
MG 222	Negotiation Skills for Managers	Core	9
MS 221	Business Research Methods	Core	9
	<b>Total</b>		<b>61</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 311	Strategic Management	Core	9
MG 312	Organizational Risk Management	Core	9
HR 311	Compensation Management	Core	7.5
HR 312	Labour Relations and Collective Bargaining	Core	8
HR 313	Occupational Health and Safety	Core	7.5
HR 314	Talent and Knowledge Management	Core	8
MG 313	Field Practical Training	Core	12
AF 316	Auditing and Assurance Services	Elective	9
	<b>Total</b>		<b>70</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 322	Management Consulting	Core	9
HR 321	Legal Aspects of Human Resource Management	Core	9
HR 322	Organizational Change and Development	Core	9
HR 323	Strategic Human Resource Management	Core	9
HR 325	Applied Human Resource Research	Core	8.5
IM 325	Management Information System	Core	7.5
	One Elective Course	Elective	9
	<b>Total</b>		<b>61</b>

<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 321	Sales Management	Elective	9
EMM 325	Industrial Marketing	Elective	9

### **2.1.5 Bachelor of Commerce in International Business (BCom IB)**

#### **Programme Description**

Bachelor of Commerce in International Business prepares a cadre of high quality professionals in the today's international business environment. Graduates from this programme shall be able to use analytical knowledge and skills for effective and efficient planning on matters concerning international business and policy formulation in the context of Tanzania, developed countries, and all over the world. The programme contents have been selected considering the country's current business environment and the global environment, i.e. the country's need for good international business strategists, planners, and policy makers in business issues, international trade, agriculture, industrial development, etc.

#### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Upon successful completion of the programme, the graduate should be able to:

- Apply computer skills and knowledge to support the international business functions.
- Assist in the importing and exporting functions of a business.
- Conduct business in compliance with relevant national and international law, legislation, policies, and regulations.
- Conduct business with diverse populations using culturally appropriate methods.
- Collect, process, and interpret data used to support international business.
- Develop personal and professional strategies to improve job performance, work relationships, and stress management.
- Contribute to the planning, directing, and evaluating of individual and team projects.
- Apply financial knowledge and skills to the operation of an international business.
- Apply teamwork knowledge and skills when working with co-workers, supervisors, and others.

- Apply knowledge of quality control and assurance programmes to sourcing and supplying.
- Apply the principles of business ethics and international corporate responsibility.
- Develop strategies to prepare for the contingencies associated with personal international travel. Participate in the development of an international marketing plan which includes marketing objectives, marketing mix, strategies, budgetary considerations, and evaluation criteria.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
MG 121	Principles and Practices of Management	Core	9
MG 122	Introduction to Business	Core	9
HR 121	Principles and Practices of Human Resources Management	Core	9
ST 1208	Statistical Analysis for Business Decisions	Core	9
AF 121	Financial Accounting II	Core	9
FR 125	Introduction to French 1	Elective	9
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 211	Cost and Management Accounting I	Core	9
AF 212	Financial Management I	Core	9
MS 211	Operation research for Business Decision	Core	9
EME 211	Small Business Management and Entrepreneurship	Core	9
LW 2108	Business Law and Corporate Governance	Core	9
MS 123	Procurement Management	Core	9

MG 211	Business Organization and Systems	Elective	9
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 221	Organisational Behaviour	Core	9
MG 224	Business in Emerging Markets	Core	9
MS 221	Business Research Methods	Core	9
AF 227	Performance Management	Core	9
EMM 222	International Marketing	Core	7.5
MG 222	Negotiation Skills for Managers	Core	9
LW 208	Legal Aspects of International Trade	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 311	Strategic Management	Core	9
MG 312	Organizational Risk Management	Core	9
EN 318	International Economics I	Core	9
MG 315	International Trade and Negotiation	Core	7.5
MG 313	Field Practical Training	Core	12
MG 314	Trade Related Aspects of Intellectual Property rights Management	Core	9
AF 316	Auditing and Assurance Services	Elective	9
	<b>Total Units</b>		<b>64.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 322	Management Consulting	Core	9
MG 323	Import and Export Management	Core	9
HR 324	International Human Resource Management	Core	9
EN 328	International Economics II	Core	9
IM 325	Management Information System	Core	7.5
AF 327	International Business Finance	Core	9
EME 322	Business Planning Development	Core	9
	<b>Total</b>		<b>61.5</b>

### 2.1.6 Bachelor of Commerce in Marketing (BCom Marketing)

#### Programme Description

Bachelor of Commerce in Marketing is designed to provide students with a sound background in business, together with an understanding of the role of marketing within and between organisations. People seeking careers in marketing are expected to have well-developed decision-making skills and become innovative in addressing



business problems and situations. As a result, the marketing courses are combined with general business studies, and the development of practical skills and knowledge is integrated with an understanding of current theories and the latest research. This degree does not only provide a grounding in marketing theory but also opportunities to prepare marketing reports and plans, undertake a diagnostic case study of an exporting firm, analyse advertisements in a variety of media, and apply market research as part of a group project that focuses on a real business problem.

### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Upon successful completion of the programme, a graduate should be able to:

- Apply computer skills and knowledge to support the marketing and business functions.
- Contribute to innovation and development within their business, workplace, or community.
- Demonstrate ethical behaviours in work and community situations.
- Manage change in business organizations.
- Analyse current trends in the marketplace, present findings, develop marketing solutions to business problems, create advertising and other promotional materials.
- Apply skills and knowledge to deal with the ambiguity and complexity of a career in marketing; promote business: its products, and services.
- Manage demand for their products and services through communication, product renewal, and product creation.
- Develop personal and professional strategies to improve job performance, work relationships, and stress management.
- Collect, process, and interpret data to support marketing research.
- Participate in the development of marketing plan which includes marketing objectives, marketing mix, strategies, budgetary considerations, and evaluation criteria.
- Apply financial knowledge and skills to the operation of the marketing function.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
EN 122	Introductory Macroeconomic Analysis II	Core	9
MG 121	Principles and Practices of Management	Core	9
EMM 121	Consumer Behaviour	Core	7.5
HR 121	Principles and Practices of Human Resources Management	Core	9
ST 1208	Statistical Analysis for Business Decisions	Core	9
AF 121	Financial Accounting II	Core	9
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 211	Services Marketing	Core	7.5
MS 211	Operation Research for Business Decision	Core	9
AF 212	Financial Management 1	Core	9
MS 212	Procurement Management	Core	9
AF 211	Cost and Management Accounting 1	Core	9
LW 2108	Business Law and Corporate Governance	Core	9
EMM 212	Marketing Distribution Management	Core	9
EME 211	Small Business Management and Entrepreneurship	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 225	Pricing Decisions	Core	9
EMM 221	International Marketing	Core	9
EMM 223	Product Management	Core	9
MS 221	Business Research Methods	Core	9
EMM 226	Marketing Research	Core	9

MG 221	Organisational Behaviour	Core	9
EMM 223	E-Marketing	Core	9
	<b>Total</b>		<b>62</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 312	Strategic Marketing	Core	9
MG 313	Field Practical Training	Core	12
EMM 313	Marketing Communication	Core	9
EMM 311	Relationship Marketing	Core	9
MG 311	Strategic Management	Core	9
	Two Elective Courses	Elective	18
	<b>Total</b>		<b>66</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 315	Marketing of Events	Elective	9
EME 313	Marketing Networking in Entrepreneurship	Elective	9
MS 315	Quality Management and Control	Elective	9
EMM 314	Social Marketing	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 324	Customer Care	Core	9
EMM 325	Industrial Marketing	Core	9
EME 323	Business Planning and Development	Core	9
MG 322	Management Consulting	Core	9
EMM 321	Sales Management	Core	9
EMM 322	Brand Management	Core	9
IM 325	Management Information System	Core	7.5
	<b>Total</b>		<b>61.5</b>

### 2.1.7 Bachelor of Commerce in Entrepreneurship (BCom Entrep)

#### Programme Description

Bachelor of Commerce in Entrepreneurship programme focuses on the rapidly changing global economic environment and the opportunities for entrepreneurial activities. Much of the programme is delivered through case analysis in a team setting where students develop critical thinking, problem-solving, and communication skills. The result is intra- and entrepreneurial leadership combined with management skills that translate theory into practice. The programme involves the identification and pursuit of opportunities, marshalling of required resources and their strategic allocation, and management. It focuses on enabling students to be

innovators, be it in new businesses or in implementing new ideas in established organisations. Underlying this focus is developing an understanding of the relationship between business, society, and the environment. Students acquire the skill set required for workplace success.

### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. On successful completion of the Bachelor of Commerce in Entrepreneurship, graduates should be able to:

- Explain entrepreneurship in the context of society, organisations, and individuals.
- Lead or belong to teams that successfully establish new ventures.
- Apply appropriate strategies to manage entrepreneurial risk.
- Identify and evaluate opportunities, as well as plan the development of new ventures.
- Develop a venture plan that can be used as a planning tool for a specific potential opportunity and idea.
- Articulate the impact of entrepreneurship on the economy.
- Identify the leadership styles of entrepreneurs who have been successful in given business settings both in Tanzania and internationally.

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
EN 122	Introductory Macroeconomic Analysis II	Core	9
MG 121	Principles and Practices of Management	Core	9
EME 121	Theories of Entrepreneurship	Core	7.5
HR 121	Principles and Practices of Human Resources	Core	9

	Management		
ST 1208	Statistical Analysis for Business Decisions	Core	9
AF 121	Financial Accounting II	Core	9
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EME 211	Small Business Management and Entrepreneurship	Core	9
MS 211	Operation Research for Business Decision	Core	9
AF 212	Financial Management 1	Core	9
EME 212	Management of Family Enterprises	Core	9
AF 211	Cost and Management Accounting 1	Core	9
EME 213	Internationalization of Entrepreneurial Venture	Core	7.5
LW 2108	Business Law and Corporate Governance	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EME 221	Organization and Marketing for Small Business	Core	9
EME 222	Promoting Enterprise	Core	9
MS 221	Business Research Methods	Core	9
EME 223	Business Start-up and Growth	Core	9
MG 221	Organizational Behaviour	Core	9
EMM 223	E- Marketing	Core	9
EMM 226	Marketing Research	Core	9
	<b>Total</b>		<b>62</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EME 311	Venture Capital for Small Business Management	Core	9
EME 312	Business Negotiation Skills	Core	9
EME 313	Marketing Networking in Entrepreneurship	Core	9
MG 311	Strategic Management	Core	9
MG 313	Field Practical Training	Core	12
EMM 313	Marketing Communication	Core	9
	One Elective Course	Elective	7.5
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MS 315	Quality Management and Control	Elective	7.5
AF 318	Investment Analysis	Elective	7.5
	<b>Total</b>		<b>64.5</b>
<b>Semester Two</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EME 321	Corporate Entrepreneurship	Core	9
EME 322	Innovation Management in Entrepreneurship	Core	9
EME 323	Business Planning and Development	Core	9
MG 322	Management Consulting	Core	9
EMM 325	Industrial Marketing	Core	9
IM 325	Management Information System	Core	7.5
	One Elective Course	Elective	9
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 324	Customer Care	Elective	9
EMM 322	Brand Management	Elective	9
EME 324	Management of Intellectual Property for Entrepreneurs	Elective	9

### **2.1.8 Bachelor of Commerce in Procurement and Logistics Management (BCom PLM)**

#### **Programme Description**

Bachelor of Commerce in Procurement and Logistics Management programme is designed to provide a broad theoretical and applied background in the managerial disciplines required to manage effectively the development, procurement, contracting, and channelling of material, services, and major systems. The course is best suited to employees and officers in government, public sector industries, local government agencies, and government aided institutions engaged in various levels in purchase, import, stores, finance, production, projects, corporate planning, and other allied activities. It produces graduates who want to make a career in public procurement and logistics management.

#### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. At the end of the programme, graduates should be able to:

- Apply concepts, theories, models and principles of management, macro and micro economics, and development studies in analysing procurement issues.
- Collect and analyse data relating to the business.

- Apply principles, practices, and techniques of management accounting and financial management for acquiring, allocating and investing in business.
- Design and develop product or service, price, promotion, and distribute products.
- Apply the theoretical and practical aspects of human resource management to formulate strategies that will enable organizations to achieve both operational and strategic goals related to the organization's human capital.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
EN 122	Introductory Macroeconomic Analysis II	Core	9
MG 121	Principles and Practices of Management	Core	9
MS 123	Procurement Management	Core	9
HR 121	Principles and Practices of Human Resources Management	Core	9
ST 1208	Statistical Analysis for Business Decisions	Core	9
AF 121	Financial Accounting II	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MS 216	International Logistics Management	Core	9
AF 212	Financial Management I	Core	9
MS 211	Operation Research for Business Decision	Core	9
MS 217	Clearing and Forwarding Management	Core	7.5
EME 211	Small Business Management and Entrepreneurship	Core	9
LW 2108	Business Law and Corporate Governance	Core	9
	One Elective Course	Elective	8

	<b>Total</b>		<b>60.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 215	Auditing Principles and Practice	Elective	8
AF 211	Cost and Management Accounting I	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MS 225	Transport Management	Core	8
M 223	Supply Chain Management	Core	9
MS 221	Business Research Methods	Core	9
MS 222	Legal Aspects of Procurement	Core	9
MG 221	Organizational Behaviour	Core	8
MS 224	Warehouse Management	Core	9
	One Elective Course	Elective	<b>8</b>
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EMM 222	International Marketing	Elective	8
AF 227	Performance Management	Elective	9
AF 223	Computerized Accounting Applications	Elective	10
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 311	Strategic Management	Core	9
IM 325	Management Information Systems	Core	7.5
MS 312	Strategic Procurement	Core	9
MS 313	Procurement and Supplies Audit	Core	8
MS 314	Physical Distribution Management	Core	9
MG 313	Field Practical Training	Core	12
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>62</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MS 315	Quality Management and Control	Elective	7.5
MG 312	Organizational Risk Management	Elective	9
AF 316	Auditing and Assurance Services	Elective	9
AF 318	Investment Analysis	Elective	8
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MS 329	Strategic Logistic Management	Core	8
EME 323	Business Planning and Development	Core	9
MS 321	Procurement Contracts Management	Core	9



MS 322	Public Procurement	Core	9
MS 323	International Procurement Management	Core	9
MS 324	Inventory Management	Core	8
	One Elective Course	Elective	8
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MS 325	Knowledge Management	Elective	8
MG 322	Management Consulting	Elective	9

### 2.1.9 Bachelor of Commerce in Information Management (BCom IM)

#### Programme Description

Information Management is about applying information technology to manage and analyse operations and solve business problems. Bachelor of Commerce in Information Management students learn about business processes and analyse how to improve processes using IT. It helps students to be equipped with superior skills in communications and leadership.

#### Learning Outcomes of the Programme

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Upon successful completion of the programme, the graduate should be able to:

- Demonstrate knowledge, skills, and ideas of developing and managing information systems in the organization.
- Apply concepts, theories, models, principles of management, macro, and micro Economics, and development studies in analysing business issues.
- Collect and analyse data relating to the business.
- Apply principles, practices, and techniques of management accounting, financial management, and entrepreneurship for acquiring, allocating, and investing in business.
- Apply knowledge of business law and ethics for contractual activities in business.
- Explore the work environment and compare practices and theories learnt in class.
- Apply knowledge, skills and ideas in designing and developing the product or service, price, promotion and distribution of products.

- Apply the theoretical and practical aspects of human resource management to formulate strategies that will enable organizations to achieve both operational and strategic goals related to organisation's human capital.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9
EN112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
CP 111	Principles of Programming	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>69</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
CP 121	Introduction to Database Systems	Core	9
MG 121	Principles and Practices of Management	Core	9
MG 122	Introduction to Business	Core	9
HR 121	Principles and Practices of Human Resources Management	Core	9
ST 1208	Statistical Analysis for Business Decisions	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 212	Financial Management I	Core	9
MS 211	Operation Research for Business Decision	Core	9
CP 212	System Analysis and Design	Core	7.5
IM 216	Information Resource Management	Core	7.5
EME 211	Small Business Management and Entrepreneurship	Core	9
LW 2108	Business Law and Corporate Governance	Core	9
AF 211	Cost and Management Accounting	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 227	Visual Basic Programming	Core	9

EME 223	Business Start Up and Growth	Core	9
CP 224	Database Management Systems	Core	7.5
CP 221	Internet Programming and Application	Core	7.5
AF 223	Computerized Accounting Applications	Core	9
MS 221	Business Research Methods	Core	9
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 221	Organizational Behaviour	Elective	9
EMM 223	E - Marketing	Elective	9
AF 227	Performance Management	Elective	9
<b>Year Three</b>			
<b>Semester One</b>			
MG 311	Strategic Management	Core	9
IM 325	Management Information Systems	Core	7.5
IM 316	Information in Digital Economy	Core	9
MG 313	Field Practical Training	Core	12
MS 318	Enterprise Resource Planning	Core	9
BT 212	E-business Strategy, Architecture and Design	Core	7.5
	One Elective Course	Elective	8
	<b>Total</b>		<b>62</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 312	Organizational Risk Management	Elective	9.0
AF 318	Investment Analysis	Elective	8.0
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MG 322	Management Consulting	Core	9.0
MS 325	Knowledge Management	Core	8.0
MS 326	Business Information System Project	Core	12
IM 319	Strategic Information Systems Management	Core	7.5
EME 323	Business Planning and Development	Core	9.0
EME 322	Innovation Management In Entrepreneurship	Core	9.0
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>62</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EME 221	Organization and Marketing for Small Business	Elective	9.0
AF 222	Risk and Insurance	Elective	7.5

### **2.1.10 Bachelor of Commerce in Tourism and Hospitality Management (BCom THM)**

#### **Programme Description**

Bachelor of Commerce in Tourism and Hospitality Management provides a detailed understanding of travel and tourism with special attention to the management of tourism destinations. The programme prepares students for employment in the tourism and hospitality industry. The majority of graduates hold various lucrative positions such as tourism officers, hotel managers, air ticketing, holiday representative, tourist information centre managers, etc.

#### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Upon successful completion of the programme, a graduate should be able to:

- Demonstrate knowledge, skills, and understand the nature and structure of the tourism and hospitality industry and appreciate the impact of the past and present developments in tourism and hospitality planning, management, and development.
- Apply concepts, theories, models and principles of management, macro and micro Economics, and development studies in analysing business issues in tourism and hospitality industry.
- Collect and analyse data relating to tourism and hospitality issues.
- Apply principles, practices, and techniques of management accounting, financial management and entrepreneurship for acquiring, allocating, and investing in business.
- Apply knowledge of business law and ethics for contractual activities in business.
- Explore the work environment and compare practices and theories learnt in class.
- Demonstrate knowledge, skills, and ideas of designing and developing product or service, price, promotion and distribution of products.

#### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
EN 111	Introductory Microeconomic Analysis I	Core	9

EN112	Introductory Macroeconomic Analysis I	Core	9
AF 111	Introduction to Financial Accounting	Core	9
BS 111	Business Communication	Core	7.5
MT 1114	Business Mathematics	Core	9
EMM 111	Principles of Marketing	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
TM 121	Food and Beverage Management	Core	9
MG 121	Principles and Practices of Management	Core	9
FR 125	Introduction to French	Core	7.5
HR 121	Principles and Practices of Human Resources Management	Core	9
ST 1208	Statistical Analysis for Business Decisions	Core	9
AF 121	Financial Accounting II	Core	9
FR 125	Introduction to French 1	Core	7.5
	<b>Total</b>		<b>67.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EME 211	Small Business Management and Entrepreneurship	Core	9
TM 212	Events and Activities Management	Core	7.5
TM 211	Tourism Management	Core	9
MS 211	Quantitative Methods for Business Decisions	Core	9
AF 212	Financial Management I	Core	9
LW 2108	Business Law and Corporate Governance	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TM 213	Accommodation Management	Elective	7.5
EMM 221	Service Marketing	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TM 221	Consumer Behaviour in the Tourism and Leisure Industry	Core	7.5
MS 221	Business Research Methods	Core	9
TM 222	Tour Guiding Techniques	Core	10
TM 224	Economics of Tourism	Core	8
TM 223	Travel Agency and Tour Operations Management	Core	10

	One Foreign Language	Elective	8
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 227	Introduction to French II	Elective	8
EMM 221	International Marketing	Elective	7.5
TM 225	Nutrition and Food Safety	Elective	7.5
HR 121	Principles and Practices of Human Resource Management	Elective	9
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TM 311	Protected Areas Management	Core	8
TM 312	Tourism Planning and Development	Core	8
MG 313	Field Practical Training	Core	12
IM 325	Management Information Systems	Core	7.5
TM 316	E-Tourism	Core	8
MG 311	Strategic Management	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TM 313	Marketing for Tourism Services	Elective	7.5
TM 318	Computer Software for Tourism and Hospitality	Elective	7.5
TM 317	Cruise Line Operations and Management	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TM 322	Leisure Strategies and Issues	Core	9
TM 323	Tourism Dimensions	Core	8
EME 323	Business Planning and Development	Core	9
TM 324	Development and Management of Local Tourism	Core	9
TM 325	Sustainable Tourism Management	Core	10
FR 326	French Intermediate	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TM 321	Leadership in Tourism and Hospitality Industry	Elective	7.5
TM 326	Cultural Tourism	Elective	7.5

### 2.1.11 Bachelor of Arts in Economics (BA Economics)

#### Programme Description

The overall objective of the programme is to prepare a cadre of high quality understanding in economics. Graduates should be able to use analytical knowledge and skills for effective economic planning and policy formulation in the context of Tanzania and beyond. The programme contents have been selected after taking into account the country's current economic issues, i.e. the country's need for good planners and policy makers in monetary issues, public finance, international trade, agriculture, industrial development, etc. Learning and teaching methods, process and criteria for assessment, reference materials, core and optional elements have been determined on the basis of the nature of the courses and what other universities in the country and elsewhere in the world do.

#### Learning Outcomes of the Programme

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Graduates should be able to:

- Apply micro and macroeconomic theories that are the basis of economic thinking and, therefore, be able to think and act as economists.
- Collect and analyse data relating to the economy.
- Carry out research on economic issues.

#### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
EN 111	Introductory Microeconomics Analysis I	Core	9
EN 112	Introductory Macroeconomics Analysis I	Core	9
DS 102	Development Perspective	Core	7.5
LG 102	Communication Skills	Core	7.5
AF 111	Financial Accounting I	Core	9
ST 1101	Basic Statistics	Core	10
IT 111	Introduction to Information Technology	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>67</b>
Semester Two			
Code	Course Title	Status	Credits
EN 121	Introductory Microeconomics Analysis II	Core	9
EN 122	Introductory Macroeconomics Analysis II	Core	9
EN 124	Mathematics for Economists	Core	7.5
AF 121	Financial Accounting	Core	9

MG 121	Principles and Practices of Management	Core	9
EN 125	The History of Economic Thought	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 114	History and Economics of Development	Elective	7.5
MG 122	Introduction to Business	Elective	9
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 211	Intermediate Microeconomic Analysis I	Core	9
EN 212	Intermediate Macroeconomic Analysis I	Core	9
EN 213	Econometrics I	Core	9
EN 214	Quantitative Methods	Core	7.5
EN 215	Development Economics I	Core	9
EN 217	Managerial Economics	Core	7.5
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 221	Intermediate Microeconomic Analysis II	Core	9
EN 222	Intermediate Macroeconomic Analysis II	Core	9
EN 223	Econometrics II	Core	9
EN 224	Industrial Economics	Core	7.5
EN 225	Development Economics II	Core	9
EN 228	Economic Research Methods	Core	7.5
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 2108	Business Law and Corporate Governance	Elective	9
EME 211	Small Business Management and Entrepreneurship	Elective	9
	<b>Total</b>		
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 310	Field Practical Training	Core	12
EN 311	Economic Policy and Planning I	Core	9
EN 312	Monetary Economics I	Core	9
EN 313	Applied Quantitative Methods	Core	9
EN 317	Public Finance I	Core	7.5



EN 318	International Economics I	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 315	Financial Economics I	Elective	7.5
EN 316	Agricultural Economics I	Elective	7.5
EN 319	Labour Economics I	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 321	Economic Policy and Planning II	Core	9
EN 322	Monetary Economics II	Core	9
EN 323	Applied Econometrics	Core	9
EN 324	Special Project	Core	9
EN 327	Public Finance II	Core	7.5
EN 328	International Economics II	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 325	Financial Economics II	Elective	7.5
EN 326	Agricultural Economics II	Elective	7.5
EN 329	Labour Economics II	Elective	7.5

### 2.1.12 Bachelor of Arts in Economics and Statistics (BA EST)

#### Programme Description

The overall objective of the programme is to prepare a cadre of high quality understanding in economics and statistics. Graduates should be able to use analytical knowledge and skills for effective economic planning and policy formulation in the context of Tanzania and beyond. The programme content has been selected after taking into account the country's current economic issues, i.e. the country's need for good planners and policy makers in monetary issues, public finance, international trade, agriculture, industrial development, etc. Learning and teaching methods, process and criteria for assessment, reference materials, core and optional elements have been determined based on the nature of the courses and on what other universities in the country and elsewhere in the world do. The main objective of Bachelor of Arts in Economics and Statistics Programme is to provide students with a thorough understanding of the theories, principles, and analytical techniques in the economics and statistics disciplines as taught worldwide. The specific objectives of the programme are to:

- Equip students with relatively advanced analytical skills in Economics and Statistics.
- Provide students with skills for careers in the public and private sectors.
- Equip students with skills for job opportunities in research institutions and non-governmental organizations (NGOs).
- Prepare students for post-graduate studies in either of the two fields.

### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Graduates of this programme should be able to:

- Plan, collect, analyse, and utilize various types of data for economic development planning in the context of Tanzania.
- Describe, compare, and correlate important economic phenomena of production, consumption, exchange, and distribution with the help of Statistics, Mathematics and its offspring.
- Apply relevant competencies in different economic approaches and mechanisms of addressing social and economic issues related to sustainable development in the society.
- Demonstrate a high level of maturity in the application of appropriate skills in dealing with dynamics and challenges facing the world today and for the future.

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 111	Introductory Microeconomics Analysis I	Core	9
EN 112	Introductory Macroeconomics Analysis I	Core	9
DS 102	Development Perspective	Core	7.5
LG 102	Communication Skills	Core	7.5
AF 111	Introduction to Financial Accounting I	Core	9
ST 1101	Basic Statistics	Core	10
IT 111	Introduction to Information Technology	Core	7.5
EN 114	History and Economics of Development	Elective	7.5
	<b>Total</b>		<b>67</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

EN 121	Introductory Microeconomics Analysis II	Core	9
EN 122	Introductory Macroeconomics Analysis II	Core	9
EN 124	Mathematics for Economists	Core	7.5
ST 1203	Basic Demographic Model	Core	9
ST 1201	Probability Theory	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
EN 125	The History of Economic Thought	Elective	9
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 211	Intermediate Microeconomics Analysis I	Core	9
EN 212	Intermediate Macroeconomics Analysis I	Core	9
EN 213	Econometrics I	Core	9
ST 2102	Statistical Inference	Core	9
ST 2101	Probability Distribution	Core	10.5
ST 2103	Statistical Methods of Quality Control	Core	9
EN 217	Managerial Economics	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 221	Intermediate Microeconomics Analysis II	Core	9
EN 222	Intermediate Macroeconomics Analysis II	Core	9
EN 223	Econometric II	Core	9
ST 2204	Non Parametric Methods	Core	7.5
EN 228	Economic Research Methods	Core	9
EN 224	Industrial Economics	Core	7.5
ST 2201	Sampling Theory and Methods	Core	9
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 311	Economic Policy and Planning I	Core	9
EN 313	Applied Quantitative methods	Core	9
EV 311	Techniques of Spatial Economic Analysis	Core	9
EN 317	Public Finance I	Core	7.5
EN 310	Field Practical Training	Core	12
ST 3101	Design and Analysis of Experiments	Core	9
	One Elective Course	Elective	9
	<b>Total</b>		<b>64.5</b>
<b>Electives</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 318	International Economics I	Elective	9
EN 3101	Applied Impact Evaluation	Elective	9
EN 312	Monetary Economics I	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 321	Economic Policy and Planning II	Core	9
EN 323	Applied Econometrics	Core	9
ST 3201	Biostatistics and Epidemiology	Core	9
EN 324	Special Project	Core	9
EN 327	Public Finance II	Core	7.5
	Two Elective Courses	Electives	18
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 328	International Economics II	Elective	9
EN 322	Monetary Economics II	Elective	9
ST 3206	Regression Analysis II	Elective	9

### **2.1.13 Bachelor of Arts in Economics and Sociology (BA ESoc)**

#### **Programme Description**

The overall objective of the programme is to prepare a cadre of high quality understanding in economics. Graduates should be able to use analytical knowledge and skills for effective economic planning and policy formulation in the context of Tanzania and beyond. The programme content has been selected considering the country's current economic issues, i.e. the country's need for good planners and policy makers in monetary issues, public finance, international trade, agriculture, industrial development, etc. Learning and teaching methods, process, and criteria for assessment, reference materials, core and optional elements have been determined on the basis of the nature of the courses and what other universities in the country and elsewhere in the world do.

#### **Learning Outcomes of the Programme**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, intellectual qualities, practical skills, transferable skills, and other attributes in different areas. Graduates of this programme are expected to:

- Develop an understanding of the theories that are the basis of socio-economic thinking.
- Collect and analyse data related to socio-economic issues.
- Collect and analyse data related to the economy.
- Carry out research on economic issues.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 111	Introductory Microeconomics Analysis I	Core	9
EN 112	Introductory Macroeconomics Analysis I	Core	9
DS 102	Development Perspective	Core	7.5
LG 102	Communication Skills	Core	7.5
SY 111	Classical Sociology	Core	10.5
ST 1101	Basic Statistics	Core	9
EN 114	History and Economics of Development	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 121	Introductory Microeconomics Analysis II	Core	9
EN 122	Introductory Macroeconomics Analysis II	Core	9
EN 124	Mathematics for Economists	Core	7.5
SY 121	Contemporary Sociology	Core	10.5
SY 122	Introduction to Culture and Society	Core	10.5
IT 111	Introduction to Information Technology	Core	7.5
MG 121	Principles and Practices of Management	Elective	10
	<b>Total</b>		<b>64</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 211	Intermediate Microeconomics Analysis I	Core	9
EN 212	Intermediate Macroeconomics Analysis I	Core	9
EN 213	Econometrics I	Core	9
EN 215	Development Economics I	Core	9
SY 212	Introduction to Rural Sociology and Urban Sociology	Core	7.5
SY 211	Classical Sociological Theories	Core	10.5
EN 217	Managerial Economics	Core	7.5
	<b>Total</b>		<b>61.5</b>

<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 221	Intermediate Microeconomics Analysis II	Core	9
EN 222	Intermediate Macroeconomics Analysis II	Core	9
EN 223	Econometrics II	Core	9
SY 221	Contemporary Sociological Theories	Core	10.5
EN 225	Development Economics II	Core	9
EN 228	Economic Research Methods	Core	7.5
EN 224	Industrial Economics	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 311	Economic Policy and Planning I	Core	9
EN 310	Field Practical Training	Core	12
SY 311	Community Development: Theory and Practice	Core	7.5
SY 312	Sociology of Development	Core	7.5
EN 317	Public Finance I	Core	7.5
EN 312	Monetary Economics I	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 319	Labour Economics I	Elective	7.5
EN 316	Agricultural Economics I	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 321	Economic Policy and Planning II	Core	9
SY 324	Project Planning and Implementation	Core	10.5
SY 321	Intervention Strategies for Sustainable Development	Core	10.5
EN 324	Special Project	Core	9
EN 323	Applied Econometrics	Core	9
	Two Elective Courses	Elective	15
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 329	Labour Economics II	Elective	7.5
EN 326	Agricultural Economics II	Elective	7.5

## **2.1.14 Bachelor of Arts in Environmental Economics and Policy (BA EEP)**

### **Programme Description**

The programme of Bachelor of Arts in Environmental Economics and Policy is structured to assist in the intellectual, social, and personal development of a student as preparation for the entrance to a range of specialist and generalist practitioners in environmental economics and economics professions. The world requires enterprising men and women who can take stock of the changing competitive economic environment and make critical decisions for effective and efficient strategy formulation and implementation. This qualification is intended for persons who will analyse, interpret, and make decisions on micro and macroeconomic aspects of the environment. The beneficiaries of the qualification will be able to apply knowledge, skills, and understanding to a wide and unpredictable variety of contexts with substantial personal responsibility for the work of others and responsibility for the allocation of resources, policies, planning, execution, and evaluation. Upon successful completion of the programme, graduates should be able to serve effectively and efficiently both in the public and private sectors.

### **Learning Outcomes of the Programme**

The programme provides to students an understanding of the environmental resources and the importance of safeguarding the environment for the betterment of the present and future generations. Moreover, students will gain knowledge and skills on various environmental issues and use economic principles and theories to address environmental challenges currently encountered in developing countries, Tanzania in particular. Graduates of this programme should be able to:

- Use economic theories and principles in making rational decisions on the use of environmental and natural resources.
- Ensure that environmental and natural resources are properly allocated with regard to the needs of the present and future generations.
- Advise policy makers on how to develop appropriate environmental policies which can address the on-going environmental threats in developing countries.
- Conduct environmental policy reviews which could be of great value in enriching the existing environmental policy.
- Apply knowledge to safeguard our environmental and natural resources.
- Conduct environmental impact assessments for new development projects and advise the responsible authorities accordingly.
- Conduct environmental audits for projects already in operation to ensure environmental protection for the present and future generations since

environmental audits identify all environmental anomalies and require the developer to conform to the environmental guidelines given prior to the execution of the project.

- Address market failures associated with non-marketed goods which includes most of environmental and natural resources.
- Attach a price tag on environmental goods and services (non-marketed goods and services).
- Minimize the degradation of these resources as people appreciate their economic values.
- Resolve natural resource use conflicts since the increased human population has significantly led to conflicts over resources in developing countries. Through this programme, students will be in a position to resolve conflicts guided by economic theories and principles on resource use.
- Propose appropriate economic instruments to handle different environmental problems or natural resource issues, i.e. air pollution, water pollution, traffic management, oil spills, noise pollution, industrial pollution, sedimentation of rivers, poor waste management, etc.
- Identify appropriate economically efficient environmental technologies which can be used to handle environmental problems, i.e. cleaner production mechanisms, waste management technologies, water management technologies, etc.
- Conduct environmental and natural resources related researches and hence solve environmental problems or issues which will be identified in researches.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 111	Introductory Microeconomics Analysis I	Core	9
EN 112	Introductory Macroeconomics Analysis I	Core	9
DS 102	Development Perspective	Core	7.5
LG 102	Communication Skills	Core	7.5
AF 111	Introduction to Financial Accounting	Core	9
ST 1101	Basic Statistics	Core	10
IT 111	Introduction to Information Technology	Core	7.5
EN 114	History and Economics of Development	Elective	7.5
	<b>Total</b>		<b>67</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>



EN 121	Introductory Microeconomics Analysis II	Core	9
EN 122	Introductory Macroeconomics Analysis II	Core	9
EN 124	Mathematics for Economists	Core	7.5
EV 121	Introduction to Environmental and Natural Resources Economics	Core	9
AF 121	Financial Accounting	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
EN 125	The History of Economic Thought	Elective	9
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 211	Intermediate Microeconomics Analysis I	Core	9
EN 212	Intermediate Macroeconomics Analysis I	Core	9
EN 213	Econometrics I	Core	9
EN 214	Quantitative Methods	Core	9
EN 215	Development Economics I	Core	10.5
LW 218	Environmental Law	Core	7.5
EV 211	Intermediate Environmental and Natural Resources Economics	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 221	Intermediate Microeconomics Analysis II	Core	9
EN 222	Intermediate Macroeconomics Analysis II	Core	9
EN 223	Econometrics II	Core	9
EN 228	Economic Research Methods	Core	9
GO 221	GIS and Remote Sensing	Core	9
EN 224	Industrial Economics	Core	7.5
EN 225	Development Economics II	Core	10.5
	<b>Total</b>		<b>63</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EV 311	Techniques of Spatial Economic Analysis	Core	9
EN 316	Agricultural Economics I	Core	7.5
EN 317	Public Finance I	Core	7.5
EV 312	Environmental Valuation and Analysis I	Core	7.5
EN 310	Field Practical Training	Core	12
EV 316	Energy Economics	Core	9

	One Elective Course		7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EN 3101	Applied Impact Evaluation	Elective	7.5
EN 315	Financial Economics I	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AF 332	Environmental Accounting	Core	9
EV 321	Environmental Valuation and Analysis II	Core	9
EV 322	Modeling and Management of Biological Resources	Core	10.5
EN 324	Special Project	Core	9
EN 327	Public Finance II	Core	7.5
EN 326	Agricultural Economics II	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EV 323	Economics of Climate Change	Elective	7.5
EN 325	Financial Economics II	Elective	7.5
BI 327	Environmental Impact Assessment	Elective	7.5

## 2.2 COLLEGE OF EARTH SCIENCES AND ENGINEERING (CoESE)

The College of Earth Sciences and Engineering offers the following undergraduate programmes:

1. Bachelor of Science in Environmental Sciences (BSc ES)
2. Bachelor of Science in Environmental Engineering (BSc EE)
3. Bachelor of Science in Applied Geology (BSc AG)
4. Bachelor of Science in Geo-informatics (BSc GEOINFO)
5. Bachelor of Science in Metallurgy and Mineral Processing Engineering (BSc MMPE)
6. Bachelor of Science in Mining Engineering (BSc ME)
7. Bachelor of Science in Renewable Energy Engineering (BSc REE)
8. Bachelor of Science in Petroleum Engineering (BSc PE)
9. Bachelor of Science in Chemical and Process Engineering (BSc CPE)
10. Diploma in Mineral Exploration and Mining Geology (Dip MEMG)
11. Diploma in Mining Engineering (Dip ME)

## 2.2.1 Bachelor of Science in Environmental Sciences (BSc ES)

### Programme Description

This is a three-year programme training on skills and understanding of the Earth's physical and chemical processes and develops an appreciation of the interaction between many different aspects of the environment. The programme also offers interdisciplinary insights into the study of environmental problems, stimulating the quest of applying scientific techniques in solving the problems. Graduates from this programme will have a thorough command of their subject matter as well as valuable and transferrable environmental skills that qualify them to enter the employment race or join postgraduate training.

### Learning Outcomes of the Programme

Graduates of this programme are expected to be:

- Knowledgeable in the interrelationship between man and physical, biological, and social environment as well as other pertinent environmental issues.
- Skilled and practical oriented in solving environmental problems, including formulation and independent implementation of solutions.
- Competent in matters of environmental legislation.
- Effective communicators and ethically responsible.
- Robust in character, self-motivated, and engaging in further research and career-related studies.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
ES 111	Mathematics	Core	10
EE 113	Introduction to Computers	Core	7.5
EE 112	Technical Report Writing and Documentation	Core	7.5
LG 104	Communication Skills for Earth Sciences	Core	10
ES 113	Principles of Physics	Core	7.5
ES 114	Fundamentals of Biology	Core	10
DS 104	Development Perspectives I	Core	7.5
	<b>Total</b>		<b>60</b>
Semester Two			
Code	Course Title	Status	Credits
ES 121	Environmental Physics	Core	7.5
ES 122	Introduction to Environmental Science	Core	10

ES 123	Introduction to Natural resources Conservation and Management	Core	7.5
MP 122	Physical Chemistry for Engineers	Core	10
GI 120	Principles of Remote Sensing	Core	12
ES 124	Fundamentals of Ecology	Core	7.5
ES 125	Industrial Training I	Core	7.5
	<b>Total</b>		<b>62</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ES 211	Water Supply and Environmental Sanitation	Core	15
ES 212	Environmental Microbiology	Core	7.5
ES 213	Environmental Statistics and Statistical Methods	Core	10
GI 212	Principles of GIS	Core	10
ES 214	Environmental Management Systems	Core	7.5
EE 315	Environmental Chemistry	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ES 221	Meteorology	Core	7.5
ES 222	Environmental Ecology	Core	10
ES 223	Toxicology and Risk Management	Core	10
ES 224	Pollution Science	Core	15
ES 225	Water Resource Management	Core	10
ES 226	Industrial Training II	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ES 311	Environmental Pollution Prevention and Control	Core	10
ES 312	Environmental Policies and Legislation	Core	10
ES 313	Environmental Planning and Assessment	Core	7.5
EE 314	Environmental Health and Epidemiology	Core	7.5
MN 415	Entrepreneurship and Management for Engineers	Core	10
ES 315	Final Year Project I	Core	7.5
ES 314	Environmental Horticulture for Sustainable Communities	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

ES 321	Environmental Biotechnology	Core	10
EE 323	Solid Waste Management and Technology	Core	10
ES 324	Disaster and Risk Management	Core	7.5
EE 423	Environmental Economics	Core	7.5
EE 421	Occupational Health and Safety	Core	7.5
ES 325	Final Year Project II	Core	13
ES 322	Climate Change and Variability	Elective	7.5
	<b>Total</b>		<b>63</b>

## 2.2.2 Bachelor of Science in Environmental Engineering (BSc EE)

### Programme Description

The programme is structured in such a way that in the first two years, the concentration is on foundation courses in basic engineering science, Mathematics, computer and technical communications; and in the last two years, the concentration is on core environmental engineering courses as well as environmental engineering practice. The last semesters, i.e. final year, involves a final year project with two parts. The first part is in the first semester and the second is in the second semester. In their project assignments, students are at this point expected to demonstrate independent and critical thinking and propose relevant engineering solutions to environmental engineering problems. The degree award is classified based on the completion of 490 credits from core courses and 15 credits from elective courses in 8 semesters. Practical Training (PT) is also regarded as an integral part of this programme, as it is used to consolidate students' theoretical understanding of concepts in the field. At the end of each second semester (from the first, second and third years), an eight-week practical training is taken to expose students to real life situations in the field.

### Learning Outcomes of the Programme

The programme is designed to ideally produce graduates who are well-groomed in the fundamental and scientific principles pertinent to their discipline, have a basic knowledge of applied engineering, and able to be resourceful to the course of action. Upon completion of this programme, graduates should be able to:

- Develop solutions to environmental problems; pollution control and overall environmental management.
- Show an appreciation of practical aspects of the environmental engineering profession.
- Conduct relevant research and pursue further studies at higher levels.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 111	Engineering Mathematics 1	Core	10
EE 111	Construction Materials and Technology	Core	8.5
DS 104	Development Perspectives for Earth Scientists	Core	7
LG 104	Communication Skills for Earth Scientists	Core	10
MN 112	Engineering Drawings	Core	10
EE 112	Environmental Skills and Documentation	Core	7.5
EE 113	Introduction to Computers	Core	7.5
	<b>Total</b>		<b>60.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 121	Engineering Mathematics II	Core	10
MP 122	Physical Chemistry for Engineers	Core	10
AG 124	Introduction to Surveying and Mapping	Core	12
EE 121	Introduction to Environmental Engineering	Core	12
MN 122	Computer Aided Drafting	Core	10
EE 122	Practical Training I	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 211	Engineering Statics	Core	10
ES 212	Environmental Microbiology	Core	7.5
MP 211	Fluid Mechanics	Core	10
MN 213	Engineering Mathematics III	Core	10
EE 211	Engineering Surveying	Core	7.5
EE 212	Water Supply Engineering	Core	15
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EE 221	Engineering Mechanics	Core	7.5
EE 222	Open Channel Mechanics	Core	7.5
EE 223	Sewerage and Drainage Engineering	Core	15
EE 224	Foundation Engineering	Core	7.5
MP 221	Material and Energy Balance	Core	7.5
EE 225	Introduction to Quantity Surveying	Core	10
EE 226	Practical Training II	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Year Three</b>			

<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EE 311	Hydraulic Structures	Core	10
EE 312	Unit Operations and Processes in Environmental Engineering	Core	7.5
EE 313	Land and Water Pollution Control	Core	15
EE 314	Environmental Health and Epidemiology	Core	7.5
EE 315	Environmental Chemistry	Core	10
ES 213	Environmental Statistics and Scientific Methods	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EE 321	Water Treatment Engineering	Core	15
EE 322	Pumps and Pumping Stations	Core	7.5
ES 223	Environmental Ecology	Core	7.5
EE 323	Solid Waste Management	Core	10
EE 324	Practical Training III	Core	7.5
ES 322	Climate Change and Variability	Elective	7.5
	<b>Total</b>		<b>55</b>
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 415	Entrepreneurship and Management for Engineers	Core	10
ES 312	Environmental Policies and Legislation	Core	10
ES 313	Environmental Planning and Assessments	Core	10
EE 411	Wastewater Treatment Technology	Core	15
EE 413	Air Pollution Engineering	Core	10
EE 414	Final Year Project I	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EE 421	Occupational Health and Safety	Core	10
RE 423	Project Management	Core	7.5
MN 421	Engineering Procedures, Ethics and Professional Conduct	Core	7.5
EE 423	Environmental Economics	Core	7.5
EE 424	Environmental Systems Analysis & Techniques	Core	10
EE 425	Final Year Project II	Core	13
EE 422	Technology, Energy and the Environment	Elective	7.5
	<b>Total</b>		<b>63</b>

### 2.2.3 Bachelor of Science in Applied Geology (BSc AG)

#### Programme Description

This programme is designed to provide students with a broad background for a geology career and thus produce highly qualified geologists to suit the fast-growing mineral exploration, groundwater exploration and petroleum industries. This three-year programme is focused on state of the art of geological skills in field mapping, geophysical survey, geochemical survey, mineralogy and petrographic studies, and mining and engineering geology.

#### Learning Outcomes of the Programme

The objectives of the programme are geared at imparting knowledge and providing a range of competencies that must be achieved before graduation. Specifically, the Applied Geology Programme seeks to:

- Produce graduates with a solid foundation in applied geology and with the ability to apply this knowledge in the practice of various fields related to geosciences.
- Produce graduates skillful in commonly used applied geology techniques and with the ability to design and implement research in geosciences and related fields.
- Produce graduates who are qualified, knowledgeable, and possess appropriate skills to serve earth-resource based industries and capable of developing and implementing projects involving earth materials.
- Produce graduates with self-learning and problem-solving skills that are pertinent in various careers.
- Enhance employment prospects for the graduates.
- Develop an Earth Science ethos in terms of awareness of the Earth as an integrated system.
- Develop the role of Geology in society and its importance to natural environmental issues.
- Provide a background of knowledge, practical skills, and field experience in geology and earth sciences.

#### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
CH 1101	General Chemistry	Core	9
CP 111	Principles of Programming	Core	9
DS 102	Development Perspectives	Core	7.5



LG 102	Communication Skills	Core	7.5
AG 1101	Principles of Geomorphology	Core	7.5
AG 1102	Introduction to Geology and Geological Processes	Core	9
GI 1103	Introductions to Surveying and Mapping	Core	10.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 123	Introduction to High Level Programming	Core	9
ST 1209	Statistics and Probability	Core	10.5
AG 1203	Earth Materials	Core	10.5
AG 1204	History of the Earth	Core	10.5
PH 1209	Remote Sensing and GIS	Core	10.5
AG 1202	Physics for Geoscientists	Core	9
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AG 1209	Field Geology and Excursions	*Core	9.6
AG 2101	Introduction to Geochemistry	Core	9
AG 2102	Crystallography and Mineralogy	Core	9
AG 2103	Optical Mineralogy	Core	7.5
AG 2104	Structural Geology	Core	9
AG 2105	Geology and Mineral Resources of Tanzania	Core	7.5
AG 2106	Solid Earth Geophysics	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>66.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AG 2107	Statistics and Geostatistical Applications in Geology	Elective	7.5
GI 2103	GIS and Remote Sensing Operation	Elective	10.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AG 2201	Sedimentary Petrology	Core	9
AG 2202	Igneous Petrology	Core	9
AG 2203	Metamorphic Petrology	Core	9
AG 2204	Research Approach and Scientific Writing	Core	9
AG 2205	Applied Geophysics	Core	7.5
AG 2206	Stratigraphy and Paleontology	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AG 2207	Geotectonics	Elective	7.5
AG 2208	Environmental Geology	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AG 2209	Industrial Training	***Core	9.6
MN 4114	Entrepreneurship and Management	Core	7.5
AG 3101	Industrial Minerals and Rocks	Core	7.5
AG 3102	Applied Geochemistry	Core	7.5
AG 3103	Metallic Mineral Deposits	Core	7.5
AG 3104	Hydrogeology	Core	9
AG 3105	Final Year Project I	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AG 3106	Seismic Exploration	Elective	7.5
AG 3107	Marine Geology	Elective	7.5
AG 3108	Seismology	Elective	7.5
<b>Semester Two</b>			
PE 425	Contract and Project Management	Core	7.5
AG 3201	Mining Geology	Core	10.5
AG 3202	Fuel Geology	Core	7.5
AG 3203	Ore Microscopy	Core	9
AG 3204	Mineral Exploration Techniques	Core	7.5
AG 3205	Final Project II	***Core	10.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
AG 3206	Basin Analysis	Elective	7.5
AG 3207	Engineering Geology	Elective	7.5

\*This is a Field Practical Training course conducted for 8 weeks.

\*\*This is a Practical Training (PT) course conducted for 8 weeks.

\*\*\*This course has a research component.

## **Special Programme Requirements**

### **Field Practical Training**

Field Geology and Excursions provides students with an excellent opportunity to integrate the theoretical and field practical aspects to solve the real-world problems. Students are expected to apply the real-life implementation of theories taught in class to solve societal problems. This is an eight-week programme conducted

towards the end of an academic year after the completion of second semester examinations. This course is conducted in Chimala area – Mbeya Region, where students carry out geological mapping to assigned areas and in the end produce a detailed geological map under close supervision of the academic staff. Students also visit pertinent geological sites with special geological features only found in Mbeya Region and within a short distance in order to gain hands-on experience in all works related to the theory and practice of the programme. At the end of this course, students work and write a comprehensive report under close guidance and supervision of an academic supervisor from the department. To ensure adequate coverage in terms of depth and breadth of the field training, students are given exposure to a wide variety of geological features and activities pertaining to the programme.

### **Practical Training**

Practical Training is an industrial attachment course which provides students with an excellent opportunity to link the theories taught in class. This is an eight-week course conducted towards the end of an academic year after the completion of second semester university examinations. Students are allocated to relevant organizations, firms, agencies, mining companies (i.e., small, medium and large mining companies), etc., in order to gain hands-on experience in all works related to the theory and practice of the programme. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the department, at least once. During this period students are expected to gather relevant information and materials (e.g., datasets, software, literature/reports etc.) which will help them to formulate proposal, field data collection, data analysis, and report/dissertation writing. The students should submit the dissertation with the following sections: introduction, objectives, methodology, analysis, findings, summary and conclusions, recommendations, references, and appendices. Finally, students have to present their findings in front of the examiners.

## **2.2.4 Bachelor of Science in Geo-informatics (BSc GEOINFO)**

### **Programme Description**

The Bachelor of Science in Geoinformatics programme is designed with the main objective of providing the country with well trained and qualified personnel that can process and interpret aerial photographs, satellite images, and prepare maps for various earth resources at different spatial and temporal scales with the meaningful results for the decision making process at all levels of good governance. Graduates

from this programme should have the needed skills and knowledge on various sensor-platform characteristics, criteria for selecting remotely sensed images suitable for the intended application, and image analysis and classification techniques. The student should also get acquainted with GIS functionalities available in selected GIS software that facilitate data analysis, map making procedures, and spatial data fusion process. Furthermore, the students should know how to operate various field survey equipments such as total stations and GPS devices. In addition, students should be exposed to both commercial and open-source software/packages and should have the freedom to enjoy the advantages of each over the others.

### **Learning Outcomes of the Programme**

After completing this programme, graduates will be able to process and interpret satellite images, aerial photographs from different sensors, prepare digital terrain models (DTMs) or digital elevation models (DEMs) at various spatial scales, and analyse spatial data in GIS environment to solve problems related to:

- Sustainable agriculture development
- Geo-hazards
- Disaster mitigation
- Urban and rural development
- Wildlife management and ecology
- Natural resources management and exploration
- Climate science and change
- Effective land use planning and management
- Quick and informed decision making

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
CP 111	Principles of Programming	Core	9
MT 1116	Mathematics for Geoinformatics	Core	9
GI 1102	Cartography	Core	9
GI 1103	Introductions to Surveying and Mapping	Core	10.5
GI 1104	Fundamentals of Database Management Systems	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GI 1201	Principles of Remote Sensing	Core	7.5
GI 1203	Principles of GIS and Lis	Core	10.5
GI 1204	Topographical Surveying	Core	7.5
ST 1209	Statistics and Probability	Core	10.5
PH 1209	Physics for Geoscientists	Core	9
CP 123	Introduction to High-Level Programming	Core	9
GI 1202	Field Mapping with GPS and Satellite Data	*Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GI 2101	Advanced Remote Sensing	Core	7.5
GI 2102	Urban Planning and Design	Core	7.5
GI 2103	GIS and Remote Sensing Operation	Core	10.5
GI 2104	Hydrology and Geophysics	Core	10.5
GI 2105	Land Management and Administration	Core	7.5
GI 2106	Cadastral Surveying	Core	10.5
GI 2107	Adjustment Theories in Land Surveying	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GI 2201	Digital Mapping and Geo-Visualization	Core	7.5
GI 2202	Photogrammetry	Core	10.5
GI 2203	Land Law	Core	7.5
GI 2205	Engineering Surveying	Core	7.5
GI 2206	Geodesy and GPS	Core	10.5
AG 2204	Research Approach and Scientific Writing	Core	9
GI 2204	Industrial Training	**Core	9.6
	<b>Total</b>		<b>62.1</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 4114	Entrepreneurship and Management	Core	7.5
GI 3101	Geoinformatics Applications	Core	10.5
GI 3102	Spatial Data Infrastructures	Core	7.5
GI 3103	Spatial Data Analysis and Modelling	Core	9
GI 3104	Surface and Underground Mine Surveys	Core	7.5
GI 3105	Professional Practice	Core	6

GI 3106	Final Year Project I	Core	7.5
	One Elective	Elective	7.5
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GI 3107	Digital Image Processing	Elective	7.5
GI 3108	Electronic Surveying	Elective	7.5
GI 3108	Electronic Surveying	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GI 3201	Web GIS and Customization	Core	9
GI 3202	Geostatistical Concepts	Core	10.5
PE 425	Contract and Project Management	Core	7.5
MG 221	Organizational Behaviour	Core	8
GI 3203	Geo-Computation and Spatial Decision Support Systems	Core	7.5
GI 3204	Final Year Project II	***Core	10.5
	One Elective	Elective	7.5
	<b>Total</b>		<b>60.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GI 3205	Modern Trends in GIS	Elective	7.5
GI 3206	Watershed Management	Elective	7.5
	<b>Total</b>		<b>60.5</b>

\*This course is a Field Practical Training for 8 weeks.

\*\*This course is a Practical Training (PT) for 8 weeks.

\*\*\*This course has a research component.

## **Special Programme Requirements**

### **Field Practical Training**

Field Geology and Excursions provides students with an excellent opportunity to integrate the theoretical and field practical aspects to solve the real-world problems. Students are expected to apply the real-life implementation of theories taught in class to solve societal problems. This is an eight-week programme conducted towards the end of an academic year after completion of second semester examinations. This course is conducted in Singida Municipality – Singida Region, where students carry out field trips to various vegetation patterns, crop types, soils,

water bodies and geological formations to make them clearly understand the spectral reflectance of these features and identify them in the satellite image and prepare an interpreted map of an area. Further, students conduct GPS tracking and locating of points using GPS under close supervision of the academic staff. At the end of this course, students work and write a comprehensive report under close guidance and supervision of an academic supervisor from the department. To ensure adequate coverage in terms of depth and breadth of the field training, students are given exposure to a wide variety of geospatial and land surveying related aspects and activities pertaining to the Programme.

### **Practical Training**

Practical Training is an industrial attachment course which provides students with an excellent opportunity to link the theories taught in class. This is an eight-week course conducted towards the end of an academic year, after completion of second semester university examinations. Students are allocated to relevant organizations, firms, agencies, mining companies (i.e., mine surveying in medium and large mining companies), etc., in order to gain hands-on experience in all works related to the theory and practice of the programme. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the department, at least once. During this period, students are expected to gather relevant information and materials (e.g., datasets, software, literature/reports etc.) which will help them in formulating proposal, field data collection, data analysis and report/dissertation writing. The students should submit dissertations with the following sections: introduction, objectives, methodology, analysis, findings, summary and conclusions, recommendations, references and appendixes. Finally, students will present their findings in front of the examiners.

## **2.2.5 Bachelor of Science in Metallurgy and Mineral Processing Engineering (BSc MMPE)**

### **Programme Description**

The Department of Mining and Mineral Processing of The University of Dodoma (UDOM) offers a four-year programme containing aspects of mineral science engineering and technology that is professionally related to the ever-expanding mineral industry of Tanzania. The curriculum for this programme reflects massive changes that have taken place in the mining industry in the last 10 years. It takes the advantage that there is a growing demand for mineral science engineers due to the increasing consumption of mineral resources worldwide. China and India, in

particular, have sent mineral commodity prices soaring and have renewed the need for minerals and technical expertise for finding, extracting, and processing them in the country and abroad.

The strength of this curriculum, nevertheless, is catered in a form of Outcome-Based Training (OBT) which differs substantially from the existing, classical knowledge-based, and content-driven format. It is driven by the acquisition of skills. Most contents of the courses are seen as a tool whereby life-skills and competencies can be enhanced; in other words, students will be taught how to think rather than what to think. This will have a considerable impact for employers over the present teaching system.

The curriculum addresses communication skills, basic sciences, applied sciences, geology, and engineering sciences to mould competent mineral processing engineers through minerals identification, ore valuation and concentration, conservation, and protection of the environment. Ethical, social, safety, economic, and environmental considerations are emphasized in the design experience throughout many courses, including the final project write-up.

Coursework, which covers theoretical, practical training, and training practice sessions provides a unique background for science, engineering, and management positions in the industry and government, as well as for the continuation of specialized graduate studies. The laboratory sessions expose students to laboratory courses which focus on conducting experiments as the base of Research and Development (R&D) of a modern plant, understanding of the principles involved in each experiment, and analysing and interpreting experimental data. Field excursions and industrial practical training will develop life-skills for the students.

Training practice plays a vital part in most courses, and it is prepared to spend time in the mineral processing plants to undertake single/group expeditions lasting from a few days to one or two months. Students are expected to complete a longer, usually independent project during the 3<sup>rd</sup> study year, which will be submitted as an independent project during the final year. Laboratory work is also a crucial component in building life-long skills. It involves the examination of polished rock/ore sections under microscopes, laboratory particle size analysis; simulation of crushing, grinding, sieving, and classification; mineral separations using gravitation, flotation, magnetic, electrostatic, and dissolution methods. Potential graduates of this programme will find domestic and international employment opportunities with the processing and concentrating valuable elements in soft and hard rocks, coal,



industrial minerals, and construction aggregates producers, as well as with government agencies and equipment vendors.

### **Learning Outcomes of the Programme**

The major outcome is building skills for the young graduates, i.e. skills, abilities and values which a student shall acquire and be expected to demonstrate in each programme area. Assessment of the learner's progress will be in terms of these outcomes. The curriculum is therefore catered to produce high quality, rigorously trained metallurgy and mineral processing engineers whose background and education reflect the current level of **metallurgy and mineral processing** technology and thought of the profession; and can enter directly into metallurgy and mineral processing engineering practice or graduate school for further studies. Specifically, the programme outcomes include:

- Provision of high quality undergraduate and graduate programmes supported by up-to-date curriculum and scientific and industrial research.
- Production of technically competent and well-trained graduates engineers who inspire creativity in thinking and skills in problem solving to assist the mining industry in the country and abroad in meeting daily challenges.
- Contribution to maintain a team of school who are committed to providing high quality of teaching and research in solving metallurgy and mineral processing problems using the fundamental principles of basic and applied sciences and engineering, in conjunction with state-of-the-art tools.
- Production of well-trained graduate **metallurgy and mineral processing** engineers who can follow and utilize the technological developments that may occur during their careers and recognize the needs of an environmentally sensitive society.

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 1113	Engineering Mathematics I	Core	9
MN 114	Engineering Drawing	Core	7.5
MN 115	Introduction to Mining Engineering	Core	6
MN 116	Engineering Statics	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
AG 1102	Introduction to Geology and Geological Processes	Core	9
CP 111	Principles of Programming	Core	9

	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MP 124	Introduction to Mineral Processing	Core	6
CH 1207	Physical Chemistry	Core	7.5
MT 1212	Engineering Mathematics II	Core	9
MN 124	Computer Aided Drafting	Core	7.5
MN 125	Basic Electrical Engineering	Core	7.5
AG 1202	Earth Materials	Core	10.5
CP 123	Introduction to High Level Programming	Core	9
CP 1206	Basic Inorganic Chemistry for Engineers	Core	7.5
	<b>Total</b>		<b>64.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MP 215	Fluid Mechanics	Core	7.5
MP 216	Materials and Energy Balance	Core	7.5
MN 215	Mechanics of Materials I	Core	7.5
MT 2112	Engineering Mathematics III	Core	9
MP 217	Mineral Processing Engineering I	Core	7.5
AG 3103	Metallic Mineral Deposits	Core	7.5
AG 3101	Industrial Minerals and Rock	Core	7.5
MP 129	Practical Training I	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MP 224	Chemical Reaction Engineering	Core	10.5
MP 225	Mineral Processing Engineering II	Core	9
MP 226	Froth Flotation	Core	7.5
MN 2211	Engineering Thermodynamics	Core	10.5
MT 2215	Engineering Mathematics IV	Core	9
AG 3203	Ore Microscopy	Core	9
CH 2204	Chemistry Practical	Core	6
	<b>Total</b>		<b>61.5</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MP 315	Hydrometallurgy	Core	7.5
MP 316	Pyrometallurgy	Core	9
MP 317	Mineral Processing Laboratory I	Core	7.5
MN 317	Mine Transportation and Materials Handling	Core	7.5
MN 3111	Coal Mining	Core	6
MN 3112	Deterioration of Materials in Service	Core	6

MP 229	Practical Training II	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60.6</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MP 326	Dewatering and Tailing Disposal	Core	7.5
MP 328	Coal Processing	Core	7.5
MP 3212	Computer Applications in Mineral Processing	Core	9
MP 327	Mineral Processing Laboratory II	Core	7.5
MP 3211	Electrometallurgy	Core	6
AG 2204	Research Approach and Scientific Writing	Core	9
MP 3210	Metallurgical Accounting	Core	6
		Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PE 313	Instrumentation and Process Control	Core	7.5
MP 415	Extractive Metallurgy of Iron Ores	Core	6
MP 416	Final Project I	Core	7.5
MN 4110	Mineral Economics	Core	6
MN 4111	Mine Health and Safety	Core	6
MN 4112	Mine Management	Core	6
MN 4114	Entrepreneurship and Management	Core	7.5
MP 329	Practical Training III	Core	9.6
	One Elective Course	Elective	6
	<b>Total</b>		<b>62.1</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MP 427	Mining Environment	Core	7.5
MP 428	Design of Mineral Processing Plants	Core	9
MN 426	Small-Scale Mining Industry	Core	7.5
MP 429	Final Project II	Core	10.5
MN 425	Engineering Ethics and Professional Conduct	Core	6
PE 425	Contract And Project Management	Core	7.5
MP 4210	Extractive Metallurgy of Precious Metals	Core	6
	One Elective Course	Elective	6
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 3110	Geostatistics and Ore Reserve Estimation	Elective	7.5
AG 3202	Fuel Geology	Elective	7.5
AG 3204	Mineral Exploration Techniques	Elective	7.5

AG 3201	Mining Geology	Elective	10.5
MP 417	Extractive Metallurgy of Uranium Ores	Elective	6
AG 2105	Geology and Mineral Resources of Tanzania	Elective	7.5
MP 4211	Extractive Metallurgy of Copper Ores	Elective	6
	Any other course approved by the department		

## **2.2.6 Bachelor of Science in Mining Engineering (BSc ME)**

### **Programme Description**

Developments in the mining sector and the ongoing mineral exploration programmes in the country have shown great potential to become the key-driving engines of Tanzania's economy. Besides contributing substantially to government revenue through taxes (such as income tax, royalty, and withholding taxes on dividends and indirect taxes), mines have other social-economic benefits. It is envisaged that the mineral sector will contribute significantly to industrial development, employment creation, social and economic infrastructure development (particularly for the rural areas), income generation, foreign exchange earnings, and government revenue.

The mining investment needs a large pool of technical staff trained in the disciplines associated with mining and an abundant supply of willing labour. This programme was conceived in order to address the current and future needs of the market for trained mining engineers.

Mining Engineering is the application of engineering and scientific principles to the discovery, appraisal, and extraction of minerals from the earth and the sea. Thus, the curriculum has to provide fundamental training in the basic sciences, engineering sciences, earth sciences, environmental sciences, as well as training in the student's specialized branch of mining engineering. These include courses in design and development of the mine, mining technology, computer applications to the design, mineral extraction, management, control of mine operations, environmental impact and mitigation, industrial safety and health, protection of the environment, and mineral economics.

To accomplish their work, mining engineers are expected to work closely with other related professionals, including geologists, surveyors, and mineral processing engineers. Graduates are therefore supposed to be proficient in the use of a computer to develop problem-solving skills, and also proficient in communication skills.

To develop a professional, mining engineering training requires both theoretical understanding and practical training. This is accomplished in a partnership among students, staff, and the Mining Industry. The theoretical part will be covered in class involving staff and students. This is complemented by laboratory courses which focus on conducting experiments, understanding the principles involved in each experiment, and analysing and interpreting experimental data. To cement their understanding, students do practical training in the industry which exposes them to the actual mining operations.

The curriculum is therefore designed to provide students with a broad background for a career as a modern mining engineer since graduates of this programme are expected to be employed in different mining operations in hard rock mines, coal, oil and gas, industrial minerals, and construction aggregates production. Some are expected to work with government agencies, financial institutions and equipment vendors.

### **Learning Outcomes of the Programme**

The Mining Engineering programme is designed to ideally produce graduates who are well grounded in the fundamental and scientific principles appropriate to their discipline; have basic knowledge of applied engineering and management and able to think independently, critically, logically, scientifically, deductively, inductively, and creatively. Intrinsic to the programme is the development of a meaningful major engineering understanding that builds upon the fundamental concepts of Mathematics, basic and earth sciences, and engineering topics relevant to the local and international mining industry.

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 114	Engineering Drawings	Core	7.5
MN 115	Introduction to Mining Engineering	Core	6
MN 116	Engineering Statics	Core	7.5
MT 1113	Engineering Mathematics I	Core	9
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
AG 1102	Introduction to Geology and Geological Processes	Core	9
CP 111	Principles of Programming	Core	9
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

MN 124	Computer Aided Drafting	Core	7.5
MN 125	Basic Electrical Engineering	Core	7.5
MP 124	Introduction to Mineral Processing	Core	6
MT 1212	Engineering Mathematics II	Core	9
AG 1202	Earth Materials	Core	10.5
AG 124	Introduction to Survey and Mapping	Core	10
CP 123	Introduction to High Level Programming	Core	9
	<b>Total</b>		<b>59.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 129	Industrial Training I	Core	9.6
MN 215	Mechanics of Materials I	Core	7.5
MN 216	Mine Surveying	Core	6
MP 215	Fluid Mechanics	Core	7.5
MP 217	Mineral Processing Engineering I	Core	7.5
MT 2112	Engineering Mathematics III	Core	9
AG 3103	Metallic Mineral Deposits	Core	7.5
AG 3104	Hydrogeology	Core	9
	<b>Total</b>		<b>63.6</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 228	Rock Fragmentation	Core	9
MN 2210	Mine Development	Core	7.5
MN 2211	Engineering Thermodynamics	Core	10.5
MN 2212	Mechanics of Materials II	Core	7.5
MN 2213	Quarrying Operations	Core	7.5
MT 2215	Engineering Mathematics IV	Core	9
	<b>Total</b>		<b>51</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 229	Industrial Training II	Core	9.6
MN 317	Mine Transportation and Materials Handling	Core	7.5
MN 318	Surface Mining Methods	Core	7.5
MN 319	Engineering Rock Mechanics	Core	7.5
MN 3110	Geostatistics and Ore Reserve Estimation	Core	7.5
MN 3111	Coal Mining	Core	7.5
MN 3112	Deterioration of Materials in Service	Core	6
AG 3101	Industrial Minerals and Rocks	Core	7.5
	<b>Total</b>		<b>60.6</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

MN 326	Underground Mining Methods	Core	10.5
MN 327	Mine Ventilation and Climate Control	Core	10.5
MN 328	Introduction to Oil and Gas Mining	Core	9
MN 3210	Mining Engineering Laboratory I	Core	7.5
MP 328	Coal Processing	Core	6
AG 2204	Research Approach and Scientific Writing	Core	9
AG 3202	Fuel Geology	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 329	Industrial Training III	Core	9.6
MN 4110	Mineral Economics	Core	7.5
MN 4111	Mine Health and Safety	Core	6
MN 4112	Mine Management	Core	7.5
MN 4113	Mine Planning and Design	Core	7.5
MN 4114	Entrepreneurship and Management	Core	7.5
MN 4115	Mining Engineering Laboratory II	Core	7.5
MN 419	Final Project I	Core	7.5
	<b>Total</b>		<b>60.6</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 425	Engineering Ethics and Professional Conduct	Core	6
MN 426	Small Scale Mining Industry	Core	7.5
MN 427	Mining Machines and Equipment	Core	6
MN 429	Final Project II	Core	10.5
MP 427	Mining Environment	Core	7.5
AG 3201	Mining Geology	Core	10.5
PE 425	Contract and Project Management	Core	7.5
	Elective	Elective	6
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AG 3204	Mineral Exploration Techniques	Elective	7.5
AG 3207	Engineering Geology	Elective	7.5
	<b>Total</b>		

### 2.2.7 Bachelor of Science in Renewable Energy Engineering (BSc REE)

#### Programme Description

Bachelor of Science in Renewable Energy Engineering is a four years programme with 493 minimum credits of which 450.5 are credits of core courses, 20 credits of

elective courses, and 22.5 credits of industrial practical trainings. In the first two years, students will concentrate on foundation courses in Engineering, Science, Mathematics, Computer, and Technical Communications and the last two years will concentrate on core renewable energy issues, economics, environment and managerial courses. In this programme, coursework, which covers theoretical and laboratory sessions, provides a unique background for science, engineering, and management positions in the industry and government, as well as for the continuation of specialized graduate studies.

The laboratory sessions expose students to laboratory practices which involve conducting experiments as the base of research and development. The practical training plays a vital part in most courses to combine theory and practice, and it is a mandatory requirement by the Engineers Registration Board (ERB) which is a regulatory body for all practicing engineers in the country. In this programme, it is envisaged that second and third year students will have practical training sessions where they will be attached to a particular industry/company. They are expected to solve or work on specific problems in the industry and submit a report. During this practical training session, a student is also expected to identify a project, especially during the 3<sup>rd</sup> year of studies, which will be submitted as an independent project during the final year.

The strength of this programme is that it is geared towards Outcomes-Based Training (OBT) which differs substantially from many university trainings which are classical knowledge-based and content-driven format. It is driven by the acquisition of skills. Most of the contents of the courses are seen as a tool whereby life-skills and competencies can be enhanced; in other words, students will be taught *how* to think, rather than *what* to think. The overall intention is to get competent staff in this fast growing industry who can be absorbed by the labour market both locally and internationally.

### **Learning Outcomes of the Programme**

The Renewable Energy Engineering programme is designed to ideally produce graduates who are well grounded in the fundamental and scientific principles appropriate to their discipline, have a basic knowledge of applied engineering and management and are able to think independently, critically, logically, scientifically, deductively, inductively and creatively. Intrinsic to the programme is the development of a meaningful major engineering understanding that builds upon the fundamental concepts of Mathematics, basic and energy sciences and engineering topics, relevant to the local and international renewable industry.



The graduates of this programme should be able to:

- Solve renewable energy engineering problems based on fundamental principles of science, Mathematics, and engineering using available tools.
- Follow and utilize the technological developments that may occur during their careers and recognize the needs of an environmentally sensitive society.
- Practice the aspects of the energy industry and possess an appreciation for the industry as a business opportunity.
- Function professionally and ethically, and understand the social, environmental, regulatory, and safety considerations of the Renewable Energy Engineering profession.
- Implement energy strategies and policies for leading manufacturers, innovative start-ups, and public organisations.
- Effectively communicate, lead, and engage in life-long learning and professional development.
- Design and manage renewable energy systems and related technologies.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 111	Engineering Mathematics I	Core	10
MN 112	Engineering Drawings	Core	10
RE 111	Engineering Mechanics I	Core	7.5
DS 104	Development Perspectives for Earth Sciences	Core	7.5
LG 104	Communication Skills for Earth Sciences	Core	10
RE 112	Fundamentals of Electrical Engineering	Core	7.5
PE 111	Introduction to Computers and Programming I	Core	10
	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 121	Engineering Mathematics II	Core	10
MN 122	Computer Aided Drafting	Core	10
RE 121	Electronics and Instrumentation	Core	7.5
RE 122	Electrical Engineering	Core	10
RE 123	Introduction to Renewable Energy	Core	7.5
PE 125	Introduction to Computers and Programming II	Core	10
RE 124	Industrial Practical Training I	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

RE 211	Engineering Mechanics II	Core	7.5
MN213	Engineering Mathematics III	Core	10
MP 211	Fluid Mechanics	Core	10
RE 212	Design Methodology and Practice	Core	10
RE 213	Strength of Materials I	Core	10
RE 214	Hydropower	Core	10
RE 215	Marine Energy	Core	7.5
	<b>Total</b>		<b>65</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
RE 221	Combustion and Heat Transfer	Core	10
MN 226	Engineering Mathematics IV	Core	10
MN 224	Engineering Thermodynamics	Core	10
AG224	Research Methodology in Earth Sciences	Core	10
RE 222	Strength of Materials II	Core	7.5
RE 224	Machine Elements and Design	Core	7.5
RE 225	Industrial Practical Training 2	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
RE 311	Computer Aided Design and Simulation	Core	7.5
RE 312	Energy and Building	Core	7.5
RE 313	Corrosion Principle and Control	Core	7.5
RE 314	Control Engineering	Core	10
RE 315	Solar Photovoltaic Conversion	Core	10
RE 316	Testing of Materials	Core	7.5
RE 317	Solar Thermal Conversion	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
RE 322	Turbo-machinery	Core	7.5
RE 323	Bio-energy Technology	Core	10
RE 324	Power Systems	Core	7.5
RE 325	Wind Energy	Core	10
RE 326	Energy Laboratory	Core	7.5
RE 328	Industrial Practical Training 3	Core	7.5
RE 327	Solar Cell Design	Core	10
	<b>Total</b>		<b>60</b>
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
RE 411	Energy Storage	Core	10

RE 412	Energy Policy, Planning, and Economics	Core	10
RE 413	Energy Systems Modelling	Core	7.5
RE 414	Geothermal Energy	Core	7.5
RE 415	Final Year Project I	Core	7.5
MN 415	Entrepreneurship and Management for Engineers	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
RE 421	Industrial Safety and Maintenance	Core	7.5
RE 422	Final Year Project II	Core	13
RE 423	Project Management	Core	10
RE 424	Energy Efficiency, Management and Audit	Core	10
MN 421	Engineering Procedures, Ethics, and Professional Conduct	Core	7.5
	One Elective Course	Elective	20
	<b>Total</b>		<b>68</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
RE 418	Mechatronics	Elective	10
RE 419	Power Electronics and Drive Systems	Elective	10
RE 420	Vibration	Elective	10
RE 425	Computational Fluid Dynamics	Elective	10
RE 426	Industrial Energy Management	Elective	10
RE 427	Material Science and Engineering	Elective	10

## 2.2.8 Bachelor of Science in Petroleum Engineering (BSc PE)

### Programme Description

Bachelor of Science in Petroleum Engineering takes advantage that there is a growing demand for petroleum and gas engineers due to increasing consumption, both locally and worldwide of oil and gas resources. This is a four years degree programme that is intended to produce competent engineers in oil and gas to cater for the petroleum industry. The programme focuses on petroleum exploration, reserve estimation, drilling, well logging, testing and maintenance, oil and gas processing, transportation, and distribution.

### Learning Outcomes of the Programme

Upon graduation, graduates from the Petroleum Engineering programme should be able to:

- Develop competency in the core subjects in Petroleum Engineering including introduction to oil and gas industry, sedimentology and petroleum geology, properties of reservoir fluid, drilling engineering, petrophysical well logging and interpretation, natural gas engineering, petroleum production, reservoir engineering, coring and core analysis, hydrocarbon storage and transportation, and principles of enhanced oil recovery.
- Demonstrate an understanding of the petroleum engineering field including the types of jobs, challenges, and opportunities that they will experience as petroleum engineers. Graduates should also be familiar with technical, political, and social issues that may have an impact on professional activities.
- Demonstrate competency in applying petroleum engineering fundamentals and "higher-level" problem solving skills.
- Design field development strategy, plants (processing plants); and operate in an effective and efficient manner.
- Conduct research projects.
- Solve different problems in Petroleum Engineering.
- Apply problem solving strategies and have experience on using those strategies to a wide variety of engineering problems.
- Use their independent decision and observation to study existing and new problems and design practically relevant solutions.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AG 112	Introduction to Geology and Geological Processes	Core	9
CP 111	Principles of Programming Languages	Core	10
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
MN 116	Engineering Statics	Core	7.5
MN 114	Engineering Drawing	Core	7.5
MT 1113	Engineering Mathematics I	Core	9
PE 112	Introduction to Oil and Gas Industry	Core	6
	<b>Total</b>		<b>64</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1201	Organic Chemistry I	Core	9
CH 1207	Physical Chemistry	Core	7.5
CP 123	Introduction to High Level Programming	Core	9
MN 125	Basic Electrical Engineering	Core	7.5

MN 127	Computer Aided Drafting	Core	7.5
MT 1212	Engineering Mathematics II	Core	9
PE 121	Sedimentology and Petroleum Geology	Core	10.5
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PE 211	Properties of Reservoir Fluids	Core	7.5
PE 212	Mass and Energy Balance in Petroleum Industries	Core	7.5
PE 213	Drilling Engineering I	Core	9
MP 211	Fluid Mechanics	Core	7.5
MN 211	Mechanics of Materials I	Core	7.5
MT 2112	Engineering Mathematics III	Core	9
MN 212	Mine Surveying	Core	6
PE 129	Practical Training	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PE 221	Petrophysical Well Logging and Interpretation	Core	7.5
PE 222	Drilling Engineering II	Core	10.5
PE 223	Material Science and Corrosion Engineering	Core	7.5
MP 221	Chemical Reaction Engineering	Core	10.5
PE 225	Heat and Mass Transfer	Core	7.5
MN 223	Engineering Thermodynamics	Core	10.5
MT 2215	Engineering Mathematics IV	Core	9
	<b>Total</b>		<b>63</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PE 311	Unit Operations for Petroleum Industry	Core	7.5
PE 312	Natural Gas Engineering	Core	7.5
PE 313	Process Control	Core	7.5
PE 314	Petroleum Production Engineering I	Core	7.5
PE 315	Applied Numerical Methods	Core	7.5
PE 316	Reservoir Engineering I	Core	7.5
PE 229	Practical Training	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>62.1</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

PE 321	Reservoir Engineering II	Core	9
PE 322	Petroleum Production Engineering II	Core	9
PE 323	Coring and Core Analysis	Core	9
PE 324	Offshore Oil and Gas Operations	Core	9
PE 325	Hydrocarbon Storage and Transportation Engineering	Core	7.5
AG 224	Research Approach and Scientific Writing	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PE 411	Principles of Enhanced Oil Recovery	Core	7.5
PE 412	Reservoir Modelling and Simulation	Core	7.5
PE 413	Petroleum Economics	Core	7.5
PE 414	Natural Gas Processing Technology	Core	7.5
PE 415	Final Year Project I	Core	7.5
MN 415	Entrepreneurship and Management	Core	9.6
PE 329	Practical Training	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>62.1</b>
<b>Semester Two</b>			
PE 421	Petroleum Refining and Petrochemicals	Core	10.5
PE 422	Field Development and Plant Design	Core	10.5
PE 423	Healthy, Safety and Environment Management	Core	7.5
PE 424	Final Year Project II	Core	10.5
PE 425	Contract and Project Management	Core	7.5
MN 421	Engineering Ethics and Professional Conduct	Core	6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PE 416	Unconventional Hydrocarbon Resources	Elective	7.5
MG 221	Organizational Behaviour	Elective	8
RE 424	Energy Efficiency, Management and Audit	Elective	10
ES 312	Environmental Policy and Legislation	Elective	10

## 2.2.9 Bachelor of Science in Chemical and Process Engineering (BSc CPE)

### Programme Description

Bachelor of Science in Chemical and Process Engineering programme aims at providing the processing industry with highly trained processing engineers who are able to exploit the potential resources sustainably and in an environmentally sound manner. The programme is featured to produce graduates who are academically well trained with enough skills and able to work efficiently in the processing industry. With appropriate practical exposure, graduates from this program will meet the requirements for professional registration and will be able to develop careers in the higher levels of the chemical and process industry.

### Learning Outcomes of the Programme

The graduates of Chemical and Process Engineering programme should be able to:

- Identify the needs of the society and demands of the 21<sup>st</sup> century and be able to improve the quality of life.
- Describe/demonstrate the principles of chemical engineering design and identify their application for sustainable development.
- Identify, analyze, interpret and solve problems of chemical and allied industries by using modern techniques, engineering tools, research, and innovation.
- Define and demonstrate safety principles and practices in process industries.
- Recognize and employ professional and ethical responsibilities.
- Work in multidisciplinary teams.
- Serve on managerial positions within the chemical and associated industries.
- Demonstrate and identify life cycle environmental impacts of chemical and allied industries and their mitigation measures.
- Communicate effectively the technical knowledge, skills, and training.
- Engage in life-long learning and professional development.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
LG 102	Communication Skills	Core	7.5
DS 102	Development Perspectives	Core	7.5
CP 111	Principles of Programming	Core	9
MT 1113	Engineering Mathematics I	Core	9
MN 111	Engineering Drawing	Core	7.5

RE 111	Engineering Mechanics I	Core	7.5
RE 112	Fundamentals of Electrical Engineering	Core	7.5
CPE 111	Principles of Chemical and Process Engineering	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CPE 122	Electrical Engineering	Core	10.5
MT 1212	Engineering Mathematics II	Core	9
CH 1206	Basic Inorganic Chemistry for Engineers	Core	7.5
CH 1207	Physical Chemistry	Core	7.5
CH 1201	Organic Chemistry I	Core	9
MN 121	Computer Aided Drafting	Core	7.5
CP 123	Introduction to High-Level Programming	Core	9
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CPE 211	Chemical Engineering Laboratory I	Core	6
RE 212	Design Methodology and Practice	Core	10
MP 212	Mass and Energy Balances	Core	7.5
MP 211	Fluid Mechanics	Core	7.5
MT 2112	Engineering Mathematics III	Core	9
RE 213	Strength of Materials I	Core	7.5
RE 211	Engineering Mechanics II	Core	7.5
CPE 129	Practical Training I	Core	9.6
	<b>Total</b>		<b>64.6</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CPE 221	Unit Operations I	Core	7.5
CH 1102	Basic Analytical Chemistry	Core	9
MN 223	Engineering Thermodynamics	Core	10.5
MP 221	Chemical Reaction Engineering	Core	10.5
PE 225	Heat and Mass Transfer	Core	7.5
RE 222	Strength Of Materials II	Core	7.5
MT 2215	Engineering Mathematics IV	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CPE 311	Engineering Economics	Core	7.5
CPE 312	Unit Operations II	Core	9
CPE 313	Chemical Engineering Laboratory II	Core	7
CPE 314	Process Plant Equipment Design	Core	7.5



PE 313	Instrumentation and Process Control	Core	7.5
RE 313	Corrosion Principles and Control	Core	7.5
CPE 229	Practical Training II	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63.1</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CPE 321	Industrial Automation	Core	9
CPE 322	Research Methods	Core	7.5
CPE 323	Quality Control and Management	Core	7.5
CPE 324	Material Science	Core	7.5
CPE 325	Process Modelling and Simulation	Core	9
CPE 326	Chemical Engineering Laboratory III	Core	7.5
CPE 327	Fermentation Process	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CPE 316	Pulp and Paper Technology	Core	7.5
CPE 3210	Water and Waste Water Treatment Engineering	Core	7.5
CPE 328	Pharmaceutical Technology	Core	9
CPE 315	Process Technology I	Core	9
ES 313	Environmental Planning and Assessment	Core	10
	Any other university course approved by the department		
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CPE 411	Bio-Process Engineering	Core	9
CPE 412	Petrochemicals and Lubricants	Core	7.5
CPE 413	Final Year Project I	Core	7.5
PE 414	Natural Gas Processing Technology	Core	7.5
CPE 414	Industrial Ecology and Cleaner Technology	Core	7.5
MN 415	Entrepreneurship and Management	Core	7.5
CPE 329	Practical Training III	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63.6</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CPE 421	Chemical Process Plant Design	Core	9
RE 421	Industrial Safety and Maintenance	Core	7.5
CPE 422	Safety in Chemical Industries	Core	7.5
CPE 423	Final Year Project II	Core	10.5
PE 425	Contracts and Project Management	Core	7.5

MN 421	Engineering Ethics and Professional Conduct	Core	6
	One Elective Course	Elective	12
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
RE 413	Energy Systems Modelling	Elective	7.5
RE 424	Energy Efficiency, Management, and Audit	Elective	10
MG 221	Organizational Behaviour	Elective	8
HR 121	Principles and Practices of Human Resource Management	Elective	9
CPE 415	Process Technology II		9
	Any other university course approved by the department		

### 2.2.10 Diploma in Mineral Exploration and Mining Geology (Dip. MEMG)

#### Programme Description

The curriculum comprises class sessions, tutorials, practicals, fieldwork, surveying, and project work related to the field of specialization. In the first year, students will receive training in basic sciences, computer applications required by the industry, communication skills, fundamentals in geology and four weeks of field geological studies and mapping. The highlights of the second year include professional courses, industrial practical training, and project work.

Diploma in Mineral Exploration and Mining Geology is established to:

- Specially address the shortage of professionally trained middle level manpower in the mining industry in Tanzania.
- Increase the opportunities for further related degree programmes.
- Improve the number of trained personnel employed in the mineral and mining sector.

#### Learning Outcomes of the Programme

After the completion of the programme, the graduate should be able to:

- Ensure that minerals, rocks, and gems are extracted from opencast and underground mines, pits, and quarries in a manner that allows maximum profit and involves minimal problems.
- Analyse and solve exploration problems, consider a range of possible approaches to its solution, and determine the most promising approaches.
- Demonstrate an understanding of the practical aspects of exploration and mining and possess an appreciation for the mining sector.

- Qualify for further studies leading to advanced degrees in specialized area of geological sciences.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EG 0111	Basic Statistics and Probability	Core	10
LG 0110	Technical Communication and Presentation Skills	Core	10
PT 0112	Engineering Computer Application	Core	10
EG 0114	Introduction to Geology and Geological Processes	Core	15
EG 0115	General Chemistry	Core	10
EG 0116	Physics for Mining	Core	10
	<b>Total</b>		<b>65</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EG 0121	Mineral Deposits	Core	10
EG 0122	Mineralogy and Petrology	Core	10
MN 0125	Mine Surveying	Core	10
EG 0124	Structural Geology	Core	10
EG 0125	Computer Aided Drawing (CAD) for Mining	Core	10
EG 0126	Geological Field Mapping Training	*Core	10
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EG 0211	Fundamentals of Rock Mechanics	Core	10
EG 0212	Assaying and Geochemistry	Core	10
EG 0213	Mining Methods	Core	15
EG 0214	Mineral Exploration Techniques	Core	15
EG 0215	Mining Geology	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EG 0221	Industrial Minerals	Core	10
EG 0222	Geology and Mineral Resources of Tanzania-	Core	15
EG 0223	Mine Health and Safety Management	Core	15
EG 0224	Mining Project	**Core	20
	<b>Total</b>		<b>60</b>

\* This course is a Field Practical Training for 5 weeks.

\*\*This course is a Practical Training (PT) for 8 weeks.

## **Special Programme Requirements**

### **Field Practical Training**

Field Geology and Excursions provides students with an excellent opportunity to integrate the theoretical and field practical aspects to solve the real-world problems. Students are expected apply the real-life implementation of theories taught in class to solve societal problems. This is a 5-week programme conducted towards the end of an academic year after the completion of second semester examinations. This course is conducted in Chimala area – Mbeya Region, where students carry out geological mapping to assigned areas and, in the end, produce a detailed geological map under close supervision of an academic staff. Students also visit pertinent geological sites with special geological features only found in Mbeya Region and within a short distance in order to gain hands-on experience in all works related to the theory and practice of the programme. At the end of this course, a student works and writes a comprehensive report under close guidance and supervision of an academic supervisor from the department. To ensure adequate coverage in terms of depth and breadth of the field training, students are given exposure to a wide variety of geological features and activities pertaining to the Programme.

### **Practical Training**

Practical Training is an industrial attachment course which provides students with an excellent opportunity to link the theories taught in class. This is an eight-week course conducted towards the end of the academic year, after the completion of second semester University Examinations. Students are allocated to relevant organizations, firms, agencies, mining companies (i.e., small, medium and large mining companies), etc., in order to gain hands-on experience in all works related to the theory and practice of the programme. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the department, at least once. During this period students are expected to gather relevant information and materials (e.g., datasets, software, literature/reports etc.) which will help them to formulate proposal, field data collection, data analysis and report/dissertation writing/. The students are required to submit the dissertation with the following sections: introduction, objectives, methodology, analysis, findings, summary, conclusions, recommendations, references, and appendixes. Finally, students have to present their findings in front of the examiners.

### 2.2.11 Diploma in Mining Engineering (Dip. ME)

#### Programme Description

The programme comprises class sessions, tutorials, practicals, and fieldwork. In the first year students will learn basic sciences, communication and development perspective, computer application, as well as fundamental mining, survey and mineral processing related courses. The highlight of the second year includes professional mining courses, laboratory practicals, practical training and project work.

#### Learning Outcomes of the Programme

At the end of the programme, graduates are expected to have:

- A strong foundation and confidence in the basic sciences as well as the applied mining engineering courses.
- Knowledge in Mining Engineering and be able to practice in various fields such as mine designing, planning, exploration, management and supervision, and health and safety.
- Skills and techniques in using modern and traditional field equipments in geosciences and mining engineering in particular.
- Competent skills in computer, communication, entrepreneurship and development perspective to be used for the enhancement of the mining industry and self-employment.

#### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 0111	Mechanical Engineering Drawing	Core	10
PT 0112	Engineering Computer Applications	Core	10
EG 0111	Basic Statistics and Probability	Core	10
LG 0110	Technical Communication and Presentation Skills	Core	10
EG 0114	Introduction to Geology and Geological Processes	Core	10
EG 0116	Physics for Mining	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 0121	Introduction to Mining and Mineral Processing Engineering	Core	10
MN 0122	Vectors and Matrices	Core	10

MN 0123	Mechanics of Materials	Core	10
MN 0124	Drilling and Blasting Practices in Mining	Core	10
MN 0125	Mining and Surveying	Core	10
EG 0125	CAD for Mining	Core	10
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 0211	Introduction to Fluid Mechanics	Core	10
MN 0212	Introduction to Rock Mechanics	Core	10
MN 0213	Mining Industrial Training	Core	10
PT 0213	Projects Economics and Management	Core	10
PT 0216	Introduction to Calculus and Algebra	Core	10
EG 0215	Mining Geology	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MN 0221	Practicals in Mining Engineering	Core	10
MN 0222	Surface Mining and Mine Transport	Core	10
MN 0223	Tunnelling and Underground Mining	Core	10
MN 0224	Basics of Mine Ventilation and Working Environment	Core	10
EG 0223	Mine Health and Safety Procedures	Core	10
EG 0222	Geology and Mineral Resources of Tanzania	Core	15
	<b>Total</b>		<b>65</b>

\*The students in this programme have to do Practical Training in year one; they will do a Project in year two.

## **2.3 COLLEGE OF EDUCATION (CoED)**

The overall objective of the College of Education is to train high-quality teachers to cater for increasing teaching demands created by expanding access to pre-primary, primary, secondary and teacher education levels.

The College of Education offers the following undergraduate programmes:

1. Bachelor of Education in Arts (BEd Arts)
2. Bachelor of Education in Adult Education and Community Development (BEd ADEC)
3. Bachelor of Education in Management and Administration (BEd ADMAN)
4. Bachelor of Education in Policy, Planning and Management (BEd PPM)
5. Bachelor of Education in Guidance and Counselling (BEd GUCO)
6. Bachelor of Education in Psychology (BEd PSY)
7. Bachelor of Education in Early Childhood Education (BEd ECE)
8. Bachelor of Education in Science (BEd Sc.)
9. Bachelor of Education in Special Needs (BEd SPEN)
10. Bachelor of Education in Science with ICT (BEd Sc. ICT)
11. Bachelor of Education in Commerce (BEd Com)

### **2.3.1 Bachelor of Education in Arts (BEd Arts)**

#### **Programme Description**

The main aim of this programme is to produce teachers with skills in philosophical reasoning about problems regarding education. It is designed to assist student-teachers to develop their ability in critical thinking, divergent thinking and power of a creative mind in dealing with educational problems in Tanzania. In this case, every student has to take courses in two teaching subjects: one being major subject and other being minor subject as well as educational courses. Learning in this programme includes lectures, independent reading from different sources, seminar presentations, practical assignments and teaching practices. The programme will be assessed through continuous assessment (carrying 40% or 50%) and university examinations (carrying 60% or 50%) of the respective courses. Continuous

assessment will include a variety of activities, such as written tests, classroom assignments, seminar presentations, quizzes, project work and portfolio assessment. Also, students will be given opportunities to assess the courses they go through to check the validation of the courses offered under the programme. These types of the assessment will be complemented with a summative evaluation of the programme to be conducted after every three years.

### **Learning Outcomes of the Programme**

Upon successful completion of this programme, the graduates are expected to demonstrate:

- Pedagogical content knowledge as a master trainer in the specialised content areas.
- Ability in problem-solving techniques, personal development skills and develop creative potentials in many activities.
- Ethics and adherence to teachers' professional codes of conduct.
- Ability to teach teacher professional courses in teachers colleges as well as specialised teaching subjects in secondary schools.
- Ability to use ICT and instructional aids in the teaching and learning process.
- Ability to design and develop instructional materials which are in line with competence based education.
- Ability to assess, monitor, and evaluate students' learning.

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FE 111	Principles of Education	Core	7.5
LG 102	Communication Skills	Core	7.5
DS 102	Development Perspectives	Core	7.5
IT 111	Introduction to Information and Communication Technology	Core	7.5
	Teaching Subject I	Core	15
	Teaching Subject II	Core	15
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
ME121	Introduction to Education Management and School Administration	Core	7.5



SE 121	Introduction to Education Psychology	Core	7.5
CE 121	Classroom Management Skills	Core	7.5
	Teaching Subject I	Core	15
	Teaching Subject II	Core	15
CE 122	Teaching Practice I	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	7.5
CE 223	Project-based Learning	Core	7.5
	Teaching Subject I	Core	15
	Teaching Subject II	Core	15
CE 222	Teaching Practice II	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CE 221	Pedagogy in Teacher Education	Core	7.5
	Teaching Subject I	Core	15
	Teaching Subject II	Core	15
	Subject I Teaching Methods	Core	7.5
	Subject II Teaching Methods	Core	7.5
AE 222	Lifelong Learning for Sustainable Development	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SE 311	Educational Measurement and Evaluation	Core	7.5
SE 312	Research Methods in Education	Core	10
FE 311	Philosophy of Education	Core	7.5
FE 312	Sociology of Education	Core	7.5
	First Teaching Subject (Major)	Core	20
	Second Teaching Subject (Minor)	Core	10
	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FE 323	Comparative and International Education	Core	7.5
SE 321	Educational Career and Occupational Guidance and Counselling	Core	7.5
FE 324	Professionalism and Ethics in Education	Core	7.5
AE 321	Gender Democracy and Human Rights	Core	7.5

	First Teaching Subject (Major)	Core	20
	Second Teaching Subject (Minor)	Core	10
	<b>Total</b>		<b>60</b>

### **2.3.2 Bachelor of Education in Adult Education and Community Development (BEd ADEC)**

#### **Programme Description**

The world has been experiencing a lot of changes in technology and development challenges that face adults who are the main engine for the development of any society in the world. The main aim of this programme is to be a catalyst for development through the preparation of high quality adult educators and community developers who can help adults/communities to cope with the challenges. The contents of this programme have been selected based on the needs and requirements of the programme and stakeholders' views.

Community development is a complex and interdisciplinary field of study spanning its scope within multidimensional applications. The principle of community development lies at the core of the work of community educators. Hence, the graduates of this course will be pillars of development by raising consciousness in adults at work organisations and community at large so as to confront development challenges more broadly in this globalisation era and new technology. In this respect, the programme prepares outstanding community educators who go beyond literacy and numeric skills by equipping adults with authentic liberation tools and prepare high quality adult educators who can serve as trainers of trainers in tertiary institutions. After graduation, graduates will be able to train other adult educators, create adult education programmes, and organize community development projects. Therefore, the graduates of this programme can be absorbed in educational institutions, non-governmental organizations and work organisations as training officers, development officers, tutors, social workers, and youth workers amongst others.

#### **Learning Outcomes of the Programme**

The programme aims at being the catalyst for development through preparation of high quality adult educators and community developers. Upon graduation, graduates should be able to:

- Analyse diverse interpretations of the term adult education, adult learning, community education, community learning and community development.

- Analyse examples of government policies and initiatives in the field of adult learning and describe the contribution of various sectors through historical and contemporary analysis of community education activity in relation to contemporary Tanzania national agenda.
- Describe strategies designed to effectively engage excluded adults in community based learning.
- Critically analyse and evaluate different theories and ideologies of power, powerlessness individuals, exclusion, and empowerment.
- Evaluate the dominant discourses on education, curriculum, and learning; specify their relevance and relationship with formal, informal education with their transferability of knowledge and skills to other settings.
- Describe key theoretical perspectives relating to how and why people learn individually and in groups and evaluate their implications for community education and intervention.
- Identify social and psychological barriers that impact learning motivation.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
IT 111	Introduction to Information and Communication Technology	Core	7.5
LG 102	Communication Skills	Core	7.5
AE 111	Foundations of Adult Learning	Core	7.5
FE 111	Principles of Education	Core	7.5
	Teaching Subject I	Core	7.5
	Teaching Subject II	Core	7.5
SE 111	Introduction to General Psychology	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ME121	Introduction to Education Management and School Administration	Core	7.5
AE 122	Psychology of Adult Learning	Core	7.5
AE 123	Fundamentals of Community Development	Core	7.5
CE 121	Classroom Management Skills	Core	7.5
AE 124	Intervention Strategies for Development	Core	7.5

	Teaching Subject I	Core	7.5
	Teaching Subject II	Core	7.5
CE 222	Teaching Practice I	Core	9
	<b>Total</b>		<b>61.5</b>
	<b>Total Credits</b>		<b>121.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	7.5
AE 211	Contemporary Issues in Community Development	Core	7.5
AE 212	Communication and Extension Methods for Rural Development	Core	7.5
AE 213	Practical Training	Core	9
	Teaching Subject I	Core	7.5
	Teaching Subject II	Core	7.5
	<b>One Elective Course</b>	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CE 223	Project-based Learning	Elective	7.5
AE 215	Interventions Strategies for Development	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AE 221	Community Based Research	Core	7.5
AE 222	Lifelong Learning for Sustainable Development	Core	7.5
	Teaching Subject I	Core	7.5
	Teaching Subject II	Core	7.5
	Teaching Methods Subject I	Core	7.5
	Teaching Methods Subject II	Core	7.5
ME 222	Risk and Disaster Management in Education	Elective	7.5
DS 225	Interventions Strategies for Development	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SE 311	Educational Measurement and Evaluation	Core	7.5
SE 312	Research Methods in Education	Core	7.5
AE 311	Training and Development in Work Organisation	Core	7.5
FE 312	Sociology of Education	Core	7.5
AE 312	Educational Strategies for Community Management and Development	Core	7.5

	Teaching Subject I	Core	7.5
	Teaching Subject II	Core	7.5
AE 313	Educational Strategies for Community Management and Development	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AE 321	Gender Issues in Education and Community Development	Core	7.5
AE 322	Planning and Management of Community Project	Core	7.5
SE 321	Educational Career and Occupational Guidance and Counselling	Core	7.5
AE 323	Practicum in Adult Education and Community Development	Core Core	7.5
FE 324	Professionalism and Ethics in Education	Core	7.5
	Teaching Subject I	Core	7.5
	Teaching Subject II	Core	7.5
ME 321	Entrepreneurship Education and Training	Elective	7.5
	<b>Total</b>		<b>60</b>

### **2.3.3 Bachelor of Education in Administration and Management (BEd ADMAN)**

#### **Programme Description**

The main aim of this programme is to prepare professionals with cutting-age educational, administrative and management skills capable of not only stabilizing institutional micro-climates but also raising institutional performance beyond customary expectations. The courses in this programme will be delivered in a combination of lectures, seminar presentations, self-studies, assignments, and teaching practices. The selection of course content is based on the objectives of the programme and institutional micro-climates. The mode of assessment will be made up of 40% coursework and 60% final examination. The programme will be evaluated by students through Students' Course Evaluation Forms (SCEF) at the end of every semester to evaluate the courses they have done. Every student has to take courses in two teaching subjects: one being a major subject and another being a minor subject as well as educational management related courses.

#### **Learning Outcomes of the Programme**

Upon completion of this degree programme, graduates should be able to demonstrate:

- Knowledge and skills in educational administration and management of educational institutions.
- Capabilities in teaching content courses in their areas of specializations.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 111	Introduction to Leadership in education organisation	7.5	Core
IT 111	Introduction to Information and Communication Technology	7.5	Core
FE 111	Principles of Education	7.5	Core
DS 102	Development Perspectives	7.5	Core
LG 102	Communication Skills	7.5	Core
	Teaching Subject-Major (Two courses)	20	Core
	Teaching Subject-Minor (One course)	10	Core
	<b>Total</b>	<b>67.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 121	Introduction to Education Psychology	7.5	Core
ME 121	Introduction to Educational Management and School Administration	7.5	Core
ME 122	Management of Organizational Behaviour in Education	7.5	Core
CE 121	Classroom Management Skills	7.5	Core
CE 122	First Year Teaching Practice	10	Core
	Teaching Subject-Major (Two courses)	20	Core
	Teaching Subject-Minor (One course)	10	Core
	<b>Total</b>	<b>70</b>	
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 211	Human Resource Management in Education	7.5	Core
CE 211	Principles of Curriculum Development and Evaluation	7.5	Core
CE 212	Educational Media and Technology	10	Core
ME 213	School Governance	7.5	core

	Teaching Subject- Major (Two courses)	20	Core
	Teaching Subject-Minor ( One course)	10	Core
	<b>Total</b>	<b>62.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 221	Total Quality Management in Education	7.5	Core
ME 222	Risk and Disaster Management in Education	7.5	Core
CE 222	Second Year Teaching Practice	10	Core
*	Teaching Methods	10	Core
	Teaching Subject- Major (Two courses)	20	Core
	Teaching Subject-Minor ( One course)	10	Core
	<b>Total</b>	<b>65</b>	
*Core as per subject specialization			
BC 221	Geography Teaching Methods	10	Core
BC 222	History Teaching Methods	10	Core
BC 223	Civic and General Studies Teaching Methods	10	Core
BC 224	Economics Teaching Methods	10	Core
BC 225	Business Studies Teaching Methods	10	Core
LC 221	Kiswahili Teaching Methods	10	Core
LC 222	French Teaching Methods	10	Core
LC 223	Literature Teaching Methods	10	Core
LC 224	English Language Teaching Methods	10	Core
LC 225	Arabic Teaching Methods	10	Core
LC 226	Korea Teaching Methods	10	Core
LC 227	Chinese Teaching Methods	10	Core
SC 221	Physics Teaching Methods	10	Core
SC 222	Chemistry Teaching Methods	10	Core
SC 223	Mathematics Teaching Methods	10	Core
SC 224	Biology Teaching Methods	10	Core
SC 225	ICT Teaching Methods	10	Core
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 311	Educational Measurement and Evaluation	7.5	Core
SE 312	Research Methods in Education	10	Core
ME 311	Economics of Education and Finance	7.5	core
	Teaching Subject-Major (Two courses)	20	Core

	Teaching Subject-Minor (One course)	10	Core
	One Elective Course	7.5	Elective
	<b>Total</b>	<b>62.5</b>	
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
FE 312	Sociology of Education	7.5	Elective
ME 312	Educational Administration and Management	7.5	Elective
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 321	Entrepreneurship Education and Training	7.5	Core
ME 322	Strategic Management in Education	7.5	Core
SE 321	Educational Careers, Occupational Guidance and Counselling	7.5	Core
	Teaching Subject- Major (Two courses)	20	Core
	Teaching Subject- Minor (One course)	10	Core
FE 324	Professionalism and Ethics in Education	7.5	Core
	<b>Total</b>	<b>60</b>	

### **2.3.4 Bachelor of Education in Policy, Planning, and Management (BEd PPM)**

#### **Programme Description**

The main aim of this programme is to prepare professionals with cutting-age educational, administrative, and management skills capable of not only stabilizing institutional micro-climates but also raising institutional performance beyond customary expectations. The courses in this programme will be delivered in a combination of lectures, seminar presentations, self-studies, assignments, and teaching practices. The selection of course content is based on the objectives of the programme and institutional micro-climates. The mode of assessment will be made up of 40% course work and 60% final examination. The programme will be evaluated by students through Students' Course Evaluation Forms (SCEF) at the end of every semester to evaluate the courses they have done. Every student has to take courses in two teaching subjects: one being a major subject and the other being a minor subject as well as educational administration and management related courses.



## Learning Outcomes of the Programme

Upon completion of this degree programme, graduates should be able to demonstrate:

- Knowledge, skills and expertise in educational policy, project planning, and administration and management of educational institutions.
- Capabilities in teaching content courses in their areas of specializations.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 112	Development of Educational Policy and Practice	7.5	Core
FE 111	Principles of Education	7.5	Core
DS 102	Development Perspectives	7.5	Core
LG 102	Communication Skills	7.5	Core
IT 111	Introduction to Information and Communication Technology	7.5	Core
	Teaching Subject- Major (Two courses)	20	Core
	Teaching Subject-Minor (One course)	10	Core
	<b>Total</b>	<b>67.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 121	Introduction to Education Psychology	7.5	Core
ME 121	Introduction to Educational Management and School Administration	7.5	Core
ME 123	Educational Policy Analysis and Policy Making	7.5	Core
CE 121	Classroom Management Skills	7.5	Core
CE 122	First Year Teaching Practice	10	Core
	Teaching Subject- Major (Two courses)	20	Core
	Teaching Subject-Minor ( One course)	10	Core
	<b>Total</b>	<b>70</b>	
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 212	Educational Planning Theories and Strategies	7.5	Core
CE 211	Principles of Curriculum Development and Evaluation	7.5	Core
CE 212	Educational Media and Technology	10	Core
ME 213	School Governance	7.5	Core
	Teaching Subject- Major (Two courses)	20	Core
	Teaching Subject-Minor (One course)	10	Core

	<b>Total</b>	<b>62.5</b>	
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
FE 211	History of Education in East Africa	7.5	Elective
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 223	Educational Planning, Approaches and Practice	7.5	Core
ME 214	Educational Policy Reforms and Trends	7.5	Core
CE 222	Second Year Teaching Practice	10	Core
*	Teaching Methods	10	Core
	One Teaching Subject (Two courses)	20	Core
	One Teaching Subject-Minor (One course)	10	Core
	<b>Total</b>	<b>65</b>	
*Core as per subject specialization			
BC 221	Geography Teaching Methods	10	Core
BC 222	History Teaching Methods	10	Core
BC 223	Civic and General Studies Teaching Methods	10	Core
BC 224	Economics Teaching Methods	10	Core
BC 225	Business Studies Teaching Methods	10	Core
LC 221	Kiswahili Teaching Methods	10	Core
LC 222	French Teaching Methods	10	Core
LC 223	Literature Teaching Methods	10	Core
LC 224	English Language Teaching Methods	10	Core
LC 225	Arabic Teaching Methods	10	Core
LC 226	Korea Teaching Methods	10	Core
LC 227	Chinese Teaching Methods	10	Core
SC 221	Physics Teaching Methods	10	Core
SC 222	Chemistry Teaching Methods	10	Core
SC 223	Mathematics Teaching Methods	10	Core
SC 224	Biology Teaching Methods	10	Core
SC 225	ICT Teaching Methods	10	Core
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 222	Risk and Disaster Management in Education	7.5	Elective
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 311	Educational Measurement and Evaluation	7.5	Core
SE 312	Research Methods in Education	10	Core
ME 311	Economics of Education and Finance	7.5	core
ME 312	Educational Administration and Management	7.5	Core
	Teaching Subject- Major (Two courses)	20	Core

	Teaching Subject- Minor (One course)	10	Core
	<b>Total</b>	<b>62.5</b>	
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 313	Procurement and Logistics in Education	7.5	Elective
FE 312	Sociology of Education	7.5	Elective
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 323	Educational Sector Analysis and Project Design	7.5	Core
ME 324	Educational Projects Monitoring and Evaluation	7.5	Core
SE 321	Educational Careers, Occupational Guidance, and Counselling	7.5	Core
FE 324	Professionalism and Ethics in Education	7.5	Core
	Teaching Subject - Major (Two courses)	20	Core
	Teaching Subject - Minor (One course)	10	Core
	<b>Total</b>	<b>60</b>	

### 2.3.5 Bachelor of Education in Guidance and Counselling (BEd GUCO)

#### Programme Description

Bachelor of Education in Guidance and Counselling is a three-year undergraduate degree programme which prepares high-quality guidance and counselling professionals focusing on career choice and its influence in Tanzania. Graduates from this programme are eligible for teaching in programmes serving career development and planning, and serve as guidance and counselling curriculum developers, guidance and counselling policy planners, programme administrators and inspectors of guidance and counselling programmes.

#### Learning Outcomes of the Programme

The Bachelor of Education in Guidance and Counselling programme is designed to facilitate development of specific competencies in teachers of guidance and counselling. These include:

- Analytical skills of policy, curriculum, pedagogy and other context-specific issues related to guidance and counselling.
- Knowledge, skills, and attitudes essential for high-quality practice in guidance and counselling.
- Competencies focused on the knowledge, skills, and attitudes needed by all guidance and counselling practitioners.

- Knowledge and skills required in the process of guidance and counselling policy and curriculum development.
- Skills on designing, implementing, and evaluating guidance and counselling programmes.
- Familiarity with information on educational training, employment trends, labour market, and social issues.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>	<b>Status</b>
FE 111	Principles of Education	7.5	Core
DS 102	Development Perspectives	7.5	Core
LG 102	Communication skills	7.5	Core
IT 111	Information and Communication Technology	7.5	Core
SE 111	Introduction to General Psychology	7.5	Core
EC 111	Introduction to Early Childhood Education	7.5	Core
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>65</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>	<b>Status</b>
ME 121	Introduction to Educational Management and School Administration	7.5	Core
SE 121	Introduction to Educational Psychology	7.5	Core
CE 121	Classroom Management Skills	7.5	Core
GC 121	Introduction to Guidance and Counselling	7.5	Core
GC 122	Fundamentals of Behavioural Science	7.5	Core
EC 121	Child Development and Learning	7.5	Core
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>65</b>	
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>	<b>Status</b>
CE 122	Teaching Practice I	10	Core
CE 211	Principles of Curriculum Development and Evaluation	7.5	Core
CE 212	Educational Media and Technology	10	Core
GC 211	Theories of Guidance and Counselling	7.5	Core
SE 212	Personality Psychology	7.5	Core
GC 212	Introduction to Counselling Practicum	7.5	Core
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>70</b>	

<b>Semester Two</b>			
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>	<b>Status</b>
CE 221	Pedagogy in Teacher Education	7.5	Core
CE X/Y	Subject Teaching Methods	10	Core
GC 221	Career Counselling, Politics and Society	7.5	Core
GC 222	Lifestyle, Diseases and Rehabilitation	7.5	Core
SE 221	Forensic Psychology	7.5	Core
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>60</b>	
<b>NB:</b> CE X/Y as per teaching subject specialization			
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>	<b>Status</b>
SE 311	Educational Measurement and Evaluation	7.5	Core
SE 312	Research Methods in Education	7.5	Core
GC 312	African Psychotherapy	7.5	Core
SE 313	Organizational Psychology	7.5	Core
SN 311	Psychology of Exceptionalities	7.5	Core
CE 222	Teaching Practice II	10	Core
	One Elective Course	7.5	Elective
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>75</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>	<b>Status</b>
SE 322	Clinical Psychology	7.5	Core
SE 325	Psychology of Abnormalities	7.5	Core
GC 321	Counselling Special Populations	7.5	Core
GC 322	Behaviours Modification	7.5	Core
FE 324	Professionalism and Ethics in Education	7.5	Core
	One Teaching Subject (Two courses)	20	Core
	One Elective Course	7.5	Elective
	<b>Total</b>	<b>65</b>	

### **2.3.6 Bachelor of Education in Psychology (BEd PSY)**

#### **Programme Description**

The Bachelor of Education in Psychology is a three-year undergraduate degree programme which prepares high-quality psychologists capable of handling matters related to education at various levels of education in the Tanzanian context. Graduates from this programme are eligible for teaching in programmes addressing psychological issues, becoming programme administrators and serve as inspectors

of guidance and counselling programmes. Every student has to take courses in two teaching subjects: one being a major subject and another being a minor subject as well as relevant psychology related courses.

### Learning Outcomes of the Programme

After graduation from this programme, graduates are expected to:

- Handle matters related to education at various levels of education in Tanzanian context.
- Demonstrate knowledge, skills, and attitudes essential for high-quality practices in Psychological issues.
- Demonstrate competencies focused on the knowledge and skills required in the process of handling psycho-social issues and policy dialogues.
- Design, implement, and evaluate education and behavioural modification curricular and programmes.
- Demonstrate competence to link job seekers with information on educational training, employment trends, labour market, and social issues.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
IT 111	Introduction to information and Communication Technology	7.5	Core
FE 111	Principles of Education	7.5	Core
DS 102	Development Perspectives	7.5	Core
LG 102	Communication Skills	7.5	Core
SE 111	Introduction to General Psychology	7.5	Core
	Teaching Subject I - Major (Two courses)	15	Core
	Teaching Subject II - Minor (One course)	10	Core
	<b>Total</b>	<b>62.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 121	Introduction to Educational Psychology	7.5	Core
SE 122	Psychology of Criminal Behaviours in Education	7.5	Core
SE 123	Psychology of Adolescence	7.5	Core
ME 121	Introduction to Educational Management and School Administration	7.5	Core
CE 121	Classroom Management Skills	7.5	Core
	Teaching Subject I - Major (Two courses)	15	Core
	Teaching Subject II - Minor (One course)	10	Core
	<b>Total</b>	<b>62.5</b>	

<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 211	Principles of Curriculum Development and Evaluation	7.5	Core
CE 212	Educational Media and Technology	10	Core
SE 211	Social Psychology	7.5	Core
SE 212	Personality Psychology	7.5	Core
	Teaching Subject I (Two courses)	20	Core
	Teaching Subject II (One course)	10	Core
	<b>Total</b>	<b>62.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 122	Teaching Practice I	10	Core
SE 221	Forensic Psychology	7.5	Core
SE 222	Environmental Psychology	7.5	Core
CE 221	Pedagogy in Teacher Education	7.5	Core
CE X/Y	Subject 1 Teaching Methods	10	Core
	Teaching Subject I (Two courses)	15	Core
	Teaching Subject II (One course)	10	Core
	<b>Total</b>	<b>67.5</b>	
<b>NB: CE X /Y = as per teaching subject specialization</b>			
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 222	Teaching Practice II	10	Core
SE 311	Educational Measurement and Evaluation	7.5	Core
SE 312	Research Methods in Education	7.5	Core
SE 313	Organizational Psychology	7.5	Core
SE 314	Gender Psychology	7.5	Core
	Teaching Subject I (Major - Two courses)	15	Core
	Teaching Subject II (Minor - One course)	10	
	<b>Total</b>	<b>65</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 321	Educational and Career Guidance and Counselling	7.5	Core
SE 322	Clinical Psychology	7.5	Core
SE 323	Psychology of Abnormalities	7.5	Core
SE 324	Anthropological Psychology	7.5	Core
FE 324	Professionalism and Ethics in Education	7.5	Core
	Teaching Subject I (Major - Two courses)	15	Core
	Teaching Subject II (Minor - Two courses)	10	Core

	<b>Total</b>	<b>62.5</b>	
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### 2.3.7 Bachelor of Education in Early Childhood Education (BEd ECE)

#### Programme Description

The Bachelor of Education in Early Childhood Education is a three-year undergraduate degree programme which prepares high-quality ECE professionals. Graduates from this programme are eligible for teaching in early childhood teacher training institutions, pre-schools, and ECE programmes; become ECE curriculum developers, ECE policy planners, programme administrators, and inspectors of ECE programmes.

#### Learning Outcomes of the Programme

Graduates of Bachelor of Education in Early Childhood Education are expected to:

- Exhibit analytical skills of policy, curriculum, pedagogy, and other context-specific issues related to ECE.
- Demonstrate use of knowledge, skills, and attitudes essential for high-quality practice leading to holistic child development and learning.
- Use evidence-based assessment strategies of both young children and overall early childhood programmes.
- Deploy knowledge and skills required in the process of early childhood policy and curriculum development.
- Develop critical minds about child development and learning.
- Develop the ability to relate ECE and personal, social and national development; and later children's education as well as local versus global practices.

#### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
IT 111	Introduction to Information and Communication Technology	7.5	Core
FE 111	Principles of Education	7.5	Core
DS 102	Development Perspectives	7.5	Core
LG 102	Communication skills	7.5	Core
SE 111	Introduction to General Psychology	7.5	Core
EC 111	Introduction to Early Childhood Education	7.5	Core
LS 111	Literacy Skills (Reading and Writing) in Early	10	Core



	Childhood Education I		
NS 111	Numeracy and Science Development in Early Childhood Education I	10	Core
	<b>Total Credits</b>	<b>65</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 121	Introduction to Educational Management and School Administration	7.5	Core
SE 121	Introduction to Education Psychology	7.5	Core
EC 121	Child Development and Learning	7.5	Core
EC 122	Early Childhood Classroom and Programs Management skills.	7.5	Core
EC 123	Facilitating Language and Literacy Skills in Early Childhood Education	7.5	Core
LS 121	Literacy Skills (Reading and Writing) in Early Childhood Education II	10	Core
NS 121	Numeracy and Science Development in Early Childhood Education II	10	Core
	<b>Total</b>	<b>57.5</b>	
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 212	Educational Media and Technology	7.5	Core
EC 212	Early Childhood Policy Planning and Analysis	7.5	Core
EC 213	Early Childhood Education Curriculum Development and Evaluation	7.5	Core
EC 214	Creativity in Early Childhood Education	7.5	Core
LS 211	Literacy Skills in Early Grades (One and Two) I	10	Core
NS 211	Numeracy and Science Development in Early Grades (One and Two) I	10	Core
CE 122	Teaching Practice I	10	Core
	<b>Total</b>	<b>60</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
EC 221	Interventions for Disadvantaged Children	7.5	Core
EC 222	Facilitating Numeracy and Science Development in Early Childhood Education	7.5	Core
EC 223	Pedagogy in Early Childhood Education	7.5	Core
LS 221	Literacy Skills in Early Grades (One and Two) II	10	Core
NS 221	Numeracy and Science Development in Early Grades (One and Two) II	10	Core

NS 222	Numeracy, Science and Literacy Skills Teaching Methods	10	Core
	One Elective Course	7.5	Elective
	<b>Total</b>	<b>60</b>	
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 222	Inclusive Education	7.5	Elective
SE 223	Forensic Psychology	7.5	Elective
AD 221	Teaching and Learning through Photography (TLTP)	7.5	Elective
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 222	Teaching Practice II	10	Core
EC 311	Monitoring and Evaluation of Children's Progress	7.5	Core
SE 312	Research Methods in Education	7.5	Core
SE 314	Gender Psychology	7.5	Core
EC 312	Early Childhood Program Models and Evaluation	7.5	Core
EC 313	Constructivist Early Childhood Education	7.5	Core
LS 311	Literacy Skills in Early Grades - Grade Three I	10	Core
NS 311	Numeracy and Science Development in Early Grades – Grade Three I	10	Core
	<b>Total</b>	<b>67.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 321	Educational Career Guidance and Counselling	7.5	Core
FE 324	Professionalism and Ethics in Education	7.5	Core
EC 321	Developing Higher Mental Functions in Early Childhood	7.5	Core
EC 322	Transition Issues in Early Childhood Education	7.5	Core
EC 323	Culture and Child's Rights	7.5	Core
EC 324	Principles of Early Childhood Education Curriculum	7.5	Core
LS 321	Literacy Skills in Early Grades - Grade Three II	10	Core
NS 321	Numeracy and Science Development in Early Grades – Grade Three II	10	Core
	<b>Total</b>	<b>65</b>	

### 2.3.8 Bachelor of Education in Science (BEd Sc.)

#### Programme Description

The main aim of this programme is to prepare teachers and teacher educators for secondary schools and teacher colleges. Students under this programme are expected to take courses in one major and one minor teaching subject in the relevant field as well as educational courses. Learning modalities will include lectures, independent reading, seminar presentations, practicals, assignments, and teaching practice. Continuous assessment will include written tests, classroom assignments, seminar presentations, micro-teaching, and project work. In addition, stakeholders (heads of institutions, senior teachers/staff) will be consulted during the teaching practice to give external assessment to students. Also, students will be given opportunities to evaluate the courses as they go through.

#### Learning Outcomes of the Programme

After the completion of this programme, graduates are expected to demonstrate:

- Competencies in teaching science subjects.
- Ability to use appropriate pedagogy.
- Willingness and ability to advance professionally.
- Ability to support learners with special needs.

#### Programme Structure

Year One			
Semester One			
Code	Course Title	Credits	Status
IT 111	Introduction to Information Technology	7.5	Core
FE 111	Principles of Education	7.5	Core
DS 102	Development Perspectives	7.5	Core
LG 102	Communication Skills	7.5	Core
	Science Teaching Subject 1 - Major (Two courses)	20	Core
	Science Teaching Subject 2 - Minor (One course)	10	Core
	<b>Total</b>	<b>60</b>	
Semester Two			
Code	Course Title	Credits	Status
ME 121	Introduction to Educational Management and School Administration	7.5	Core
SE 121	Introduction to Educational Psychology	7.5	Core
SC 121	Introduction to Methods of Teaching and Learning Science and Mathematics	7.5	Core

	Science Teaching Subject 1 – (Two courses)	20	Core
	Science Teaching Subject 2 – (One course)	10	Core
SC 122	Mathematics for Teaching	7.5	Elective
	<b>Total</b>	<b>60</b>	
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 122	Teaching Practice I	10	Core
CE 211	Principles of Curriculum Development and Evaluation	7.5	Core
CE 212	Educational Media and Technology	7.5	Core
	Science Teaching Subject 1 – Major (Two courses)	20	Core
	Science Teaching Subject 2 – Minor (Two course)	15	Core
	<b>Total</b>	<b>60</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 221	Pedagogy in Teacher Education	7.5	Core
CE 223	Project Based Learning	7.5	Core
SC X/Y	Science Subject Teaching Methods	10	Core
	Science Teaching Subject 1- major (Two courses)	20	Core
	Science Teaching Subject 2 – Minor (One course)	10	Core
CE 227	Applied Mathematics for Non-Mathematics Science Students	7.5	Elective
	<b>Total</b>	<b>62.5</b>	
<b>NB:</b> SC X/Y = As per Science Teaching Subject Specialization			
	SC 221: Physics Teaching Methods	10	Core
	SC 222: Chemistry teaching Methods	10	Core
	SC 223: Mathematics Teaching Methods	10	Core
	SC 224: Biology Teaching Methods	10	Core
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 222	Teaching Practice II	10	Core
SE 311	Educational Measurement and Evaluation	7.5	Core
SC 313	Critical Thinking and Argumentation in Science Education	7.5	Core
CE 311	Research Methods in Curriculum Innovations	7.5	Core

	Science Teaching Subject 1 – (Two Courses)	20	Core
	Science Teaching Subject 2 – (One course)	10	Core
	<b>Total</b>	<b>62.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
FE 324	Professionalism and Ethics in Education	7.5	Core
SE 321	Educational and Career Guidance and Counselling	7.5	Core
CE 321	Guideline for Research Project Work Implementation	10	Core
SC 321	Contemporary Issues in Science, Mathematics and Technology Education	10	Core
	Science Teaching Subject 1 –Major (Two courses)	20	Core
	Science Teaching Subject 2 – Minor (One course)	10	Core
		<b>65</b>	

### Special Programme Requirements

- Calculator, Laboratory coat and googles TZS 300,000.
- There will be 8 weeks Teaching Practice in Year I and II.
- Estimated cost for each Practical Training is TZS 560,000.

### 2.3.9 Bachelor of Education in Special Needs (BEd SPEN)

#### Programme Description

The Bachelor of Education in Special Needs is a three-year undergraduate degree programme which prepares high-quality professionals focusing on the actual developmental and learning needs of learners with special needs in Tanzania. Specifically, this programme consists of courses from special needs and specialized courses: Mode of Communication for Individuals with Visual Impairment or Hearing Impairment; Anatomy, Physiology and Pathology of the Eye or Ear. Out of these specialized courses, two have to be compulsory from any category of disability for each candidate. Graduates from this programme are eligible for teaching in training programmes as well as for teaching learners with special needs at primary and secondary schools, becoming SPEN curriculum frame workers, SPEN policy planners, programme administrators, and inspectors of SPEN Programmes.

## Learning Outcomes of the Programme

The Bachelor of Education in Special Needs programme is designed to facilitate development of specific competencies in teachers of learners with special needs (LWSN). These include:

- Knowledge, skills, and positive attitudes within the learners so that they can develop their competency to educate LWSN by creating an inclusive environment within the classroom.
- Comprehensive idea on screening, identification, classroom management, teaching strategies, teaching learning materials, and other educational needs for LWSN.
- Knowledge and skills on creation of barrier free environment at the school so that it could be accessible and comfortable as per the needs of LWSN.
- Competence among teachers on guiding parents and community members about the academic and emotional support required by individual learners with special needs.
- Skills on preparing Individualized Education Plans (IEPs) and assessment techniques.

## Programme Structure

Year One			
Semester One			
Code	Course Title	Credits	Status
IT 111	Introduction to Information and Communication Technology	7.5	Core
FE 111	Principles of Education	7.5	Core
DS 102	Development Perspectives	7.5	Core
LG 102	Communication Skills	7.5	Core
SE 111	Introduction to General Psychology	7.5	Core
SN 111	Introduction to Special Needs Education	7.5	Core
SN 112	Introduction to Visual Impairment	7.5	Core*
SN 113	Introduction to Hearing Impairment	7.5	Core*
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>72.5</b>	
Semester Two			
Code	Course Title	Credits	Status
SE 121	Introduction to Educational Psychology	7.5	Core
SN 121	Introduction to Hearing Impairment	7.5	Core*
SN 122	Introduction to Visual Impairment	7.5	Core*
SN 123	Introduction to Sign Language	10	Core*
SN 124	Introduction to Braille	10	Core*

ME 121	Introduction to Educational Management and School Administration	7.5	Core
CE 121	Classroom Management Skills	7.5	Core
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>60</b>	
<b>NB:</b> Core* = A student should take a course either in visual or hearing impairment.			
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 122	Teaching Practice I	10	Core
CE 211	Principles of Curriculum Development and Evaluation	7.5	Core
CE 212	Educational Media and Technology	7.5	Core
CE 222	Teaching practice I	10	Core
SN 211	Interventions for Learners with Special Social Needs	7.5	Core
SN 212	Intermediate Sign Language	10	Core*
SN 213	Intermediate Braille	10	Core*
SN 214	Inclusive Education	7.5	Core
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>72.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SN 221	Learning Difficulties in Schools	7.5	Core
EC 225	Intervention for Disadvantaged Children	7.5	Core
SN 222	Inclusive Education	7.5	Core
CE 221	Pedagogy in Teacher Education	7.5	Core
CE X/Y	Subject Teaching Methods	10	Core
	One Teaching Subject (Two Courses)	20	Core
	<b>Total Credits</b>	<b>60.0</b>	
<b>NB:</b> Core* = A student should take a course either in visual or hearing impairment.			
CE X/Y = Core per subject specialization			
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 222	Teaching Practice II	10	Core
SN 311	Psychology of Exceptionalities	7.5	Core

SN 312	Advanced Sign Language	10	Core*
SN 313	Advanced Braille	10	Core*
SE 311	Educational Measurement and Evaluation	7.5	Core
SE 312	Research Methods in Education	10	Core
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>65</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SN 321	Education of Gifted and Talented Learners	7.5	Core
SE 321	Educational and Career Guidance and Counselling	7.5	Core
FE 324	Professionalism and Ethics in Education	7.5	Core
GC 324	Counselling Special Populations	7.5	Core
GC 325	Behaviours Modification	7.5	Core
	One Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>57.5</b>	

### 2.3.10 Bachelor of Education in Science with ICT (BEd Sc. ICT)

#### Programme Description

The main aim of this programme is to prepare teachers and teacher educators who will teach in secondary schools and teacher colleges in Tanzania and elsewhere in the world. Students under this programme are expected to take courses in one Science teaching subject, ICT, and teacher-educational courses. Learning modalities/approaches in the programme includes lectures, independent readings, seminar presentations, practical assignments and teaching practice. The programme will be assessed through continuous assessments and university examinations of respective courses. Continuous assessment will include written tests, classroom assignments, seminar presentations, micro-teaching, and project work. Also, students will be given opportunities to evaluate the courses as they go through. These types of assessment will be complemented with a summative evaluation of the programme to be conducted after every three years.

#### Learning Outcomes of the Programme

After the completion of this programme, graduates are expected to demonstrate:

- Competencies in teaching Science and ICT subjects.
- Ability to use appropriate pedagogy.
- Willingness and ability to advance professionally.
- Ability to handle learners with special needs.



## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
IT 111	Introduction to Information Technology	7.5	Core
FE 111	Principles of Education	7.5	Core
DS 102	Development Perspectives	7.5	Core
LG 102	Communication Skills	7.5	Core
CP 121	Introduction to Database Systems	9	Core
CP 123	Introduction to High Level Programming	9	Core
	One Science Teaching Subject (Two courses)	15	Core
	<b>Total</b>	<b>63</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 121	Introduction to Education Management and School Administration	7.5	Core
SE 121	Introduction to Education Psychology	7.5	Core
SC 121	Introduction to Methods of Teaching and Learning Science and Mathematics	7.5	Core
CD 123	Fundamentals of 2D and 3D Animation	7.5	Core
CN 120	Introduction to Computer Networking	7.5	Core
CS 123	Introduction to Software Engineering	7.5	Core
	One Science Teaching Subject (Two courses)	20	Core
	<b>Total</b>	<b>65</b>	
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SC 122	Mathematics for Teaching	7.5	Elective
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 122	Teaching Practice I	10	Core
CE 211	Principles of Curriculum Development and Evaluation	7.5	Core
CE 212	Educational Media and Technology	7.5	Core
SC 213	ICT Teaching Methods	7.5	Core
CS 224	Educational Database Management System	7.5	Core
CP 215	Object Oriented Programming in Java	7.5	Core
	Science Teaching Subject (Two courses)	15	Core

	<b>Total</b>	<b>62.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 221	Pedagogy in Teacher Education	7.5	Core
CE 223	Project Based Learning	7.5	Core
CP 221	Internet Programming and Application I	7.5	Core
TE 213	System Support and Management	7.5	Core
SC 213	ICT Teaching Methods	10	Core
SC X/Y	Science Subject Teaching Methods	10	Core
	Science Teaching Subject (Two courses)	15	Core
	<b>Total</b>	<b>65</b>	
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 227	Applied Mathematics for Non-Mathematics Science Students	7.5	Elective
<b>SC X/Y - As per Science Teaching Subject Specialization</b>			
	SC 221: Physics Teaching Methods	10	Core
	SC 222: Chemistry teaching Methods	10	Core
	SC 223: Mathematics Teaching Methods	10	Core
	SC 224: Biology Teaching Methods	10	Core
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
CE 222	Teaching Practice II	10	Core
SE 311	Educational Measurement and Evaluation	7.5	Core
SC 313	Critical Thinking and Argumentation in Science Education	7.5	Core
SE 312	Research Methods in Curriculum Innovations	7.5	Core
SC 322	Instructional Design in Education	7.5	Core
TE 322	Simulations	7.5	Elective
	Science Teaching Subject (Two courses)	15	
	<b>Total</b>	<b>62.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
FE 324	Professionalism and Ethics in Education	7.5	Core
SE 321	Educational and Career Guidance and Counselling	7.5	Core
CE 321	Guideline for Research Project Work Implementation	9	Core
SC 321	Contemporary Issues in Science, Mathematics	7.5	Core

	and Technology Education		
BT 310	Project in ICT with Education	7.5	Core
CP 313	Introduction to Android Application	9	Core
	One Science Teaching Subject (Two courses)	15	Core
	<b>Total</b>	<b>63</b>	

### **Special Programme Requirements**

- Calculator, laboratory coat and goggles TZS 300,000.
- There will be 8 weeks Teaching Practice in Year I and II.
- Estimated cost for each Teaching Practice is TZS 560,000.

### **2.3.11 Bachelor of Education in Commerce (BEd Com)**

#### **Programme Description**

The main aim of this programme is to prepare teachers/teacher educators for secondary schools and teacher colleges. In the context of Tanzania, such schools vary widely in terms of infrastructure, teaching, and learning resources and socioeconomic backgrounds of learners. Such variations need teachers/teacher educators who are adequately prepared in relevant professional areas. On this basis, students under this programme are expected to take courses in one major and minor teaching subject in the relevant fields and educational courses.

Learning modalities/approaches in the programme will include lectures, independent reading from different sources, seminar presentations, practical assignments, and teaching practice. The selection of the content is based on the objective of the programme and labour market. The programme will be assessed through continuous assessment (weight of 40%) and university examinations (weight of 60%) of respective courses and Teaching Practice for the assessment of pre-defined set of knowledge, skills, and attitudes (standards) expected for graduate teachers. Continuous assessment will include a variety of tasks such as written tests, classroom assignments, seminar presentations, micro-teaching, and project work. In addition, stakeholders (heads of institutions, senior teachers/staff) will be consulted during the teaching practice to give an external assessment to students. Also, students will be given opportunities to evaluate the courses they go through. These types of assessments will be complemented with a summative evaluation of the programme to be conducted after every three years.

## Learning Outcomes of the Programme

After the completion of the programme, graduates are expected to demonstrate:

- Competencies in teaching Economics and Business Studies subjects.
- Ability in the use of appropriate pedagogy.
- Willingness and ability to advance professionally.
- Ability to handle learners with special needs.

## Programme Structure

<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 211	Human Resource Management in Education	7.5	Core
CE 211	Principles of Curriculum Development and Evaluation	7.5	Core
ME 213	School Governance	7.5	Core
CE 212	Educational Media and Technology	10	Core
	First Teaching Subject - Major (Two courses)	20	Core
	Second Teaching Subject- Minor (Two courses)	10	Core
	<b>Total</b>	<b>62.5</b>	
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 221	Total Quality Management in Education	7.5	Core
ME 222	Risk and Disaster Management in Education	7.5	Core
CE 222	Second Year Teaching Practice	10	Core
*	Teaching Methods	10	Core
	First Teaching Subject - Major (Two courses)	20	Core
	Second Teaching Subject – Minor (One course)	10	Core
	<b>Total</b>	<b>65</b>	
*Core as per subject specialization			
	BC 224 Economics Teaching Methods	10	Core
	BC 225 Business Studies Teaching Methods	10	Core
	SC 223 Mathematics Teaching Methods	10	Core
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
SE 311	Educational Measurement and Evaluation	7.5	Core
ME 311	Management of Education and School Administration	7.5	Core

SE 312	Research Methods in Education	10	Core
ME 311	Economics of Education and Finance	7.5	Core
	First Teaching Subject - Major (Two courses)	20	Core
	Second Teaching Subject - Minor (One course)	10	Core
	<b>Total</b>	<b>62.5</b>	
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
FE 312	Sociology of Education	7.5	Elective
ME 312	Educational Administration and Management	7.5	Elective
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Status</b>
ME 321	Entrepreneurship Education and Training	7.5	Core
ME 322	Strategic Management in Education	7.5	Core
SE 321	Educational Career and Occupational Guidance and Counselling	10	Core
FE 324	Professionalism and Ethics in Education	7.5	Core
	First Teaching Subject – Major (Two courses)	20	Core
	Second Teaching Subject – Minor (One course)	10	Core
	<b>Total</b>	<b>62.5</b>	

## **2.4 COLLEGE OF HUMANITIES AND SOCIAL SCIENCES (CHSS)**

The College of Humanities and Social Sciences offers the following undergraduate programmes:

1. Bachelor of Arts with Education (BA ED)
2. Bachelor of Arts in Political Science and Public Administration (BA PSPA)
3. Bachelor of Arts in International Relations (BA-IR)
4. Bachelor of Arts in Philosophy and Political Science (BA PPS)
5. Bachelor of Geography and Environmental Studies (BGES)
6. Bachelor of Environmental Disaster Management (BEDM)
7. Bachelor of Arts in Sociology (BA-Sociology)
8. Bachelor of Arts in History (BA-History)
9. Bachelor of Arts in Tourism and Cultural Heritage (BA CHT)
10. Bachelor of Arts in Archaeology and Cultural Anthropology (BA ARCA)
11. Bachelor of Arts in Kiswahili Linguistics (BA Kiswahili Ling.)
12. Bachelor of Arts in Kiswahili Literature (BA Kiswahili Lit.)
13. Shahada ya Awali ya Sanaa katika Kiswahili (SHASAKI)
14. Bachelor of Arts in Fine Arts and Design (BA FAD)
15. Bachelor of Arts in Theatre and Film (BA TF)
16. Bachelor of Arts in Journalism and Public Relations (BA JP)
17. Bachelor of Arts in Translation and Interpretation (BA TI)
18. Bachelor of Arts in Oriental Languages (BA Arabic)
19. Bachelor of Arts in English (BA English)
20. Bachelor of Arts in French (BA French)

### **2.4.1 Bachelor of Arts with Education (BA ED)**

#### **Programme Description**

This programme aims at instilling in the minds of student-teachers the knowledge and skills that will enable them to teach competently in secondary schools in Tanzania. It further aims at providing student-teachers with alternative teaching methodologies for effective classroom interactions and develop their specializations in the subjects they are expected to teach and understand how students learn.

#### **Learning Outcomes of the Programme**

Upon completion of this programme, graduates should be able to:

- Use appropriate pedagogy and good command of communication skills.

- Master the content knowledge in their subject areas.
- Advance professionally as teachers.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FE 111	Principles of Education	Core	7.5
LG 102	Communication Skills	Core	7.5
DS 102	Development Perspectives	Core	7.5
	Teaching Subject I	Core	30
	Teaching Subject II	Core	20
IT 111	Information Technology	Core	7.5
	<b>Total</b>		<b>80</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ME 121	Introduction to Educational Management and School Administration	Core	7.5
SE 123	Introduction to Educational Psychology	Core	7.5
	Teaching Subject I	Core	30
	Teaching Subject II	Core	20
CE 122	First Year Teaching Practice	Core	10
CE 121	Classroom Management Skills	Core	7.5
	<b>Total</b>		<b>82.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	7.5
	Teaching Subject I	Core	30
	Teaching Subject II	Core	20
	<b>Total</b>		<b>65</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CE 222	Second Year Teaching Practice	Core	10
	Teaching Subject I	Core	30
	Teaching Subject II	Core	20
AD 221	Teaching and Learning Through Photography (TLTP)	Core	7.5
	<b>Total</b>		<b>67.5</b>
<b>Year Three</b>			

<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SE 311	Educational Measurement and Evaluation	Core	7.5
FE 311	Philosophy of Education	Core	7.5
	Teaching Subject I	Core	30
	Teaching Subject II	Core	20
SE 312	Research Methods in Education	Core	7.5
FE 312	Sociology of Education	Core	7.5
	<b>Total</b>		<b>80</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SE 321	Educational Career and Occupational Guidance and Counselling	Core	7.5
	Teaching Subject I	Core	30
	Teaching Subject II	Core	20
FE 324	Professionalism and Ethics in Education	Core	7.5
	<b>Total</b>		<b>65</b>

### **Special Programme Requirements**

- The programme involves two teaching practices (CE 122 and CE 222).
- The Teaching practice is supposed to be held during the end of semester two of the first year (CE 122) as well as during the end of semester two of the second year (CE 222).
- The teaching practice is conducted for 8 weeks at a cost of TZS 560,000.

### **2.4.2 Bachelor of Arts in Political Science and Public Administration (BA PSPA)**

#### **Programme Description**

The overall objective of this programme is to prepare professionals with accurate expression and practice, as well as clear and concise analysis of political, economic and social issues at local and global scale. Specifically, the programme endeavours to address the following:

- To produce qualified and practically competent graduates in the field of Political Science and Public Administration.
- To produce candidates who are able to address development challenges in both public and private socio-economic ventures, welfare and production services.



- To create a pool of well-trained graduates who can work as analysts, administrators and advisors in public service organizations and development institutions in Tanzania.

### Learning Outcomes of the Programme

Upon successful completion of this programme, graduates should be able to:

- Demonstrate knowledge of theory and practice of central issues in the field of Political Science and Public Administration.
- Devise innovative methods/approaches to effectively deal with increasingly complex political, public policy, and public management issues.
- Analyze and define the broader economic, social and political issues in the contemporary societies at local and global scale.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
PO 111	Introduction to Political Science I	Core	10.5
PO 112	Introduction to Public Administration	Core	7.5
IR 111	Introduction to International Relations I	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
DS 111	Poverty and Socio-Economic Development	Elective	10.5
PM 111	Introduction to Project Planning and Management	Elective	10.5
	<b>Total</b>		<b>69</b>
Semester Two			
Code	Course Title	Status	Credits
PO 121	Introduction to Political Science II	Core	10.5
PO 122	Introduction to Political Economy	Core	7.5
PO 123	Government and Politics in Tanzania	Core	7.5
PO 124	Local Government System in Tanzania	Core	7.5
PO 125	Theory and Practice of Management	Core	10.5
IR 121	Introduction to International Relations II	Core	7.5
	One Elective Course	Elective	10.5
	<b>Total</b>		<b>61.5</b>
Electives			
Code	Course Title	Status	Credits
IR 122	Foreign Policy and Diplomacy	Elective	10.5
DS 123	Governance, Civil Society, and Development	Elective	10.5

<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 211	Qualitative Social Science Research Methods	Core	10.5
PO 212	African Political Thought	Core	7.5
PO 213	Comparative Public Administration	Core	7.5
PO 214	Decision Making: Theory and Practice	Core	10.5
PL 212	Critical Thinking and Argumentation	Core	10.5
PO 215	Comparative Political Systems	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 214	Democracy, Governance, and Development	Elective	7.5
IR 212	International Organizations and Global Governance	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 221	Quantitative Social Science Research Methods	Core	10.5
PO 222	Comparative Political Thought	Core	7.5
PO 223	Public Policy Making and Analysis	Core	10.5
PO 224	Human Resources Management: Theory and	Core	10.5
PL 221	Professional and Civic Ethics	Core	7.5
PO 220	Field Practical	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 225	Decentralization and Development	Elective	7.5
PL 223	History of African Philosophy	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 311	Public Bureaucracies and Organizations	Core	7.5
PO 312	Administrative and Labour Laws	Core	10.5
PO 313	Strategic Planning and Management	Core	10.5
PO 314	Human Rights: Theory and Practice	Core	10.5
PO 315	Politics in Africa	Core	7.5
PO 316	Legislature and Legislative Processes	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>

<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 311	Globalization and Socio-Economic Development	Elective	7.5
DS 312	Industrialization and Development	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 321	Management of Public Resources	Core	10.5
PO 322	Public Administration in Tanzania	Core	10.5
PO 323	Gender and Politics in Africa	Core	7.5
PO 324	Democracy: Theory and Practice	Core	10.5
PO 325	Civil Society and the State	Core	10.5
	One Elective Course	Elective	10.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 326	Contemporary Issues in Public Administration	Elective	10.5
DS 323	Public and Private Sector Management	Elective	10.5

### **Special Programme Requirements**

Field Practical (FP) provides students with an excellent opportunity for witnessing and taking part in real life implementation of theories taught in class. This is a six-week programme conducted towards the end of the academic year, after the completion of second semester examinations. Students are allocated to relevant organizations, firms, agencies, etc., in order to gain hands-on experience in all works related to the theory and practice of the programme.

During the PT, students work and write comprehensive reports under close supervision of professional training officers at their respective placements. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the college/department at least once during their placements. To ensure adequate coverage in terms of both depth and breadth of the training, students are given exposure to a wide variety of activities pertaining to the programme. The cost of FP is covered by sponsors of respective students. According to the current UDOM fee structure, each student is paid TZS 10,000 per day, which amounts to the sum of TZS 420,000 for six weeks.

### 2.4.3 Bachelor of Arts in International Relations (BA IR)

#### Programme Description

The overall objective of the programme is to prepare professionals with a unique blend of theories and approaches of the understanding of major global and multicultural perspectives that stimulate intellectual knowledge of international relations through critical analysis of historical, political, economic, legal and cultural forces that frame the field of study. Specifically, the programme endeavours to:

- Produce qualified and practically competent graduates in the field of International Relations.
- Produce graduates who are able to address contemporary challenges facing global politics and economy; and their influence on both public and private ventures, welfare, and production services.
- Develop a pool of intellectual minds capable of addressing emerging concerns to humankind such as international peace and security, conflict resolution and management, economic diplomacy, and international trade and negotiations.

#### Learning Outcomes of the Programme

Upon successful completion of this programme, graduates are expected to:

- Demonstrate knowledge of theory and practice of methodologies and approaches of addressing major concerns in the ever-increasing interconnected world.
- Analyse issues and give policy-oriented advice related to international relations in the context of Tanzania and beyond.
- Apply different approaches and mechanisms of addressing social, political, and economic issues related to sustainable development in the society.
- Apply appropriate skills in dealing with dynamics and challenges facing the world today and in the future.

#### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IR 111	Introduction to International Relations I	Core	7.5
IR 112	International Relations Theories	Core	10.5
PO 111	Introduction to Political Science I	Core	10.5
IT 111	Introduction to Information Technology	Core	7.5

	Two Elective Courses	Elective	15
	<b>Total</b>		<b>66</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 111	Methods and Techniques of Oral and Written	Elective	7.5
OC 111	Elementary Comprehensive Chinese I	Elective	7.5
PO 112	Introduction to Public Administration	Elective	7.5
DS 111	Poverty and Socio-Economic Development	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IR 121	Introduction to International Relations II	Core	7.5
IR 122	Foreign Policy and Diplomacy	Core	10.5
PO 121	Introduction to Political Science II	Core	10.5
PO 122	Introduction to Political Economy	Core	7.5
PO 123	Government and Politics in Tanzania	Core	10.5
PO 124	Local Government System in Tanzania	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 124	French Phonetics and Phonology	Elective	7.5
OC 124	Elementary Chinese Reading II	Elective	7.5
PO 125	Theory and Practice in Management	Elective	10.5
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IR 211	International Trade and Negotiations	Core	7.5
IR 212	International Organizations and Global	Core	7.5
PO 211	Qualitative Social Science Research Methods	Core	10.5
PO 214	Decision Making: Theory and Practice	Core	10.5
PL 212	Critical Thinking and Argumentation	Core	10.5
PO 212	African Political Thought	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

FR 211	Methods and Techniques of Oral and Written French II	Elective	7.5
OC 212	Intermediate Chinese Listening I	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IR 221	Conflict Management: Theory and Practice	Core	10.5
IR 222	Public International Law and Ethics	Core	7.5
PO 221	Quantitative Social Science Research Methods	Core	10.5
PO 223	Public Policy: Making and Analysis	Core	10.5
PL 221	Professional and Civic Ethics	Core	7.5
PO 220	Field Practical	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 224	Functional French	Elective	7.5
OC 222	Intermediate Chinese Listening II	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IR 311	Regional Integration: Theory and Practice	Core	10.5
IR 312	Contemporary Issues in International Relations	Core	10.5
PO 311	Public Bureaucracies and Organizations	Core	7.5
PO 314	Human Rights: Theory and Practice	Core	10.5
PO 315	Politics in Africa	Core	7.5
DS 311	Globalization and Socio-Economic Development	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 311	Syntactic Description of French	Elective	7.5
OC 311	Advanced Comprehensive Chinese I	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IR 321	International Political Economy	Core	10.5
IR 322	Economic Diplomacy	Core	10.5
IR 323	Politics of North-South Relations	Core	7.5

PO 324	Democracy: Theory and Practice	Core	10.5
PO 325	Civil Society and the State	Core	10.5
	Two Elective Courses	Elective	18
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 313	Strategic Planning and Management	Elective	10.5
PO 316	Legislature and Legislative Processes	Elective	7.5
FR 322	French Novel	Elective	10.5
OC 322	Advanced Chinese Listening II	Elective	10.5

### Special Programme Requirements

Field practical (FP) provides students with an excellent opportunity for witnessing and taking part in the real life implementation of theories taught in class. This is a six-week programme conducted towards the end of the academic year, after the completion of second semester examinations. Students are allocated to relevant organizations, firms, agencies, etc., in order to gain hands-on experience in all works related to the theory and practice of the programme.

During the PT, students work and write comprehensive reports under close supervision of professional training officers at their respective placements. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the college/ department at least once. To ensure adequate coverage in terms of both depth and breadth of the training, the students are exposed to a wide variety of activities pertaining to the programme. The cost of PT is covered by sponsors of respective students. According to the current UDOM fee structure, each student is paid **TZS 10,000** per day, which amounts to the sum of **TZS 420,000** for six weeks.

#### 2.4.4 Bachelor of Arts in Philosophy and Political Science (BA PPS)

##### Programme Description

The overall objective of this programme focuses on preparing professionals with philosophical thoughts, intellectual curiosity, and critical thinking required in the course of addressing contemporary concerns in social, economic, and political life. Specifically, the programme endeavours to:

- Produce qualified and practically competent graduates with problem solving skills and deeper insights for evaluation of complex problems in the society.

- Develop a pool of leaders, analysts, and advisors equipped with methodologies and approaches towards addressing contemporary realities at local and global scale.
- Prepare intellectual minds who can critically and analytically engage in the analysis and interpretation of contemporary development challenges through interrogation of social policies, development ethics, and moral reasoning.

### Learning Outcomes of the Programme

Upon successful completion of this programme, graduates are expected to:

- Demonstrate knowledge of theory and practice of developing philosophical thoughts central to the way we see ourselves and the wider world.
- Demonstrate critical mind in the application of different approaches and mechanisms of addressing social, political, and economic issues related to sustainable development in the society.
- Apply philosophical methodologies and approaches to interpret challenges facing humankind and possible solutions for their remedy.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
PL 111	Introduction to Philosophy	Core	7.5
PL 112	Logic I: Formal Logic	Core	10.5
PO 111	Introduction to Political Science I	Core	10.5
IT 111	Introduction to Information Technology	Core	7.5
	Two Elective Courses	Elective	15
	<b>Total</b>		<b>66</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 112	Introduction to Public Administration	Elective	7.5
IR 111	Introduction to International Relations I	Elective	7.5
DS 111	Poverty and Socio-Economic Development	Elective	10.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PL 121	Ancient and Medieval Philosophy	Core	7.5
PL 122	Logic II: Symbolic Logic	Core	10.5
PL 123	General Ethics	Core	10.5



PO 121	Introduction to Political Science II	Core	10.5
PO 124	Local Government System in Tanzania	Core	10.5
PO 123	Government and Politics in Tanzania	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>64.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 122	Introduction to Political Economy	Elective	7.5
IR 121	Introduction to International Relations II	Elective	7.5
PO 125	Theory and Practice of Management	Elective	10.5
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 211	Qualitative Social Science Research Methods	Core	10.5
PL 211	Philosophy of Knowledge	Core	7.5
PL 212	Critical Thinking and Argumentation	Core	10.5
PO 215	Comparative Political Systems	Core	7.5
PO 212	African Political Thought	Core	7.5
PO 214	Decision Making: Theory and Practice	Core	10.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PL 213	Selective Readings in Metaphysics and	Elective	7.5
DS 214	Democratization, Governance, and Development	Elective	10.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 221	Quantitative Social Science Research Methods	Core	10.5
PL 221	Professional and Civic Ethics	Core	7.5
PL 222	Philosophy of Nature and Science	Core	7.5
PL 223	History of African Philosophy	Core	7.5
PL 224	Metaphysics	Core	7.5
PO 220	Field Practical	Core	9.6
	One Elective Course	Elective	10.5
	<b>Total</b>		<b>60.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

PO 224	Human Resources Management: Theory and Practice	Elective	10.5
PO 223	Public Policy: Making and Analysis	Elective	10.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PL 311	Selected Issues in Psychology	Core	10.5
PL 312	Modern and Contemporary Philosophy	Core	7.5
PL 313	Philosophy of Education	Core	10.5
PO 314	Human Rights: Theory and Practice	Core	10.5
PL 315	Applied Philosophy and Development Ethics	Core	10.5
	One Elective Course	Elective	10.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 313	Strategic Planning and Management	Elective	10.5
PL 314	Philosophy of Interpretation	Elective	10.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PL 321	Philosophical Anthropology	Core	7.5
PL 322	Philosophy of Religion	Core	10.5
PL 323	Philosophy of Law	Core	10.5
PO 324	Democracy: Theory and Practice	Core	10.5
PO 325	Civil Society and the State	Core	10.5
	One Elective Course	Elective	10.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 321	Management of Public Resources	Elective	10.5
PO 322	Public Administration in Tanzania	Elective	10.5

### Special Programme Requirements

Field practical (FP) provides students with an excellent opportunity for witnessing and taking part in real life implementation of theories taught in class. This is a six-week Programme conducted towards the end of the academic year, after the completion of second semester examinations. Students are allocated to relevant organizations, firms, agencies, etc., in order to gain hands-on experience in all works related to the theory and practice of the programme.

During the PT, students work and write comprehensive reports under close supervision of professional training officers at their respective placements. To

complement the supervision provided by the professional training officers, students are visited by an academic supervisor from the college/department, at least once. To ensure adequate coverage, in terms of both depth and breadth of the training, students are exposed to a wide variety of activities pertaining to the programme. The cost of the PT is covered by sponsors of respective students. According to current UDOM fee structure, each student is paid **TZS 10,000** per day, which amounts to the sum of **TZS 420,000** for six weeks.

## **2.4.5 Bachelor of Geography and Environmental Studies (BGES)**

### **Programme Description**

This degree programme is offered in the Department of Geography and Environmental Studies. It is designed to prepare and equip students with professional skills in geography and environmental issues. Graduates of this programme are expected to be able to apply environmental knowledge and skills in ensuring sustainability of environment in various policies and development programmes. The overall objective of the programme focuses on preparing professionals with accurate expression and practice, as well as clear and concise analysis of environmental issues. Specifically, the programme endeavours to enable graduates analyse the environmental levels; plan measures to mitigate environmental problems; and provide advices on policy in the context of Tanzania and beyond.

### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Apply acquired knowledge and skills in environmental management.
- Demonstrate practical skills related to environmental management.
- Plan and implement environmental projects.

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 111	Background to Geomorphology	Core	10
GO 112	Climatology	Core	10
GO 113	Spatial Organization	Core	10
IT 111	Introduction to Information Technology	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
	One Elective Course	Elective	10

	<b>Total</b>		<b>62.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 111	Introduction to Project Planning and Management	Elective	10
PM 112	Rural Planning and Development	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 121	Land Surveying and Mapping Science	Core	10
GO 122	Environmental Conservation Education	Core	7.5
GO 123	Environmental and Natural Resources Economics I	Core	7.5
GO 124	Natural Resources Management and Development	Core	10
GO 125	Biogeography	Core	7.5
DS 124	Poverty and Livelihoods	Core	7.5
	One Elective Course	Elective	10
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 123	Principals of Economics I	Elective	10
DM 121	Theories and Management of Risk and Crisis	Elective	10
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 211	Soil Science	Core	10
GO 212	Agricultural Systems and Locations	Core	7.5
GO 213	Quantitative Methods in Geography and Disaster Management	Core	10
GO 214	Research Methods in Geography and Disaster Management	Core	10
GO 215	Agriculture and Rural Settlement Planning	Core	7.5
GO 216	Urban Systems	Core	10
GO 217	Climate Vulnerability and Change	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 221	Remote Sensing and Geographical Information Systems	Core	10
GO 222	Hydrometeorology	Core	10
GO 223	Population Perspectives	Core	7.5
GO 224	Environmental Policy Planning and Management	Core	7.5

GO 225	Transport Systems	Core	7.5
GO 220	Field Practical	Core	10
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 226	Medical Geography	Elective	7.5
PM 221	Natural Resource Conservation and Governance	Elective	10
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 311	Water Resource Management	Core	10
GO 312	Population Development	Core	7.5
GO 313	Resource Use and Conservation	Core	7.5
GO 314	Environmental Project Planning and Management	Core	10
GO 315	Research Project	Core	15
GO 316	Regional Planning	Core	7.5
	One Elective Course	Elective	10
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 311	Globalization and Socio-Economic Development	Elective	10
DS 313	Agricultural Policy and Planning	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 321	Environmental Policy and Planning	Core	10
DS 322	Food Security, Nutrition, and Development	Core	7.5
GO 322	Land Evaluation for Land use Planning and Management	Core	10
GO 323	Environmental and Social Impact Assessment	Core	10
GO 324	Urban Planning and Management	Core	7.5
EV 308	Environmental and Natural Resource Economic II	Core	7.5
PM 322	Entrepreneurships Skills and Rural Investment Sector	Core	10
	<b>Total</b>		<b>62.5</b>

## **Special Programme Requirements**

### **Field Practical Attachment**

Field Practical (FP) provides students with an excellent opportunity to witness and take part in real life implementation of theories taught in class. This is a six-week programme conducted towards the end of the academic year, after the completion of the second semester examinations. Students are allocated to pertinent organizations, firms, agencies, etc., in order to gain hands-on experience in all works related to the theory and practice of the programme.

During the PT, students work and write comprehensive reports under close supervision of professional training officers at their respective placements. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the college/department, at least once. To ensure adequate coverage in terms of depth and breadth of the training, the students are given exposure to a wide variety of activities pertaining to the programme. The cost of the PT is covered by sponsors of respective students. According to current UDOM fee structure, each student is paid TZS 10,000 per day, which amounts to the sum of TZS 420,000 for six weeks.

### **Research Field Practical Training**

Research Field Practical Training is part and parcel of the assessment requirements of the course; namely, Qualitative Research Methods in Geography and Disaster (GO 214) which provides students with an excellent opportunity to link the theories taught in class to practice through research undertaking procedures including proposal writing, preparation of data collection tools, field data collection, data analysis, and report writing. The research field practical training is a two weeks exercise in which students, under the supervision of instructors, visit selected areas of study with respect to research themes and conduct research activities. This part contributes 30% of the continuous assessment needed for the course GO 214. The cost of Research Field Practical Training amounts to TZS 200,000 for two weeks.

## **2.4.6 Bachelor of Environmental Disaster Management (BEDM)**

### **Programme Description**

This degree programme is offered by the Department of Geography and Environmental Studies. It is designed to prepare and equip students with professional skills in environment and disaster issues. Graduates of this Programme are expected to be able to apply knowledge and skills in mainstreaming disaster

management issues in various policies and development programmes. The overall objective of the programme is to prepare professionals with accurate expression and practice, as well as clear and concise analysis of disaster risks and environmental issues. Specifically, the programme endeavours to enable the graduates analyse the environmental disaster risks and plan measures to mitigate environmental disasters and disaster risk treatment, and provide advices on disaster management policy in the context of Tanzania and beyond.

### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Apply acquired knowledge and skills in managing disaster and/or environment.
- Demonstrate practical skills related to disaster risk management.
- Plan and implement disaster risk reduction in projects.

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
DM 111	Introduction to Disaster Management	Core	7.5
DM 112	Risks and Disaster Mapping	Core	10
IT 111	Introduction to Information Technology	Core	10
GO 112	Climatology	Core	7.5
LG 102	Communication Skills	Core	7.5
	One Elective Course	Elective	10
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 111	Background to Geomorphology	Elective	10
PM 111	Introduction to Project Planning and Management	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DM 121	Theories and Management of Risk and Crisis	Core	10
DM 122	Disaster and Catastrophic Emergency	Core	10
GO 121	Land Surveying and Mapping Science	Core	10
GO 123	Environmental and Natural Resources Economics I	Core	7.5
GO 124	Natural Resources Management and Development	Core	10
GO 122	Environmental Conservation Education	Core	7.5
	One Elective Course	Elective	10

	<b>Total</b>		<b>65</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 123	Principles of Economics I	Elective	10
DS 124	Poverty and Livelihoods	Elective	10
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DM 211	Climate Change and Disasters	Core	7.5
DM 212	Disaster Management Cycle	Core	7.5
DM 213	Safety, Health, and Disaster Management	Core	7.5
DM 214	Ecosystem Services and Disaster Management	Core	10.5
GO 216	Urban Systems	Core	7.5
GO 213	Quantitative Methods in Geography and Disaster Management	Core	10
GO 214	Research Methods in Geography and Disaster Management	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>70.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 213	Agricultural Transformation and Rural Development	Elective	10
SY 212	Introduction to Rural Sociology	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DM 221	Disaster Vulnerability and Livelihoods	Core	7.5
DM 222	Early Warning Systems	Core	7.5
DM 223	Occupational Safety and Health Risks Management	Core	10
DM 220	Field Practical	Core	10
GO 221	Remote Sensing and Geographical Information Systems	Core	10
GO 225	Transport Systems	Core	7.5
GO 224	Environmental Policy Planning and Management	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 226	Medical Geography	Elective	7.5
GO 223	Population Perspective	Elective	7.5



<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DM 311	Governance, Law and Policy in Disaster Management	Core	10
DM 312	Disaster Management Cycle	Core	7.5
DM 313	Research Project	Core	10
GO 316	Regional Planning	Core	7.5
GO 317	Tourism and Leisure	Core	10
GO 313	Resource Use and Conservation	Core	7.5
	One Elective Course	Elective	10.5
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 324	Project Planning and Implementation	Elective	10.5
GO 321	Environmental Policy and Planning	Elective	10.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DM 321	Urban Planning and Disaster Management	Core	10
DM 322	Disaster Management and Sustainability	Core	7.5
DM 323	Emergency Planning Management	Core	10
DS 322	Food Nutrition Security and Development	Core	10
GO 323	Environmental and Social Impact Assessment	Core	10
EV 308	Environmental and Natural Resource Economics II	Core	7.5
	One Elective Course	Elective	10
	<b>Total</b>		<b>65</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 322	Entrepreneurship Skills and Rural Investment	Elective	10
GO 321	Land Evaluation for Land Use Planning and Management	Elective	10

## Special Programme Requirements

### Field Practical Attachment

Field Practical (FP) provides students with an excellent opportunity for witnessing and taking part in real life implementation of theories taught in class. This is a six-week programme conducted towards the end of the academic year, after the completion of the second semester examinations. Students are allocated to pertinent

organisations, firms, agencies, etc., in order to gain hands-on experience in all works related to the theory and practice of the programme.

During the PT, students work and write comprehensive reports under close supervision of professional training officers at their respective placements. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the college/department, at least once. To ensure adequate coverage in terms of both depth and breadth of the training, students are given exposure to a wide variety of activities pertaining to the programme.

Research Field Practical Training is part and parcel of the assessment requirement of the course; namely, Qualitative Research Methods in Geography and Disaster (GO 214) which provides students with an excellent opportunity to link the theories taught in class to practice through research undertaking procedures including proposal writing, preparation of data collection tools, field data collection, data analysis, and report writing. The research field practical training is a two-week exercise in which students under supervision of instructors visit selected areas of study with respect to research themes and conduct research activities. This part contributes 30% of the continuous assessment needed for the course GO 214. The cost for Research Field Practical Training amounts to TZS 200,000 for two weeks.

#### **2.4.7 Bachelor of Arts in Sociology (BA Sociology)**

##### **Programme Description**

Bachelor of Arts in Sociology is offered by the Department of Sociology and Anthropology. The programme is positioned on the need to capture both the qualitative and quantitative levels of education. Equally important, the programme guarantees students an opportunity to get a wide range of courses in line with their fields of study and specializations. It markets students in the current stiff and highly competitive labour market and provides them with relevant skills and knowledge of respective professional background.

##### **Learning Outcomes of the Programme**

Upon completion of the programme, graduates are expected to have acquired knowledge, values, and skills to:

- Demonstrate expertise in undertaking social research in society.

- Recognize and demonstrate ability of reviewing theoretical models in understanding research-oriented projects.
- Critically analyze the contemporary discourses in rural development initiatives.
- Apply scientific methods in analyzing diversities in the social world.
- Sociologically scrutinize health systems by considering the macro and micro concerns.
- Apply the theoretical models in solving practical problems in the social world.
- Demonstrate ethical and professional behaviour in the workplace.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
SY 111	Classical Sociology	Core	10.5
SY 112	Cultural Anthropology	Core	10.5
IT 111	Introduction to Information Technology	Core	10.5
SY 113	Introduction to Social Psychology	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 113	Gender and Socio-Economic Development	Elective	7.5
PO 112	Introduction to Public Administration	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 121	Contemporary Sociology	Core	10.5
SY 122	Introduction to Culture and Society	Core	10.5
SY 123	Social Structure, Agency and Transformation	Core	10.5
DS 123	Governance, Civil Society and Development	Core	7.5
PO 124	Local Government System in Tanzania	Core	7.5
DS 124	Poverty and Livelihoods	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 122	Introduction to Political Economy	Elective	7.5
DS 125	Population, Demography, and Development	Elective	7.5
<b>Year Two</b>			
<b>Semester One</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 211	Classical Sociological Theories	Core	10.5
SY 212	Introduction to Rural and Urban Sociology	Core	7.5
SY 213	Qualitative Research Methodology	Core	10.5
SY 214	Introduction to Medical Sociology	Core	7.5
SY 215	Sociology, Criminology, and Penology	Core	7.5
PL 212	Critical Thinking and Argumentation	Core	10.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 216	Introduction to Social Policy	Elective	7.5
IR 212	International Organizations and Global	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 220	Field	Core	9.6
SY 221	Contemporary Sociology Theories	Core	10.5
SY 222	Quantitative Research Methods	Core	10.5
SY 223	Social Planning and Administration	Core	7.5
SY 224	Social Security and Employment Schemes	Core	7.5
SY 225	Introduction to Guidance and Counselling	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 225	Decentralization and Development	Elective	7.5
PL 221	Professional and Civic Ethics	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 311	Community Development: Theory and Practice	Core	10.5
SY 312	Sociology of Development	Core	7.5
SY 313	Population and Reproductive Health	Core	7.5
SY 314	Research Project	Core	9.6
SY 315	Contemporary Social Change and Culture	Core	7.5
SY 316	Sociology of Organization, Work, and Industry	Core	7.5
	One Elective Course	Elective	10.5
	<b>Total</b>		<b>60.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 317	Sociological Aspects of Globalization	Elective	10.5
SY 318	Rural Cooperation in Tanzania	Elective	10.5

<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 321	Intervention Strategies for Sustainable Development	Core	10.5
SY 322	Rural Development Policy and Planning	Core	10.5
SY 323	Society, Culture, and Health Transition	Core	7.5
SY 324	Project Planning and Implementation	Core	10.5
SY 325	Social and Cultural Impact Assessment	Core	7.5
SY 326	Foundations of Sociology of Knowledge and Culture	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SY 327	Sociology of Religion	Elective	7.5
DS 322	Food Security, Nutrition, and Development	Elective	7.5

## **Special Programme Requirements**

### **Field Practical**

Field Practical (FP) provides students with an excellent opportunity to witness and take part in real life implementation of theories taught in class. This is a six-week programme conducted towards the end of the academic year, after the completion of second semester examinations. Students are allocated to pertinent organizations, firms, agencies, etc., in order to gain hands-on experience in all works related to the theory and practice of the programme.

During the PT, students work and write comprehensive reports under close supervision of professional training officers at their respective placements. To complement the supervision provided by the professional training officers, the students are visited by an academic supervisor from the college/department at least once. To ensure adequate coverage in terms of both depth and breadth of the training, the students are given exposure to a wide variety of activities pertaining to the programme. The cost of PT is covered by sponsors of respective students. According to the current UDOM fee structure, each student is paid **TZS 10,000** per day, which amounts to the sum of **TZS 420,000** for six weeks.

## **Research Report**

In the third year, students pursuing Bachelor of Arts in Sociology shall conduct a research and write a report in partial fulfilment of the requirement for the award of Bachelor of Arts in Sociology of The University of Dodoma.

### **2.4.8 Bachelor of Arts in History (BA History)**

#### **Programme Description**

The aim of this programme is to provide skill-oriented training in historical scholarship. This is a broad based degree programme that aims at engaging the minds and imaginations of students and introducing students to times, places, and cultures, including theirs. At the end of the course, history graduates are expected to be professional information gatherers, archivists, documentarists, record managers, local historians, cultural officers, community managers, and teachers of history in secondary schools and colleges. Finally, on accomplishing this programme, graduates will be able to demonstrate competency in the crucial skills of historical explanation and synthesis. Learning modalities in this programme will include lectures, tutorial/seminars, assignments, practical, and self-study. A combination of these activities will ensure participation of lecturers and learners in learning through discussions during seminars/tutorials and consultation hours.

#### **Learning Outcomes of the Programme**

Graduates of BA-History should be able to:

- Work on aspects related to world history, capitalism and imperialism, African history and the history of Tanzania.
- Work as professional information gatherers, archivists, documentarists, and record managers.
- Work as local historians, cultural officers, and community managers.
- Work as cultural heritage and conservation professionals.
- Advice on key issues related to heritage policy and legislation in the national context and beyond.
- Teach History in secondary schools and related institutions.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HS 111	Basic Concepts and Perspectives in Historical Scholarship	Core	7.5
HS 112	Capitalism and Imperialism in World History	Core	10.5
TH 112	History of Heritage Conservation	Core	10.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
AC 111	Introduction to Archaeology	Core	10
	<b>Total</b>		<b>61</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HS 121	Introduction to Practical History	Core	10
HS 122	African History to the 21 <sup>st</sup> Century	Core	10
HS 123	Survey of World History to about 1500 A.D	Core	10
AC 123	Archaeology of Tanzania	Core	12
DS 121	Natural Resources Management and Development	Elective	10
TH 121	Tourism Mobility and Globalization	Elective	10
	<b>Total</b>		<b>62</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HS 211	Philosophies and Methodologies of History	Core	10
HS 212	Neo-Colonialism and Revolutionary Movements	Core	10
HS 213	History of East Africa	Core	7.5
HS 214	Oral Histories in Tanzania: Theory	Core	7.5
TH 215	Research Methods	Core	10
PL 212	Critical Thinking and Argumentation	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 211	Conservation and Curation of Cultural Heritage Materials	Elective	10
TH 212	Heritage Resource Conservation in Tanzania	Elective	7.5
<b>Semester Two</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HS 221	History of Tanzania	Core	7.5
HS 222	History of Central Africa	Core	10
TH 222	Tourism Marketing	Elective	10
TH 221	Museology and Museum Studies	Core	10
HS 223	The Second African Liberation	Core	7.5
HS 229	Oral Histories in Tanzania: Practical	Core	10
HS 224	War and Diplomacy in World History	Elective	10
	<b>Total</b>		<b>65</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HS 313	History of North Africa	Core	10
HS 314	Survey of World History of Globalization	Core	10
HS 312	History of South Africa	Core	10
HS 311	Population and Urban History of Tanzania	Core	10
HS 315	Economic History of Tanzania I	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 313	Indigenous Knowledge and Preservation of Culture	Elective	10
TH 311	Cultural Heritage and Management	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HS 322	History of West Africa	Core	10
HS 321	The Environmental History of Africa	Core	10
HS 323	Africa and World Religions: Christianity and Islam	Core	10
HS 324	Industrialization and the Rise of Working Class in Britain	Core	10
HS 325	Selected Historical Problems in the Middle East	Core	7.5
	Two Elective Courses	Electives	17.5
	<b>Total</b>		<b>65</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 324	Cultural Heritage Impact Assessment (CHIA)	Elective	10
TH 323	Leisure and Recreational Studies	Elective	7.5
TH 325	Cultural Heritage Resource Planning and Governance	Elective	10



### **Special Programme Requirements**

Students pursuing Bachelor of Arts in History will go for a mandatory course in field practical (**HS 229**) at the end of the second year. This is a continuation of a theoretical classroom course (**HS 214**) where students learn theoretical aspects. During their field training, they will be introduced to the practice of oral history research. Practical training starts with a three-week field research conducted during the inter-semester breather, during which students collect oral data on a topic approved by the course coordinator who is also the overall field supervisor. Interviews may preferably be recorded on audio-tapes for reviewing and grading. When other methods are used, a fair transcript of the proceedings must be submitted. Finally, the student is required to analyse the gathered data and write a synthetic long paper based on the field research.

### **2.4.9 Bachelor of Arts in Cultural Heritage and Tourism (BA CHT)**

#### **Programme Description**

The programme aims at producing graduates who will have working knowledge in the areas of Cultural Heritage and Tourism. They will understand the meaning and importance of cultural heritage resources and their conservation at the national and global context. Moreover, they will be able to identify unique heritage resources and be conversant with respective conservation methods and sustainable utilization of the same in tourism operations. Students will be trained to have critical and scientific thinking that can help to address challenges facing the heritage sector. In this respect, the programme prepares competent professionals who can handle cultural heritage and tourism issues efficiently and effectively. It also prepares these professionals to advice on policy and promotion issues regarding cultural heritage and tourism in the context of Tanzania and beyond. On this basis, students will be required to take core courses and relevant electives as provided in the programme. Learning modalities in this programme will include lectures, tutorial/seminars, assignments, practical, and self-study. A combination of these activities will ensure participation of lecturers and learners in learning through discussion during the seminars/tutorials and consultation hours.

#### **Learning Outcomes of the Programme**

At the end of the programme, graduates are expected to be well informed Cultural Heritage specialists and, hence, be able to:

- Identify unique heritage resources and be conversant with respective conservation methods and sustainable utilization of the same in tourism operations.
- Use common tourism heritage terms, concepts, and principles.
- Understand meaning and structure of heritage planning, management, and governance.
- Organize tour operations and conduct professional tour guidance in destinations with natural and cultural heritage resources.
- Evaluate the significance of business plan for tour operators.
- Advise on key issues related to heritage and tourism policy and legislation in the national context and beyond.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 111	Introduction to Tourism	Core	10
TH 112	History of Heritage Conservation	Core	10
AC 111	Introduction to Archaeology	Core	10
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
AC 112	Introduction to Cultural Anthropology	Elective	12
	<b>Total</b>		<b>64.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 121	Tourism Mobility and Globalization	Core	10
TH 122	Tour Operation Management and Tour Guidance	Core	10
AC 123	Archaeology of Tanzania	Core	7.5
SY 122	Introduction to Culture and Society	Core	10.5
AC 122	Kinship and Marriage	Elective	12
DS 121	Natural Resources Management and Development	Elective	10
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 211	Conservation and Curation of Cultural Heritage Materials	Core	10
TH 212	Heritage Resource Conservation in Tanzania	Core	7.5
TH 213	Strategic Tourism Management	Core	10
TH 215	Research Methods	Core	10

PL 212	Critical Thinking and Argumentation	Core	7.5
DS 212	Natural Resource Conservation and Governance	Elective	10
SY 216	Introduction to Social Policy	Elective	10
	<b>Total</b>		<b>65</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 221	Museology and Museum Studies	Core	10
TH 222	Tourism Marketing	Core	10
TH 223	Rural, Urban, and Eco-Tourism	Core	7.5
TM 223	Travel Agency and Tour Operations Management	Core	10
HS 221	History of Tanzania	Core	7.5
TH 229	Field Practical	Core	10
AC 223	Peoples and Cultures of the World	Elective	10
	<b>Total</b>		<b>65</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 311	Cultural Heritage and Management	Core	10
TH 312	Heritage Policies and Legislations	Core	7.5
TH 313	Indigenous Knowledge and Preservation of Culture	Core	10
TM 311	Protected Areas Management	Core	10
TH 316	E-Tourism	Core	7.5
BI 313	Animal Behaviour	Core	10
TM 312	Tourism Planning and Development	Elective	10
	<b>Total</b>		<b>65</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TH 323	Leisure and Recreational Studies	Core	7.5
TH 324	Cultural Heritage Impact Assessment (CHIA)	Core	10
TH 325	Cultural Heritage Resource Planning and Governance	Core	10
TH 321	Entrepreneurship in Cultural Heritage Resources	Core	7.5
TM 325	Development and Management of Local Tourism	Electives	10
DS 324	Regional Integration and Development	Elective	10
	<b>Total</b>		<b>55</b>

### Special Programme Requirements

The practical aspect is in two categories. The first category is that students will be required to go for field excursion (**TH 212** for the second year students in the first semester) for not less than two weeks, working in a cultural heritage site and

address real challenges and assess untapped potentials. To ensure full participation during excursions, students will be closely supervised by their instructor(s).

The other practical component (**TH 229** for the second year students in the second semester) is a six-week field attachment where students will be attached to relevant areas to complement the theoretical background obtained in classrooms. The intention is to make students be more innovative and problem solvers in the heritage and tourism sectors.

#### **2.4.10 Bachelor of Arts in Archaeology and Cultural Anthropology (BA ARCA)**

##### **Programme Description**

The Bachelor of Arts in Archaeology and Cultural Anthropology programme prepares competent professionals who can handle researches that focus on prehistoric and historical archaeology. Through this programme, students will study historical development of the disciplines of archaeology and cultural anthropology; techniques of archaeology and cultural anthropology; social formation processes; and cultural heritage management processes and practices. Learning modalities in this programme includes lectures, tutorials/seminars, assignments, excavation of archaeological sites/practical, and self-study.

##### **Learning Outcomes of the Programme**

Graduates of this degree programme are highly required in museums, government ministries of Tourism, Labour and Human Welfare, Public Works, Land, Water, and Environment. Their expertise is needed in public and private institutions in formulating and implementing socio-economic policies and solutions to development problems. They can work as professional heritage managers, museum education or exhibition officers, museum curators, historic buildings inspectors or conservation officers, archivists, cartographers, social researchers, or tourism officers.

##### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AC 111	Introduction to Archaeology	Core	10
AC 112	Introduction to Cultural Anthropology	Core	12
AC 113	Principles of Archaeology	Core	12
DS 102	Development Perspectives	Core	7.5

LG 102	Communication Skills	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
TH 112	History of Heritage Conservation	Elective	10
	<b>Total</b>		<b>66.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AC 121	A History of Anthropological Theory	Core	12
AC 123	Archaeology of Tanzania	Core	7.5
AC 122	Kinship and Marriage	Core	12
AC 129	Introductory Field Training	Core	10.5
HS 123	Survey of World History to about 1500 A.D	Core	10
SY 122	Introduction to Culture and Society	Elective	10.5
	<b>Total</b>		<b>62.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AC 211	History of Archaeological Theory	Core	10.5
AC 212	Forensic Anthropology	Core	12
AC 213	Laboratory Methods in Archaeology	Core	12
AC 214	World Prehistory	Core	10.5
PL 212	Critical Thinking and Argumentation	Core	7.5
TH 215	Research Methods	Core	10
	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AC 221	Ethnographic Research Method	Core	12
AC 222	Comparative Religion	Core	10.5
AC 223	Peoples and Cultures of the World	Core	10
AC 224	Human Evolution	Core	10
AC 229	Advanced Field Training (Archaeology/Media Anthropology)	Core	12
TH 221	Museology and Museum Studies	Core	10
	<b>Total</b>		<b>64.5</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AC 311	Political and Legal Anthropology	Core	10.5
AC 312	Settlement and Environmental Archaeology	Core	10.5
AC 313	Development Anthropology	Core	7.5
AC 314	Advanced Laboratory Methods in Archaeology	Core	10
AC 315	Media Anthropology	Core	10
TH 311	Cultural Heritage and Management	Core	10
	<b>Total</b>		<b>58.5</b>

<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AC 321	Economic Anthropology	Core	10.5
AC 322	Ethno-archaeology	Core	10.5
AC 323	Urbanization and State Formation	Core	10.5
AC 324	Applied Anthropology	Core	12
AC 325	Public Archaeology	Core	12
AC 329	Research Project (specialized field in archaeology/cultural anthropology)	Core	9
	<b>Total</b>		<b>64.5</b>

### **Special Programme Requirements**

**1<sup>st</sup> year in the 2<sup>nd</sup> Semester; Introductory Field Training (AC 129):** The requirements are museum laboratory with seminar rooms equipped with computers, internet and audio visual facilities, topographic sheets, aerial photos, compass, cotton and steel tapes (scaled), digital camera, GPS devices, total station (Theodolite), range finders, binoculars, object display tables and shelves; and replacement of miscellaneous field equipments such as screens, buckets, shovels, brushes, knives, pick axes, etc. Conveyance for a day or two is required to expose students to the already identified sites in Dodoma Region.

**2<sup>nd</sup> year in the 1<sup>st</sup> Semester; Forensic Anthropology (AC 212):** The requirements are osteology practical laboratory training for bone histology, sample human and non-human skeletal bones, finger print pads (for dermatoglyphics), blood groups and DNA test kit.

**2<sup>nd</sup> year in the 1<sup>st</sup> Semester; Laboratory Methods in Archaeology (AC 213):** The requirements are lens of high resolution for use-wear analysis of artifacts, running water tap in the museum laboratory, and common balance for weighing soil samples during the particle size analysis (sand, silt and clay ratios). Graded sieve set as available in some organizations like Geological Survey of Tanzania can also be helpful to directly calculate ratios. Plaster of Paris and glue are needed to reconstruct fragmentary ancient pottery evidence in the laboratory.

**2<sup>nd</sup> year in the 2<sup>nd</sup> Semester; Ethnographic Research Method (AC 221):** The requirements are permission and provision of conveyance for research visits (4 or 5 working days) to the indigenous villages of Dodoma, tape recorder, digital camera, and other related tools of anthropological field research.

**2<sup>nd</sup> year in the 2<sup>nd</sup> Semester; Advanced Field Training (Archaeology/Media Anthropology) (AC 229):**

i) Advanced Field School in Archaeology: Intensive Field work training for four to six weeks in the selected archaeological site(s) using aerial photographs, electrical resistivity tools, magnetometer, etc. Thus, procurement of the above tools is required. For Excavation, the tools used for the course AC 129 can also be utilized. Other requirements include tents and bump beds, pressure lamps, Soil Colour Testing Chart, plumb bob, cotton bags, polythin bags, aluminium foil, etc. Transport and meals allowance are also required.

ii) Media Anthropology: Practical orientation on auditory cultures like sound, sentiment, and space using recording tools, documentary centres, and archives. Apart from these, local village visits to examine indigenous media and interview journalists are added requirements. Conveyance for small trips to nearby suburbs and indigenous villages for a week is essential.

**3<sup>rd</sup> year in the 1<sup>st</sup> Semester; Advanced Laboratory Methods in Archaeology (AC 314)/Media Anthropology (AC 315)**

i) Advanced Laboratory Methods in Archaeology (AC 314): The requirements are display boards, shelves and tables for classification and analysis of artifacts, and their preservation. A computer with GIS access is needed in the lab for archaeology data base storage.

ii) Media Anthropology (AC 315): The requirements are transport facility for a couple of days to work with mass media and other documentary centres in collecting data for examining the impact of indigenous media in the rural reconstruction and development; and interaction with scholars and students of media and design to extend knowledge on the use of new tools, if any. Such tools can be either borrowed or purchased as per necessity.

**3<sup>rd</sup> year in the 2<sup>nd</sup> Semester; one special course either Applied Anthropology (AC 324) or Public Archaeology (AC 325)**

i) Applied Anthropology (AC 324): The requirements are permission and transport facility to government and non-governmental organisations to collect data related to planning, administration and responsibilities of community welfare, CRM activities, etc.

ii) Public Archaeology (AC 325): The requirements are Permission and conveyance for conducting salvage archaeology excavation and exhibition

involving local and indigenous communities and participating in community festival, public seminar for heritage protection, case studies, etc.

### **3<sup>rd</sup> year in the 2<sup>nd</sup> Semester; Research Project (AC 329): Specialized Field, either in Archaeology or Cultural Anthropology**

Instruments for data collection and analysis need to be provided to the learners. Some contingent allowance may be recommended for the university grants or outside institutional assistance.

## **2.4.11 Bachelor of Arts in Kiswahili Linguistics (BA Kiswahili Ling)**

### **Programme Description**

This degree programme is offered by the Department of Kiswahili. The students admitted to the programme are those who have previously studied Kiswahili (and one or more foreign languages). The programme has been prepared to acquaint students with knowledge and skills that will enable them to face dynamics and challenges in the language world. The overall objective of this programme is focused at introducing and unlocking potentials among students to acquire essential language knowledge and skills. After the completion of this degree programme, graduates should be able to demonstrate knowledge of theory and practice of central issues in their fields of specialization such as editing, proofreading, dictionary making, language consultation, and teaching Kiswahili to foreigners.

### **Learning Outcomes of the Programme**

Bachelor of Arts in Kiswahili Linguistics graduates should be able to:

- Solve communication problems within societies of different languages.
- Efficiently apply translation and interpretation knowledge to deal with matters of respective fields.
- Apply techniques and strategies to compose and write various texts.
- Apply skills to evaluate, edit, and proofread different texts critically.
- Apply research skills to carry out different language researches.
- Properly apply lexicographic techniques to compile and evaluate dictionaries.
- Effectively apply teaching methodologies to teach learners of Kiswahili as a Second/Foreign language.



## Programme Structure

<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KI 310	Editing and Proofreading (Field Practical)	Core	7.5
KI 311	Kiswahili Syntax	Core	10
KI 312	Kiswahili Semantics and Pragmatics	Core	10
KI 313	Kiswahili Sociolinguistics	Core	10
KI 314	Kiswahili Computational Linguistics	Core	10
KI 315	Kiswahili Psycholinguistics	Core	10
	One elective course from relevant department	Elective	7.5
	<b>Total</b>		<b>65</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KI 320	Field Linguistics	Core	7.5
KI 321	Methods of Teaching Kiswahili to Foreigners	Core	10
KI 322	Discourse Analysis	Core	10
KT 321	Translation in Practice	Core	7.5
KT 322	Interpretation in Practice	Core	7.5
KI 323	Kiswahili Dissertation	Core	10
	One elective course from relevant department	Elective	7.5
	<b>Total</b>		<b>60</b>

## Special Programme Requirements

- For the students to complete this degree Programme, they are required to attend 6 weeks of practical training at social institutions related to the field of study.
- Practical training takes place in the second semester of the second year of study for all students studying this Programme.
- Students conduct a two weeks research related to the study during the second semester of the third year.

### 2.4.12 Bachelor of Arts in Kiswahili Literature (BA Kiswahili Lit)

#### Programme Description

Bachelor of Arts in Kiswahili Literature is a three-year programme offered by the Department of Kiswahili. It has been designed to prepare literature graduates who will be fully knowledgeable in Kiswahili literature specifically and Literature in general. The overall objective of this programme is to prepare a cadre of high-quality Kiswahili literature experts in particular, and literature in general. Upon successful completion of this programme, graduates should be able to take care of

matters related to the Kiswahili literature professionally. In this respect, the programme prepares competent professionals who can handle Kiswahili literature issues efficiently and effectively. It also prepares Kiswahili experts who can generate new knowledge in literature analysis, composition, use, and research in the context of Tanzania and beyond. The programme involves studying techniques and strategies used to compose and write various fiction and nonfiction texts. It further deals with research skills helpful in different literature researches. Likewise, the programme deals with skills and teaching methodologies which are useful for teaching Kiswahili language and culture especially to foreigners and in various cultural centers.

### Learning Outcomes of the Programme

The Bachelor of Arts in Kiswahili Literature graduates should be able to:

- Solve various academic problems related to literature.
- Efficiently apply oral literature knowledge to deal with matters of respective fields.
- Apply techniques and strategies to compose and write various fiction and nonfiction texts.
- Apply research skills to carry out different literature researches.
- Effectively apply teaching methodologies to teach the learners of Kiswahili language and culture, especially the foreigners and in various cultural centers.

### Programme Structure

<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KF 310	Kiswahili Literature (Field Practical on Community Development)	Core	7.5
KF 311	Theories of Oral Literature in Kiswahili	Core	10
KF 312	Comparative Literature in Kiswahili	Core	10
KF 314	Kiswahili Literature and Aesthetics	Core	12
KI 312	Kiswahili Semantics and Pragmatics	Core	10
	Two electives from relevant department	Core	20
	<b>Total</b>		<b>69.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KF 320	Shaaban Robert Studies	Core	10
KF 321	Gender Issues in Kiswahili Literature	Core	7.5
KF 323	Philosophy and Ideology in Kiswahili Literature	Core	12
KI 320	Field Linguistics	Core	7.5

KI 321	Methods of Teaching Kiswahili to Foreigners	Core	10
KI 322	Discourse Analysis	Core	10
KI 323	Kiswahili Dissertation	Core	10
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>74.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KF 324	Kiswahili Literature and Contemporary Issues	Elective	7.5
KF 323	East African Kiswahili Literature	Elective	10

### Special Programme Requirements

- For the students to complete this degree Programme, they are required to attend 6 weeks of practical training at social institutions related to the field of study.
- Practical training takes place in the second semester of the second year of study for all students studying this Programme.
- Students conduct a two weeks research related to the field during the second semester of the third year.

### 2.4.13 Shahada ya Awali ya Sanaa katika Kiswahili (SHASAKI)

#### Maelezo ya Programu

Programu hii inatolewa na Idara ya Kiswahili ya Chuo Kikuu cha Dodoma. Wanafunzi wanaodahiliwa katika programu hii ni wale waliosoma na kufaulu somo la Kiswahili pamoja na somo jingine katika tahasusi zao. Programu hii inawaandaa wataalamu wabobevu wenye uwezo wa kushughulikia kwa weledi mkubwa masuala ya isimu na fasihi ya Kiswahili. Vilevile, inaandaa wataalamu wa Kiswahili watakaozalisha maarifa mapya katika uchambuzi, utunzi, utumizi na utafiti wa kifasihi na kiisimu katika muktadha wa ndani na nje ya mipaka ya Tanzania. Programu hii inajihusisha na ujifunzaji wa mbinu na mikakati inayotumika kutunga na kuandika matini mbalimbali za kawaida na za kibunifu. Vilevile, inajihusisha na ujuzi wa mbinu za ufundishaji wa Kiswahili na utamaduni, hususani kwa wageni na katika vituo mbalimbali vya utamaduni. Programu hii inamuandaa mwanafunzi kuwa mfasiri, mkalimani, mtunzi wa kazi mbalimbali za kifasihi na zisizo za kifasihi, mhariri, msoma profu, mtunzi na mhariri wa kamusi, mwalimu wa Kiswahili hususani kwa wageni, mtafiti wa lugha na fasihi, afisa utamaduni n.k.

## Matokeo ya Ujifunzaji wa Programu hii

Mhitimu wa Shahada ya Awali ya Sanaa katika Kiswahili wa Chuo Kikuu cha Dodoma ataweza:

- Kutatua changamoto mbalimbali za kimawasiliano katika jamii lugha tofauti tofauti.
- Kutumia kikamilifu maarifa ya tafsiri na ukalimani katika kushughulikia masuala mbalimbali ya uga huu.
- Kutumia mbinu na mikakati anuwai katika kutunga na kuandika matini mbalimbali.
- Kutumia ujuzi alioupata kutathmini, kuhariri, na kusoma profu kitunduizi katika matini mbalimbali.
- Kutumia maarifa ya kitafiti katika kufanya tafiti mbalimbali za lugha.
- Kutumia vema maarifa ya kileksikografia kuandaa na kutathmini kamusi.
- Kutumia kikamilifu maarifa na mbinu za ufundishaji Kiswahili kwa wageni kufundisha Kiswahili kama lugha ya kigeni.
- Kufundisha Kiswahili kwa wanafunzi wa ngazi na namna mbalimbali.
- Kuratibu masuala na shughuli mbalimbali za kitamaduni na mawasiliano.
- Kusimamia rasilimali za kiutamaduni.

## Muundo wa Kozi za Programu

<b>Mwaka wa Kwanza</b>			
<b>Semista ya Kwanza</b>			
<b>Msimbo</b>	<b>Jina la Kozi</b>	<b>Hadhi</b>	<b>Hadia</b>
DS 102	Development Perspectives	Lazima	7.5
IT 111	Introduction to Information and Communication Technology	Lazima	7.5
KS 116	Stadi za Mawasiliano I	Lazima	7.5
KS 111	Utangulizi wa Fasihi ya Kiswahili	Lazima	7.5
KS 112	Utangulizi wa Nadharia za Uhakiki wa Fasihi katika Kiswahili	Lazima	7.5
KS 113	Utangulizi wa Lugha na Isimu	Lazima	7.5
	Kozi Tatu za Hitiari	Hitiari	22.5
	<b>Jumla</b>		<b>67.5</b>
<b>Hitiari</b>			
<b>Msimbo</b>	<b>Jina la Kozi</b>	<b>Hadhi</b>	<b>Hadia</b>
KS 114	Utungaji na Uandishi katika Kiswahili I	Hitiari	7.5
KS 115	Miundo Msingi ya Sarufi ya Kiswahili	Hitiari	7.5

KT 111	Utangulizi wa Ukalimani	Hitiari	7.5
KS 117	Ushairi wa Kizazi Kipya katika Fasihi ya Kiswahili	Hitiari	7.5
KS 118	Mawasiliano ya Kielekitroniki	Hitiari	7.5
<b>Semista ya Pili</b>			
<b>Msimbo</b>	<b>Jina la Kozi</b>	<b>Hadhi</b>	<b>Hadia</b>
KS 122	Uandishi, Uhariri na Usomaji Prufu wa Kiswahili	Lazima	7.5
KS 123	Elimu-mitindo ya Kiswahili	Lazima	7.5
KS 124	Mabadiliko ya Dhamira za Fasihi ya Kiswahili Kihistoria	Lazima	7.5
KS 125	Mafunzo ya Lugha kwa Vitendo Uwandani	Lazima	7.5
KS 121	Historia na Maendeleo ya Kiswahili	Hitiari	7.5
KS 126	Utangulizi wa Unukuzi Hati	Hitiari	7.5
KT 121	Uchanganuzi wa Nadharia za Ukalimani	Hitiari	7.5
KT 122	Changamoto za ukalimani na Tafsiri	Hitiari	7.5
	<b>Jumla</b>		<b>60</b>
<b>Mwaka wa Pili</b>			
<b>Semista ya Kwanza</b>			
<b>Msimbo</b>	<b>Jina la Kozi</b>	<b>Hadhi</b>	<b>Hadia</b>
KS 219	Stadi za Mawasiliano II	Lazima	7.5
KS 210	Utungaji na Uandishi katika Kiswahili II	Lazima	7.5
KS 211	Fonolojia ya Kiswahili	Lazima	7.5
KS 212	Ushairi wa Kiswahili	Lazima	7.5
KS 213	Hadithi Fupi za Kiswahili	Lazima	7.5
	Kozi Nne za Hitiari	Hitiari	30
	<b>Jumla</b>		<b>67.5</b>
<b>Hitiari</b>			
<b>Msimbo</b>	<b>Jina la Kozi</b>	<b>Hadhi</b>	<b>Hadia</b>
KS 218	Isimu Historia na Isimu Linganishi ya Kiswahili	Hitiari	7.5
KS 214	Filamu ya Kiswahili	Hitiari	7.5
KS 215	Mbinu za Ufundishaji Kiswahili kwa Wageni	Hitiari	7.5
KS 216	Fasihi ya Watoto Tanzania	Hitiari	7.5
KS 217	Utendi wa Kiswahili	Hitiari	7.5
KT 211	Utangulizi wa Tafsiri kwa Mashine	Hitiari	7.5
KT 212	Tafsiri katika Uga Maalumu	Hitiari	7.5
KT 223	Stadi katika Tafsiri na Ukalimani	Hitiari	7.5
<b>Semista ya Pili</b>			
<b>Msimbo</b>	<b>Jina la Kozi</b>	<b>Hadhi</b>	<b>Hadia</b>
KS 222	Leksikografia ya Kiswahili	Lazima	7.5
KS 223	Tamthiliya ya Kiswahili	Lazima	7.5
KS 224	Riwaya ya Kiswahili	Lazima	7.5
KS 226	Uandishi kwa Vitendo Uwandani	Lazima	7.5
KS 221	Mofolojia ya Kiswahili	Lazima	7.5

KS 226	Uandishi kwa Vitendo Uwandani	Lazima	7.5
KS 225	Kazi-mradi ya Uandishi Bunilizi katika Kiswahili	Hitiari	7.5
KS 227	Usarufishaji katika Kiswahili	Hitiari	7.5
KS 228	Utangulizi wa Kazi Bora katika Fasihi ya Kiswahili	Hitiari	7.5
KT 221	Tafsiri na Ujinsia	Hitiari	7.5
	<b>Jumla</b>		<b>75</b>
<b>Mwaka wa Tatu</b>			
<b>Semista ya Kwanza</b>			
<b>Msimbo</b>	<b>Jina la Kozi</b>	<b>Hadhi</b>	<b>Hadia</b>
KS 310	Utungaji na Uandishi katika Kiswahili III	Lazima	7.5
KS 311	Sintaksia ya Kiswahili	Lazima	7.5
KS 312	Semantiki na Pragmatiki ya Kiswahili	Lazima	7.5
KS 313	Nadharia za Fasihi Simulizi katika Kiswahili	Lazima	7.5
KS 319	Stadi za Mawasiliano III	Lazima	7.5
KS 314	Fasihi Linganishi	Hitiari	7.5
KS 315	Isimujamii ya Kiswahili	Hitiari	7.5
KS 316	Mbinu za Utafiti katika Sanaa na Lugha	Kualikwa	7.5
KS 317	Ubidhaishaji wa Taaluma za Kiswahili	Hitiari	7.5
KS 318	Isimu Kompyuta ya Kiswahili	Hitiari	7.5
	<b>Jumla</b>		<b>75</b>
<b>Semista ya Pili</b>			
<b>Msimbo</b>	<b>Jina la Kozi</b>	<b>Hadhi</b>	<b>Hadia</b>
KS 321	Masuala Mtambuko katika Fasihi ya Kiswahili	Lazima	7.5
KS 324	Isimu Uwandani	Lazima	7.5
KS 325	Uchanganuzi Kilongo	Lazima	7.5
KS 328	Ujumi katika Fasihi ya Kiswahili	Lazima	7.5
	Kozi Moja ya Hitiari kutoka Idara yenye Mlandano	Lazima	7.5
KS 322	Masuala ya Jinsia katika Fasihi ya Kiswahili	Hitiari	7.5
KS 323	Utangulizi wa Forensiki ya Lugha	Hitiari	7.5
KS 326	Uandishi wa Tasnifu (kwa Idhini ya Idara)	Hitiari	7.5
KS 327	Isimu Saikolojia	Hitiari	7.5
	<b>Jumla</b>		<b>67.5</b>

### **Matakwa Maalumu ya Programu**

- Ili mwanafunzi aweze kuhitimu programu hii (SHASAKI), atalazimika kuhudhuria mafunzo kwa vitendo katika awamu mbili. Awamu ya kwanza itahusisha kozi ya KS 125 itakayofanyika semista ya pili kwa mwaka wa kwanza. Awamu ya pili itahusisha kozi ya KS 226 ambayo itafanyika semista ya pili kwa mwaka wa pili. Mafunzo hayo (kwa kila awamu)

yatafanyika jumla ya ama majuma sita (6) au nane (8) ya mafunzo kwa vitendo katika taasisi za umma/kijamii zinazohusiana na taaluma yake.

- Katika programu hii, watasoma KS 326 – Uandishi wa Tasnifu (kwa idhini ya Idara), inayofanyika semista ya pili kwa mwaka wa tatu. Ili kukamilisha mahitaji ya kozi hii, watapaswa kufanya utafiti kwa wiki mbili.

#### **2.4.14 Bachelor of Arts in Fine Arts and Design (BA FAD)**

##### **Programme Description**

This is a three-year degree programme in which students will be given basic skills in fine arts and design disciplines to enable them appreciate, design, and produce works of art at a professional level. It is a self-job creation professional training intended to create a generation of young Tanzanians who are able to appreciate and create works of art for national and international consumption. The programme aims at creating entrepreneurs in Fine Arts and Design who can create jobs and businesses within the relevant industries. In doing so, the programme provides students with skills in film, radio, and television to enable them expand their working platforms and markets for their works and equip them with wider horizons of knowledge. In so doing, the student's labour market is also given a wider perspective.

##### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Produce arts and design works.
- Create arts and design works.
- Design for different media.
- Work in arts and design industries.

##### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 111	Drawing Fundamentals	Core	10
AD 112	Fundamentals of Graphic Design	Core	10
AD 113	Introduction to Painting	Core	10
AD 115	Introduction to Textile and Fashion Design	Core	10
TF 112	Fundamentals of Film and Television	Core	10
TF 116	Cinematography	Core	10
LG 102	Communication Skills	Core	7.5

DS 102	Development Perspectives	Core	7.5
IT 111	Information Technology	Core	7.5
	<b>Total</b>		<b>82.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 114	Introduction to Book Illustration and Cartoon	Elective	7.5
AD 116	Introduction to Photography	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 121	Drawing	Core	10
AD 122	Graphic Design in Communication	Core	10
AD 125	Studies in Traditional African Painting	Core	10
AD 128	Principles of Visual Communication	Core	7.5
TF 123	Fundamental of Film and Television II	Core	10
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>62.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 123	Studies in Textile and Fashion Design	Elective	10
AD 124	Studies in Photography	Elective	7.5
AD 126	Introduction to Print Making	Elective	10
AD 127	Studies in Book Illustration and Cartoon Drawing	Elective	7.5
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 211	Special Studies in Painting	Core	10
AD 212	Advanced Methods in Graphic Design	Core	10
JP 215	Television Production I	Core	10
AD 214	Advanced Drawing Studies	Core	10
AD 217	History of Art in Tanzania	Core	7.5
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>62.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 213	Book Illustration and Cartoon Drawing	Elective	7.5
AD 215	Special Studies in Textile and Fashion Design	Elective	7.5
AD 216	Special Studies in Photography	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 220	Field Practical Training	Core	10
AD 221	Teaching and Learning Through Photography	Core	7.5



	(TLTP)		
AD 222	Advanced Studies in Drawing	Core	10
AD 225	Visual Arts and Advertising	Core	7.5
AD 224	Advanced Studies in Painting	Core	10
JP 225	Television Production II	Core	10
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>62.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 223	Advanced Studies in Photography		7.5
AD 226	Advanced Studies in Book Illustrations and Cartoon Drawing	Elective	7.5
AD 227	Studies in Textile and Fashion Design	Elective	10
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 311	Managing and Marketing of the Arts	Core	10
AD 311	Graphic Design in Communication	Core	15
AD 313	Painting Production	Core	15
TF 312	Film Making I	Core	15
AD 314	History of Art in Africa	Core	7.5
	One Elective Course	Elective	10
	<b>Total</b>		<b>72.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 312	Fabric Decoration and Fashion Design Communication	Elective	10
AD 315	Illustration and Cartoons Production	Elective	15
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 321	Graphic Design Project Display	Core	10
AD 322	Painting Project Display	Core	10
AD 325	History of World Art	Core	7.5
TF 321	Film Making II	Core	15
TF 323	Independent Project	Core	15
	One Elective Course	Elective	10
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AD 323	Illustrations and Cartoons Project Display	Elective	10
AD 324	Fabric Decoration and Fashion Design Display	Elective	10

### **Special Programme Requirements**

- The programme involves practical training (TF 220) for six weeks.
- The practical training is supposed to be held during the end of semester two of the second year of study.
- The practical training will be done for 6 weeks at the cost of TZS 420,000.

### **2.4.15 Bachelor of Arts in Theatre and Film (BA TF)**

#### **Programme Description**

Today, theatre and film have become vital communication, educational, and entertainment tools and a business in Tanzania. However, artists, and filmmakers face many challenges in accomplishing their tasks ranging from the lack of appropriate skills; inability of linking their products to the socio-economic and cultural developments taking place in the country, and hence, adding value and relevance; and marketing and distributing their final products. Therefore, this is a three-year degree programme which aims at producing competent graduates who can create, produce, and appreciate theatrical and film productions at a professional level.

Apart from providing general knowledge and skills on broad spectrums of theatre and film, the programme produces theatre and film producers. Hence, knowledge and skills in the management of productions in its various stages is highly emphasized. Skills in acting, directing, writing and designing for stage and screen, and theories governing theatre and film practices today are developed. Through theoretical and relatively heavy practical classes, students are nurtured into competent artists who can create jobs and businesses upon their graduation. In addition, the programme also provides students with skills in film, radio, and television to enable them expand their working platforms and markets for their works.

#### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Produce and direct theatre and film works.
- Act for stage and screen.
- Manage and market the art.
- Create theatrical, media, and film works.
- Establish and run businesses related to arts.
- Work in theatrical, media and film industry.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 111	Fundamentals of Theatre I	Core	7.5
TF 112	Fundamentals of Film and Television	Core	10
TF 113	Acting for Stage and Screen I	Core	10
TF 116	Cinematography	Core	10
LG 102	Communication Skills	Core	7.5
DS 102	Development Perspectives	Core	7.5
IT 111	Information Technology	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 114	Popular Music Culture of Tanzania	Elective	7.5
TF 115	Indigenous Music of Tanzania	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 121	Fundamentals of Theatre II	Core	7.5
TF 122	Acting for Stage and Screen II	Core	10
TF 123	Fundamental of Film and Television II	Core	10
TF 125	Television and Radio Drama	Core	10
AD 128	Principles of Visual Communication	Core	7.5
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 124	Indigenous Dances of Tanzania	Elective	7.5
TF 127	Music Practice	Elective	7.5
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 211	Writing for Stage and Screen I	Core	10
TF 212	Theatre for Development I	Core	10
TF 213	Editing for Radio and Screen	Core	10
TF 215	Directing for the Stage and the Screen I	Core	10
JP 215	Television Production I	Core	10
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>65</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

TF 214	Music Ensemble	Elective	7.5
TF 216	Instrumental Instruction I	Elective	7.5
TF 217	Dance Choreography	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 220	Field Practical Training	Core	10
TF 221	Writing for Stage and Screen II	Core	10
TF 222	Theatre for Development II	Core	10
TF 225	Directing for the Stage and the Screen II	Core	10
JP 225	Television Production II	Core	10
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>65</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
JP 222	Radio Production	Elective	10
TF 224	Costume and Makeup Design for the Stage and the Screen	Elective	7.5
TF 226	Bongo Flavour Musical Appreciation	Elective	7.5
TF 227	Instrumental Instruction II	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 311	Management and Marketing the Arts	Core	10
TF 312	Film Making I	Core	15
TF 313	Play Production I	Core	15
TF 315	Set and Lighting Design for the Stage and Screen	Core	10
TF 316	Contemporary World and African Cinema	Core	10
	One Elective	Elective	10
	<b>Total</b>		<b>70</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 314	Music and Society	Elective	7.5
TF 317	Dance Composition Project	Elective	7.5
TF 318	Music Making	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TF 321	Filmmaking II	Core	15
TF 322	Play Production II	Core	15
TF 323	Independent Project	Core	15
TF 324	Theatre and Film Criticism	Core	10
TF 325	Contemporary Theatre and Film in Tanzania	Core	10

	One Elective Course	Elective	10
	<b>Total</b>		<b>75</b>

### **Special Programme Requirements**

- The Programme involves practical training (TF 220) for six weeks.
- The practical Training is supposed to be held during the end of semester two of the second year of study
- The practical training will be done at the cost of TZS 420,000.

## **2.4.16 Bachelor of Arts in Journalism and Public Relations (BA JPR)**

### **Programme Description**

This degree programme is offered by the Department of Arts and Media Studies. The students admitted to this programme are those wishing to pursue academic, professional, and research careers in the communication industry, that is, mass media and public relations. The programme equips students with knowledge and skills that will enable them to create, produce, and appreciate media content in the practice of both journalism and public relations (PR), especially as they face the current and future turbulent communication environment of their professional practice. The overall objective of this programme focuses at introducing and unlocking potentials among candidates to acquire essential skills in print media, electronic media, and PR. Thus, after the completion of this degree programme, graduates should be able to demonstrate knowledge of theory and practice of central issues in their areas of specialization such as print media, radio and TV broadcasting, news media, PR, and advertising.

### **Learning Outcomes of the Programme**

Bachelor of Arts in Journalism and Public Relations graduates should be able to:

- Demonstrate expertise in journalism, mass communication, public relations, and advertising.
- Interpret principles mandating programmes production in television and radio and uncover their genre formats and for the newspapers.
- Edit and proofread different programmes and formats for radio, television, and newspaper articles.
- Manage strategic PR communication and campaigns.
- Plan media work and practice generic principles essential for PR, advertising, and media industry in general.

- Appreciate how mass communication and PR works interplay with other major communication tools such as film, theatre, and cinematography.
- Propose and run their own media related businesses.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
JP 111	Newspaper Writing and Reporting I	Core	10
JP 112	Fundamentals of Radio Broadcasting	Core	10
JP 113	Public Relations Essentials	Core	7.5
TF 112	Fundamentals of Film and Television I	Core	10
LG 102	Communication Skills	Core	7.5
TF 116	Cinematography	Core	10
DS 102	Development Perspectives	Core	7.5
IT 111	Introduction to Information and Communication Technology	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>77.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KS 114	Utungaji na Uandishi katika Kiswahili I		7.5
EL 111	English Structure		7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
JP 121	Newspaper Layout and Editing	Core	7.5
TF 123	Fundamentals of Film and Television II	Core	10
AD 128	Principles of Visual Communication	Core	7.5
JP 122	Introduction to Mass Communication	Core	7.5
JP 123	Persuasion Skills in Public Relations	Core	7.5
KS 122	Uandishi, Uhariri na Usomaji Prufu wa Kiswahili	Elective	7.5
EL 121	EngLish Phonetics and Phonology	Elective	7.5
	<b>Total</b>		<b>55</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
JP 211	News Writing and Reporting II	Core	10
JP 212	Advanced Radio Broadcasting	Core	10
JP 213	Public Relations Writing	Core	10
JP 214	Photojournalism	Core	7.5
JP 215	Television Production I	Core	10
TF 213	Editing for Radio and Screen	Core	10

	One Elective Course	Elective	7.5
	<b>Total</b>		<b>65</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KS 213	Nadharia ya Uandishi Bunilizi katika Kiswahili		7.5
EL 211	English Morphology		7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
JP 221	Media Analysis and Criticism	Core	7.5
JP 222	Radio Production	Core	10
JP 223	Public Speaking and Protocol	Core	10
JP 224	Media Ethics	Core	7.5
JP 225	Television Production II	Core	10
TF 220	Field Practical Training	Core	10
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>62.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KS 227	Usarufishaji katika Kiswahili	Elective	7.5
EL 223	English Rhetoric	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
JP 311	Investigative Journalism	Core	7.5
JP 312	Radio and Television Programing	Core	7.5
JP 313	Advanced Public Relations Strategies	Core	7.5
JP 314	New Media Technologies	Core	7.5
JP 315	Theories in Mass Communication and Public Relations	Core	10
JP 316	Communication Research	Core	7.5
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>62.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KS 312	Semantiki na Pragmatiki ya Kiswahili	Elective	7.5
EL 311	Introduction to English Syntax	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
JP 321	Media Management	Core	7.5
JP 322	Media Evolution and Society Development	Core	7.5
JP 323	Public Relations Customer Care Principles	Core	10
JP 324	Media Laws	Core	7.5
JP 325	Advertising Principles	Core	7.5

JP 326	International Communication	Core	15
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>62.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KS 325	Uchanganuzi Kilongo	Elective	7.5
EL 323	Advanced English Rhetoric	Elective	7.5

### **Special Programme Requirements**

- For the candidates to complete this degree programme, they are required to engage in both off and on-campus practical trainings throughout the entire duration of the programme. While on campus, the university training studios (television, radio, and newsroom) will enhance candidates' ability of transforming classroom theoretical knowledge into real life experience.
- Off-campus practical training sessions are compulsory for all candidates, and take place during the second semester of the second year of study.

### **2.4.17 Bachelor of Arts in Translation and Interpretation (BA TI)**

#### **Programme Description**

The programme deals with communication problems within societies of different languages. It instils in the minds of students with principles of translation and interpretation in various settings, designs of translation, and interpretation projects. It further entails students with stumbling blocks in translation and interpretation career and their appropriate solutions. In this respect, the programme prepares competent professionals who can address communication breakdown through translation services. Graduates who are competent in translation and interpretation profession have chances to work as freelance professional or employed in different institutions, both private and government, to work as deciphers.

#### **Learning Outcomes of the Programme**

Bachelor of Arts in Translation and Interpretation graduates from The University of Dodoma should be able to:

- Solve communication problems within societies of different languages.
- Apply principles of translation and interpretation in various settings.
- Design translation and interpretation projects.



- Overcome stumbling blocks in translation and interpretation carriers.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KT 110	Introduction to Translation	Core	10
KI 121	Basic Constructions of Kiswahili Grammar	Core	10
KT 111	Introduction to Interpretation	Core	10
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
KT 112	Information Transfer and Multilingualism in Tanzania	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
	One linguistics course from the Department of Foreign Languages and Literature	Core	10
	<b>Total</b>		<b>70</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KT 120	Analysis of Translation Theories	Core	10
KT 121	Analysis of Interpretation Theories	Core	10
KT 122	Challenges of Translation and Interpretation	Core	7.5
KI 122	Kiswahili Stylistics	Core	10
KI 123	Editing and Proofreading in Kiswahili	Core	10
	One linguistics course from the Department of Foreign Languages and Literature	Core	10
	<b>Total</b>		<b>57.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KT 210	Professionalism in Translation and Interpretation	Core	10
KT 211	Introduction to Machine Translation (MT)	Core	10
KT 212	Translation in Special Domains	Core	10
PL 212	Critical Thinking and Argumentation	Core	10.5
TH 215	Research Methods in Humanities	Core	10
	One linguistics course from the Department of Foreign Languages and Literature	Core	10
	One Elective from relevant department	Elective	10
	<b>Total</b>		<b>70.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KT 220	Translation and Interpretation Business	Core	10
KI 222	Kiswahili Lexicography	Core	10

KT 221	Translation and Gender	Core	10
	One linguistics course from the Department of Foreign Languages and Literature	Core	10
	Two Electives from relevant department	Core	20
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KT 310	Advanced Machine Translation (MT)	Core	10
KT 311	Field Practical of Translation	Core	10
KI 312	Kiswahili Semantics and Pragmatics	Core	10
KT 313	Translation and Science and Technology	Core	10
KT 314	Translation of Literary Texts	Core	10
	One linguistics course from the Department of Foreign Languages and Literature	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
KT 320	Interpretation of Literary Texts	Core	10
KI 322	Discourse Analysis	Core	10
KT 321	Translation in Practice	Core	7.5
KT 322	Interpretation in Practice	Core	7.5
KI 323	Kiswahili Dissertation	Core	10
	One linguistics course from the Department of Foreign Languages and Literature	Core	10
	One Elective from relevant department	Core	10
	<b>Total</b>		<b>65</b>

### Special Programme Requirements

- For a student to complete this degree Programme, he/she is required to attend 6 weeks of practical training at an institution with tasks related to the field of study.
- Practical training takes place in the second semester of the second year for all students under this programme.
- Subsistence cost during practical training is TZS 520,000.
- Students conduct a two weeks research related to the field during the second semester of the third year.

## 2.4.18 Bachelor of Arts in English (BA English)

### Programme Description

This programme aims at equipping students with linguistic and English language knowledge and skills. To achieve this, the programme is designed to introduce students to different linguistic theories and various rules that govern English language. Among the theories to be covered include: syntactic theories, sociolinguistic theories, pragmatic theories, language acquisition theories, proofreading theories, translation and interpretation theories, meaning related theories, phonological and morphological theories, etc. The above mentioned theories and others will give the right competence to students in analysing language related materials in a scholarly manner.

### Learning Outcomes of the Programme

At the end of the programme, graduates are expected to be well informed English language specialists and, hence, able to be employed or employ themselves as:

- English language consultants
- Proof-readers
- Translators
- Interpreters
- Language planners
- Language analysts
- Public speakers
- Language researchers
- Lexicographers
- Editors
- Language instructors

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
EL 111	English Structure	Core	7.5
EL 112	Vocabulary Building	Core	7.5
EL 113	Introduction to Translation and Interpretation	Core	7.5
LG 102	Communication Skills	Core	7.5
DS 102	Development Studies	Core	7.5
LE 111	Introduction to Literature	Core	7.5
LE 112	Language and Literature	Core	7.5
LE 113	Introduction to Literary Theory and Criticism	Core	7.5

	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EL 121	English Phonetics and Phonology	Core	7.5
EL 122	History and Dialects of English	Core	7.5
EL 123	Registers of English	Core	7.5
EL 124	Social and Biological Aspects of Language	Core	10.5
LE 121	Novel	Core	7.5
LE 122	Poetry	Core	7.5
LE 123	Drama	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EL 211	English Morphology	Core	7.5
EL 212	Semantics	Core	7.5
EL 213	English Pragmatics	Core	7.5
EL 214	Language Research Methods	Core	7.5
LE 211	African Literature	Core	7.5
LE 212	Oral Literature	Core	7.5
LE 213	European Literature	Core	7.5
LG 211	Public Communication: Principles and Practices	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EL 221	English Composition	Core	7.5
EL 222	Practical Training	Core	7.5
EL 223	Translation and Interpretation Theories and Practice	Core	7.5
EL 224	Editing and Proofreading	Core	7.5
EL 225	Introduction to English Rhetoric	Core	7.5
LE 221	Twentieth Century Literary Theories	Core	10.5
LE 222	African Feminist Writing	Core	7.5
LE 223	Creative Writing	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EL 311	English Pragmatics	Core	7.5
EL 312	Stylistics	Core	7.5
EL 313	Practical Aspects of Translation and Interpretation	Core	10.5
EL 314	English as a Second Language	Core	7.5

LE 311	African American Literature	Core	7.5
LE 312	Children's Literature	Core	7.5
LE 313	Tanzania Literature in English	Core	7.5
LG 311	Communication Ethics and Patriotism	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EL 321	English in East Africa	Core	7.5
EL 322	English Discourse	Core	7.5
EL 323	Advanced English Rhetoric	Core	7.5
LE 321	Studies in World Masterpieces	Core	7.5
LE 322	Oriental Literature in English	Core	7.5
LE 323	Oral Literature Dissertation	Core	7.5
LG 321	Cross Cultural Communication	Core	7.5
LG 322	Job Searching Strategies and Interview Techniques	Core	7.5
	<b>Total</b>		<b>60</b>

### Special Programme Requirements

- This programme has a Practical Training (PT) requirement. Students will be placed at different public and private offices for six weeks for practical training.
- PT is scheduled in the 2<sup>nd</sup> semester of the second year.
- The programme also requires these students to participate in a two weeks data collection exercise needed to accomplish LE 323 (Oral literature dissertation). This is normally conducted in the second semester of the 3<sup>rd</sup> year of study.

### 2.4.19 Bachelor of Arts in French (BA French)

#### Programme Description

This programme aims at equipping students with Linguistic and French language knowledge and skills. The overall objective is to prepare a cadre of high quality language skills to take care of matters related to the French language professionally. To achieve this, the programme is designed to introduce students to different Linguistic theories and various rules that govern French language. Among the theories to be covered include: syntactic theories, sociolinguistic theories, pragmatic theories, language acquisition theories, proofreading theories, translation and interpretation theories, meaning related theories, phonological and morphological theories, etc. The above mentioned theories and others will give the right

competence to students in analysing language related materials in a scholarly manner.

### Learning Outcomes of the Programme

The programme prepares competent professionals who can handle French language issues efficiently and effectively. It prepares French experts who can generate new knowledge in its analysis, use, and teaching in the context of Tanzania and beyond. At the end of the programme, graduates are expected to be well informed French language specialists and, hence, able to be employed or employ themselves as:

- French language consultants
- Proofreaders
- Translators
- Interpreters
- Language planners
- Language analysts
- Public speakers
- Language researchers
- Lexicographers
- Editors
- Language instructors

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 111	Methods and Techniques of Oral and Written Expressions in French 1	Core	12
FR 112	Study and Analysis of Texts in French 1	Core	12
FR 113	Introduction to French Literature 1	Core	10
LG 102	Communication Skills	Core	10
DS 102	Development Studies	Core	10
OC 111	Elementary Comprehensive Chinese I	Elective	10
	<b>Total</b>		<b>64</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 121	Methods and Techniques of Oral and Written Expressions in French 2	Core	10
FR 122	Study and Analysis of Texts in French 2	Core	12
FR 123	Introduction to French Literature 2	Core	10
FR 124	French Phonetics and Phonology	Core	12

IT 111	Introduction to Information and Communication Technology	Core	10
OC 121	Introduction to Chinese Language 2	Elective	10
	<b>Total</b>		<b>64</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 211	Methods and Techniques of Oral and Written French 3	Core	12
FR 212	Study and Analysis of Texts in French 3	Core	12
FR 213	Panorama of Francophone Literature 1	Core	12
FR 214	Functional French 1	Core	7.5
PL 212	Critical Thinking and Argumentation	Core	10.5
EL 214	Language Research Methodology	Core	7.5
OC 211	Intermediate Comprehensive Chinese 1	Elective	10
	<b>Total</b>		<b>71.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 221	Methods and Techniques of Oral and Written French 4	Core	12
FR 222	Study and Analysis of Texts in French 4	Core	10
FR 223	Panorama of Francophone Literature 2	Core	10
FR 224	Functional French 2	Core	10
FR 225	Foundations of Translation	Core	10
FR 226	Practical Training	Core	10
OC 221	Intermediate Comprehensive Chinese 2	Elective	10
	<b>Total</b>		<b>72</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 311	Syntactic Description of French	Core	10
FR 312	French Drama	Core	10
FR 313	Interpretation	Core	12
FR 314	Negro-African Literature	Core	12
FR 315	Research Methodology	Core	10
OC 311	Advanced Comprehensive Chinese 1	Elective	10
	<b>Total</b>		<b>64</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FR 321	French Morphology	Core	12
FR 322	French Novel	Core	12
FR 323	Translation	Core	10
FR 324	Psycholinguistics	Core	12

FR 325	Dissertation	Core	10
OC 321	Advanced Comprehensive Chinese 2	Elective	10
	<b>Total</b>		<b>66</b>

### **Special Programme Requirements**

- This programme has a Practical Training (PT) Requirement. Students will be placed at different public and private offices for six weeks for practical training.
- PT is scheduled in the second semester of the second year of study.



## **2.5 COLLEGE OF INFORMATICS AND VIRTUAL EDUCATION (CIVE)**

The College of Informatics and Virtual Education offers the following undergraduate Programmes:

1. Bachelor of Science in Computer Networks and Information Security Engineering (BSc CNISE)
2. Bachelor of Science in Computer Engineering (BSc CE)
3. Bachelor of Science in Computer Science (BSc CS)
4. Bachelor of Science in Software Engineering (BSc SE)
5. Bachelor of Science in Cyber Security and Digital Forensics (BSc CSDFE)
6. Bachelor of Science in Business Information Systems (BSc BIS)
7. Bachelor of Science in Health Information Systems (BSc HIS)
8. Bachelor of Science in Information Systems (BSc IS)
9. Bachelor of Science in Instructional Design and Information Technology (BSc IDIT)
10. Bachelor of Science in Multimedia Technology and Animation (BSc MTA)
11. Bachelor of Science in Telecommunications Engineering (BSc TE)
12. Bachelor of Science in Digital Content and Broadcasting Engineering (BSc DCBE)
13. Diploma in Cyber Security and Digital Forensics (Dip. CSDF)
14. Diploma in Educational Technology (Dip. ET)
15. Diploma in Information and Communication Technology (Dip. ICT)

### **2.5.1 Bachelor of Science in Computer Networks and Information Security Engineering (BSc CNISE)**

#### **Programme Description**

The BSc-CNISE degree programme is designed to produce highly qualified personnel with knowledge and skills required to address new and evolving computer networks and information security challenges facing governments, companies, and individuals. Upon completion of this four-year programme, graduates will be able to identify, investigate, analyze and prevent computer crimes; develop strategies to promote and ensure computer networks and information security; and facilitate an understanding of the legal framework relating to computer crimes. Graduates of BSc-CNISE can take up appointments in financial services, public sectors, commerce, consultancy practices, and security vendors.

## Learning Outcomes of the Programme

Graduates of this programme should be able to:

- Develop well-designed, robust, computer networks and information security solutions to a range of security problems that will contribute to the national development goals.
- Identify, critically evaluate, and counteract the security threats on standalone and networked computer systems.
- Interpret the moral, ethical, political and legal implications of computer crimes and information security.
- Create and implement appropriate cryptosystems and countermeasures.
- Analyze and diagnose computer misuse and its perpetrators and uncover evidence of cybercrimes.
- Gather, capture, and interpret data which can be transformed into information and used as evidence.
- Contribute to the development and implementation of information related to computer and network security policy of an organization.

## Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
LG 102	Communication Skills	Core	7.5
MT 1112	Calculus	Core	7.5
CP 111	Principles of Programming Languages	Core	9
MT 1111	Discrete Mathematics for ICT	Core	7.5
DS 102	Development Perspectives	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
MT 1117	Linear Algebra for ICT	Core	7.5
IA 112	Mathematical Foundations of Information Security	Core	7.5
	<b>Total</b>		<b>61.5</b>
Semester Two			
Code	Course Title	Status	Credits
ST 1210	Introduction to Probability and Statistics	Core	7.5
CS 123	Introduction to Software Engineering	Core	6
IA 123	Principles of Security	Core	7.5
CP 121	Introduction to Database Systems	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
IA 222	Cryptography	Core	7.5

CS 131	Industrial Practical Training I	Core	9.6
CP 123	Introduction to High Level Programming	Core	9
	<b>Total</b>		<b>63.6</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming In Java	Core	9
CP 213	Data Structures and Algorithms Analysis	Core	10.5
IA 211	Information Security Technologies	Core	7.5
CN 211	Computer Networking Protocols	Core	9
CT 211	Computer Organization and Architecture I	Core	9
CP 212	Systems Analysis and Design	Core	7.5
CP 211	Introduction To Linux/Unix Systems	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 224	Database Management Systems	Core	9
CP 221	Internet Programming and Application I	Core	7.5
CP 226	Operating Systems	Core	9
IS 221	ICT Research Methods	Core	7.5
CN 221	Networking Routers and Routing Protocols	Core	9
IA 221	Network Security	Core	9
CS 231	Industrial Practical Training II	Core	9.6
	<b>Total</b>		<b>60.6</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 313	Operating Systems Security	Core	7.5
CP 311	Internet Programming and Applications II	Core	9
IA 311	Network Forensics	Core	7.5
IA 418	Cyber Criminology and Techniques	Core	7.5
CP 312	Python Programming	Core	9
CP 314	Distributed Computing	Core	7.5
IA 315	Information Security Auditing and Assurance	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 314	Biometric Security	Elective	7.5
CG 311	Fundamentals of Software Defined Networks	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 325	Security and Fault-Tolerance in Distributed	Core	7.5

	Systems		
IA 421	Business Continuity and Disaster Recovery	Core	9
IA 322	Malware and Software Vulnerability Analysis	Core	7.5
IA 324	Web and Mobile Systems Security	Core	7.5
IA 321	Information and Communication Systems Security	Core	9
CS 331	Industrial Practical Training III	Core	9.6
IA 326	Secure Systems Development	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>65.1</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 327	Systems Programming	Elective	7.5
CS 427	Semantic Web and Social Networks	Elective	7.5
CG 321	Blockchain Technology	Elective	7.5
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EME 314	ICT Entrepreneurship	Core	7.5
SI 311	Professional Ethics and Conduct	Core	7.5
IA 414	Database Security	Core	9
BT 413	ICT Project Management	Core	6
CS 419	Computer Networks and Information Security Engineering Project I	Core	7.5
IA 415	Information Security Management and Standards	Core	7.5
CN 411	Wireless Networks and Mobile Computing	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 416	Cloud Computing Security	Elective	7.5
BT 312	Electronic and Mobile Commerce	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 423	Systems Administration and Management	Core	9
CS 429	Computer Networks and Information Security Engineering Project II	Core	9
IA 422	Ethical Hacking	Core	9
IA 428	Trust Management in E-Commerce	Core	7.5
IA 423	Wireless Security	Core	9
CP 422	Artificial Intelligence	Core	9
	One Elective Course	Elective	7.5

	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 424	Selected Topics in Computer Networks and Information Security Engineering	Elective	7.5
CS 421	Software Deployment and Management	Elective	7.5

### **Special Programme Requirements**

- Student must attend Industrial Practical Training (IPT) at the end of the second semester of the first, second, and third year of study.
- Student must take Final Year Project (FYP) course during the first and the second semester of the fourth year of study.
- The estimated cost for IPT is TZS 560,000 per student.
- The estimated cost for FYP is TZS 200,000 per student.

## **2.5.2 Bachelor of Science in Computer Engineering (BSc CE)**

### **Programme Description**

The BSc-CE programme focuses on the design and construction of computers and computer-based systems. The programme involves the study of hardware, software, communications, and the interaction among them with emphasis on theories, principles, practices of computer science and electronics engineering, and their application to the problems of designing computers and computer-based devices. The graduates of this programme shall be competent to design computer-based systems, provide and manage them with a futuristic outlook.

### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Apply knowledge of Mathematics, science, and engineering.
- Design and conduct experiments as well as to analyze and interpret data.
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- Function on multi-disciplinary teams.
- Identify, formulate, and solve engineering problems.
- Understand professional and ethical responsibility.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LG 102	Communication Skills	Core	7.5
CT 111	Fundamentals of Engineering Drawing with CAD	Core	9
CP 111	Principles of Programming Languages	Core	9
MT 1111	Discrete Mathematics for ICT	Core	7.5
DS 102	Development Perspectives	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
MT 1117	Linear Algebra for ICT	Core	7.5
EC 111	Fundamentals of Electrical Engineering	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1210	Introduction to Probability and Statistics	Core	7.5
CT 122	Introduction to Computer Engineering	Core	7.5
CP 123	Introduction to High Level Programming	Core	9
CP 121	Introduction to Database Systems	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
CT 121	Introduction to Electronics Engineering	Core	7.5
IA 124	Introduction to IT Security	Core	6
CG 131	Industrial Practical Training I	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming in Java	Core	9
EC 212	Measurements and Instrumentation Engineering	Core	9
MT 2113	Calculus for Engineers	Core	7.5
CP 212	Systems Analysis and Design	Core	7.5
CP 213	Data Structures and Algorithms Analysis	Core	10.5
CT 211	Computer Organization and Architecture I	Core	9
CT 212	Analogue Electronics	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 226	Operating Systems	Core	9
CT 222	Hardware Description Languages and Programmable Logic	Core	7.5
CT 221	Digital Electronics	Core	9
CN 221	Networking Routers and Routing Protocols	Core	9
TN 223	Signals and Systems	Core	9

CP 224	Database Management Systems	Core	9
CG 231	Industrial Practical Training II	Core	9.6
	<b>Total</b>		<b>62.1</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 312	Computer Maintenance	Core	9
CT 314	Computer Organization and Architecture II	Core	9
CT 315	Mobile Computing	Core	7.5
CT 313	Very Large Scale Integrated Circuits	Core	9
CT 311	Microprocessor and Interfacing	Core	9
EC 211	Electrical Networks Analysis	Core	7.5
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TN 312	Optical Communication Systems	Elective	9
CN 311	Wireless Networking	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 321	Microcontroller Systems	Core	9
CP 321	Distributed Database Systems	Core	9
IA 321	Information and Communication Systems Security	Core	9
CT 322	Robotics and Automation	Core	7.5
CN 322	LAN Switching	Core	9
CG 331	Industrial Practical Training III	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IS 221	ICT Research Methods	Elective	7.5
CG 321	Selected Topics in Computer Engineering	Elective	7.5
CG 221	Fundamentals of IoT	Elective	7.5
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
EME 314	ICT Entrepreneurship	Core	7.5
CT 411	Embedded Systems I	Core	9
CT 412	Parallel Computing	Core	7.5
TN 412	Digital Signal Processing	Core	9
CG 411	Computer Engineering Project I	Core	6
BT 413	ICT Project Management	Core	6

CT 413	Operating Systems Internals	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CG 412	Selected Topics in Computer Engineering	Elective	7.5
SI 311	Professional Ethics and Conduct	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 421	Digital Image Processing	Core	7.5
CP 324	Compiler Technology	Core	7.5
CT 421	Embedded Systems II	Core	9
CP 322	Data Mining and Warehousing	Core	9
CP 422	Artificial Intelligence	Core	9
CG 421	Computer Engineering Project II	Core	9
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 423	Systems Administration and Management	Elective	9
CG 422	Selected Topics in Computer Engineering	Elective	9

### Special Programme Requirements

- Student must attend Industrial Practical Training (IPT) at the end of the second semester of the first, second, and third year of study.
- Student must take Final Year Project (FYP) course during the first and the second semester of the fourth year of study.
- The estimated cost for IPT is TZS 560,000 per student.
- The estimated cost for FYP is TZS 200,000 per student.

### 2.5.3 Bachelor of Science in Computer Science (BSc CS)

#### Programme Description

There is more and more interaction with computers in almost all the spheres of life due to the accelerated scientific breakthroughs, assisted by the computer revolution. Thus, the overall objective of this programme is to prepare a scientist of high-quality computer science skills to take care of professional matters related to computer science. In this respect, the BSc-CS programme prepares competent professionals who can handle computer science issues efficiently and effectively: it prepares



computer science experts who can generate new knowledge in the analysis, use, and teaching in the context of Tanzania and beyond.

### Learning Outcomes of the Programme

Upon completion of the BSc-CS programme, graduates are expected to be able to:

- Apply computing, science and Mathematics knowledge appropriate to the discipline to model, design, and solve computational problems related to computer-based systems.
- Analyze a problem and then identify and define the computing requirements appropriate to its solution.
- Demonstrate an understanding of professional, ethical, legal, security, and social issues and responsibilities.
- Demonstrate effective oral and written communication skills.
- Analyze local and global impact of computing on individuals, organizations, and society.
- Recognize a need for continuing professional development.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
LG 102	Communication Skills	Core	7.5
CP 111	Principles of Programming Languages	Core	9
MT 1111	Discrete Mathematics for ICT	Core	7.5
DS 102	Development Perspectives	Core	7.5
MT 1117	Linear Algebra for ICT	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
IA 112	Mathematical Foundations of Information Security	Core	7.5
MT 1112	Calculus	Core	7.5
	<b>Total</b>		<b>61.5</b>
Semester Two			
Code	Course Title	Status	Credits
ST 1210	Introduction to Probability and Statistics	Core	7.5
CP 121	Introduction to Database Systems	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
CP 123	Introduction to High Level Programming	Core	9
CS 123	Introduction to Software Engineering	Core	6
IA 124	Introduction to IT Security	Core	6
MT 1211	Numerical Analysis For ICT	Core	7.5

CS 131	Industrial Practical Training I	Core	9.6
	<b>Total</b>		<b>62.1</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming In Java	Core	9
CN 211	Computer Networking Protocols	Core	9
CP 211	Introduction To Linux/Unix Systems	Core	9
CP 212	Systems Analysis and Design	Core	7.5
CP 213	Data Structures and Algorithms Analysis	Core	10.5
CT 211	Computer Organization and Architecture I	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 214	Computational Theory	Elective	7.5
CS 215	Selected Topics in Computer Science	Elective	7.5
CT 312	Computer Maintenance	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 226	Operating Systems	Core	9
CP 221	Internet Programming and Application I	Core	7.5
IS 221	ICT Research Methods	Core	7.5
CP 222	Open Source Technologies	Core	7.5
CP 223	Object-Oriented Systems Design	Core	7.5
CP 224	Database Management Systems	Core	9
CS 231	Industrial Practical Training II	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>65.1</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CG 221	Fundamentals of IoT	Elective	7.5
CG 222	Foundations of Data Science	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 413	ICT Project Management	Core	6
SI 311	Professional Ethics and Conduct	Core	7.5
CP 313	Mobile Applications Development	Core	9
CS 319	Computer Science Project I	Core	6
CP 311	Internet Programming and Applications II	Core	9
MT 3111	Mathematical Logic and Formal Semantics	Core	7.5
EME 314	ICT Entrepreneurship	Core	7.5

	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 318	Computer Graphics	Elective	7.5
IM 411	Human-Computer Interaction	Elective	7.5
IA 313	Operating Systems Security	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 322	Data Mining and Warehousing	Core	9
CS 339	Computer Science Project II	Core	9
CP 422	Artificial Intelligence	Core	9
CP 323	Web Framework Development Using JavaScript	Core	9
CP 321	Distributed Database Systems	Core	9
CP 423	System Administration and Management	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 424	Cloud Computing	Elective	7.5
CP 324	Compiler Technology	Elective	7.5

### Special Programme Requirements

- Student must attend Industrial Practical Training (IPT) at the end of the second semester of the first and the second year of study.
- Student must take Final Year Project (FYP) course during the first and the second semester of the third year of study.
- The estimated cost for IPT is TZS 560,000 per student.
- The estimated cost for FYP is TZS 200,000 per student.

### 2.5.4 Bachelor of Science in Software Engineering (BSc SE)

#### Programme Description

The BSc-SE is a four-year degree programme which focuses mainly in the use of tools, techniques and processes for analysis, design, and development of software systems from user requirements and maintain these systems and adapt them to the changing requirements of the users. The programme covers a range of different topics in computer science, project management, and engineering. The programme provides a gateway for entering the region to soft economy. A software engineering graduate shall be able to solve complex software – intensive problems; manage

software projects, team work, and effective use of software development and testing tools. They will be able to develop and produce software and be deployed in any part of the informatics profession.

### Learning Outcomes of the Programme

A graduate of this programme is expected to:

- Carry out the process of software development with the following elements: the analysis of system requirements; the production of system specifications using appropriate models and techniques; the validation and verification of software.
- Use the variety of advanced (especially object-oriented) programming languages, paradigms, and computer-based (including operating) systems.
- Apply theoretical concepts of computing science in the design, analysis of systems, and the implementation of appropriate algorithms and data structures.
- Use and provide network information services.
- Apply knowledge of Mathematics, science, engineering and management of software and related projects to solve common problems.
- Function on multi-disciplinary teams and communicate effectively with adherence to professional and ethical responsibilities.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LG 102	Communication Skills	Core	7.5
CP 111	Principles of Programming Languages	Core	9
MT 1111	Discrete Mathematics for ICT	Core	7.5
DS 102	Development Perspectives	Core	7.5
MT 1117	Linear Algebra for ICT	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
MT 1112	Calculus	Core	7.5
IA 112	Mathematical Foundations of Information Security	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 123	Introduction to High Level Programming	Core	9
MT 1211	Numerical Analysis for ICT	Core	7.5

CP 121	Introduction to Database Systems	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
ST 1210	Introduction to Probability and Statistics	Core	7.5
CS 123	Introduction to Software Engineering	Core	6
IA 124	Introduction to IT Security	Core	6
CS 131	Industrial Practical Training I	Core	9.6
	<b>Total</b>		<b>62.1</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming in Java	Core	9
CN 211	Computer Networking Protocols	Core	9
CP 211	Introduction to Linux/Unix Systems	Core	9
CP 212	Systems Analysis and Design	Core	7.5
CP 213	Data Structure and Algorithms Analysis	Core	10.5
CT 211	Computer Organization and Architecture I	Core	9
CP 214	Computational Theory	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 226	Operating Systems	Core	9
CP 221	Internet Programming and Application I	Core	7.5
IS 221	ICT Research Methods	Core	7.5
CP 222	Open Source Technologies	Core	7.5
CP 223	Object-Oriented Systems Design	Core	7.5
CP 224	Database Management Systems	Core	7.5
CP 225	Software Testing and Quality Assurance	Core	7.5
CS 231	Industrial Practical Training II	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 318	Computer Graphics	Core	9
MT 3111	Mathematical Logic and Formal Semantics	Core	7.5
CP 311	Internet Programming and Applications II	Core	9
CP 312	Python Programming	Core	9
CP 313	Mobile Applications Development	Core	9
EME 314	ICT Entrepreneurship	Core	7.5
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 411	Embedded Systems I	Elective	9

CP 316	Selected Topics in Software Engineering	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CS 321	Advanced Java Programming	Core	9
CP 321	Distributed Database Systems	Core	9
IA 321	Information and Communication Systems Security	Core	9
CP 322	Data Mining and Warehousing	Core	9
CP 323	Web Framework Development Using Javascript	Core	9
CS 331	Industrial Practical Training III	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>62.1</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 326	Secure System Development	Elective	7.5
CP 324	Compiler Technology	Elective	7.5
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SI 311	Professional Ethics and Conduct	Core	7.5
CS 431	Software Engineering Project I	Core	6
CT 312	Computer Maintenance	Core	9
IM 411	Human-Computer Interaction	Core	7.5
CP 412	C# Programming	Core	9
CD 312	Multimedia Content Development	Core	7.5
BT 413	ICT Project Management	Core	6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 312	Electronic and Mobile Commerce	Elective	7.5
CS 411	Reverse Engineering	Elective	7.5
CG 222	Foundations of Data Science	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 421	Digital Image Processing	Core	7.5
CS 421	Software Deployment and Management	Core	7.5
CS 432	Software Engineering Project II	Core	9
CP 422	Artificial Intelligence	Core	9
CP 423	System Administration and Management	Core	9
CP 424	Cloud Computing	Core	9
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>

<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 421	Embedded Systems II	Elective	9
CD 322	Digital Creative Advertising and Production	Elective	9
CS 329	Big Data Analysis	Elective	9

### **Special Programme Requirements**

- Student must attend Industrial Practical Training (IPT) at the end of the second semester of the first, second, and third year of study.
- Student must take Final Year Project (FYP) course during the first and the second semester of the fourth year of study.
- The estimated cost for IPT is TZS 560,000 per student.
- The estimated cost for FYP is TZS 200,000 per student.

## **2.5.5 Bachelor of Science in Cyber Security and Digital Forensics Engineering (BSc CSDFE)**

### **Programme Description**

The objective of the BSc-CSDFE programme is to provide the basis for a broad spectrum of careers. Graduates in this field can find employment in a wide spectrum of public and private enterprises. Job opportunities may include cyber incidents responders, cyber security analysts, digital forensics analysts, cyber investigators, educators, digital forensics engineers, IT security specialists, digital data forensics examiners, information security auditors, network security experts, cyber security experts, cyber threat analysts, forensic support, etc. Moreover, graduates can secure consultancy opportunities in private and public organizations.

### **Learning Outcomes of the Programme**

Upon completion of the BSc-CSDFE degree programme, students are expected to be able to:

- Identify, evaluate, and counteract the cyber risks and threats prevalent on the cyber space.
- Analyze, trace and respond to cybercrimes and its perpetrators and uncover evidences that can be used in a court of law.
- Create and implement appropriate digital forensic tools and countermeasures.
- Interpret the moral, ethical, political and legal implications of cybercrime and digital forensics.

- Develop and implement the cyber security and digital forensic policies, laws and strategies of an organization and country at large.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LG 102	Communication Skills	Core	7.5
MT 1112	Calculus	Core	7.5
CP 111	Principles of Programming Languages	Core	9
IA 111	Introduction to Computer Forensics	Core	7.5
DS 102	Development Perspectives	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
MT 1117	Linear Algebra For ICT	Core	7.5
IA 112	Mathematical Foundations of Information Security	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1210	Introduction to Probability and Statistics	Core	7.5
CS 123	Introduction to Software Engineering	Core	6
IA 123	Principles of Security	Core	7.5
CP 121	Introduction to Database Systems	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
IA 121	Foundations of Cyber Security	Core	7.5
CS 131	Industrial Practical Training I	Core	9.6
CP 123	Introduction to High Level Programming	Core	9
	<b>Total</b>		<b>63.6</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming In Java	Core	9
CP 213	Data Structures and Algorithms Analysis	Core	10.5
IA 212	Computer Forensics And Investigation	Core	7.5
CN 211	Computer Networking Protocols	Core	9
CT 211	Computer Organization and Architecture I	Core	9
CP 212	Systems Analysis and Design	Core	7.5
CP 211	Introduction To Linux/Unix Systems	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 224	Database Management Systems	Core	9



CP 221	Internet Programming and Application I	Core	7.5
CP 226	Operating Systems	Core	9
IS 221	ICT Research Methods	Core	7.5
CP 222	Open Source Technologies	Core	9
IA 222	Cryptography	Core	9
IA 221	Network Security	Core	9
CS 231	Industrial Practical Training II	Core	9.6
	<b>Total</b>		<b>69.6</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 313	Operating Systems Security	Core	7.5
CP 311	Internet Programming and Applications II	Core	9
IA 311	Network Forensics	Core	7.5
IA 318	IT Security Metrics	Core	6
IA 312	Multimedia Forensics	Core	10.5
IA 316	Mobile Forensics Analysis	Core	10.5
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 314	Computer Organization and Architecture II	Elective	9
IA 317	Selected Topics in Cyber Security and Digital Forensics Engineering	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 325	Security and Fault-Tolerance in Distributed Systems	Core	7.5
CP 325	Assembly Language Programming	Core	7.5
IA 322	Malware And Software Vulnerability Analysis	Core	7.5
IA 324	Web and Mobile Systems Security	Core	7.5
IA 321	Information and Communication Systems Security	Core	9
CS 331	Industrial Practical Training III	Core	9.6
IA 326	Secure Systems Development	Core	7.5
	One Elective Course	Elective	9
	<b>Total</b>		<b>65.1</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 423	Systems Administration and Management	Elective	9
CP 322	Data Mining and Warehousing	Elective	9
<b>Year Four</b>			
<b>Semester One</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SI 311	Professional Ethics and Conduct	Core	7.5
IA 418	Cyber Criminology and Techniques	Core	7.5
IA 414	Database Security	Core	9
BT 413	ICT Project Management	Core	6
CS 418	Cyber Security and Digital Forensics Engineering Project I	Core	7.5
LW 4110	Legal Aspects in Cyber Security	Core	7.5
IA 417	Hardware Forensics	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 413	Enterprise and Perimeter Security	Elective	7.5
EME 314	ICT Entrepreneurship	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 429	Information Systems Forensics Internal Auditing	Core	9
CS 428	Cyber Security and Digital Forensics Engineering Project II	Core	9
IA 422	Ethical Hacking	Core	9
IA 428	Trust Management in E-Commerce	Core	7.5
IA 423	Wireless Security	Core	9
IA 421	Business Continuity and Disaster Recovery	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 327	Systems Programming	Elective	7.5
CG 322	Blockchain Technology	Elective	7.5
CS 427	Semantic Web and Social Networks	Elective	7.5

### **Special Programme Requirements**

- Student must attend Industrial Practical Training (IPT) at the end of the second semester of the first, second, and third year of study.
- Student must take Final Year Project (FYP) course during the first and the second semester of the fourth year of study.
- The estimated cost for IPT is TZS 560,000 per student.
- The estimated cost for FYP is TZS 200,000 per student.

## 2.5.6 Bachelor of Science in Business Information Systems (BSc BIS)

### Programme Description

This programme is aimed at those who want to become information system professionals that integrate information technology with business processes. Business information systems is a field of work that helps businesses improve efficiencies by using computer systems. It involves programming, networking, database management, and IT governance in the business sector. Learning shall be through class lectures, seminars, industrial training, and final year project.

### Learning Outcomes of the Programme

Graduates of this programme should be able to:

- Comprehend principles pertaining to business information systems design, development, and implementation based on Mathematics, science, and software engineering skills. Discuss different ways in which the notion of human development seeks to establish interconnections among the manifold aspects of processes of socio-economic and political change, and how it addresses poverty.
- Apply knowledge of Mathematics, science, business and information systems in developing systems for data analysis and interpretation in business information systems.
- Function on multi-disciplinary teams and communicate effectively.
- Identify procedures to solve business information systems problems in a real life scenario.
- Recognize the need for, and an ability to engage in, life-long learning.
- Demonstrate professionalism, ethical, legal, security, and social issues and responsibilities.
- Design business information systems to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety.
- Use the techniques, skills, and modern information systems tools necessary for business enterprise operations and practice.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
LG 102	Communication Skills	Core	7.5

CP 111	Principles of Programming	Core	9
IM 111	Introduction to Information Systems	Core	7.5
DS 102	Development Perspectives	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
MG 111	Principles of Business	Core	7.5
AF 111	Introduction to Financial Accounting	Core	9
MT 1111	Discrete Mathematics	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1201	Probability Theory	Core	7.5
CP 121	Introduction to Database Systems	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
CP 123	Introduction to High Level Programming	Core	9
MS 123	Procurement Management	Core	9
IA 124	Introduction to IT Security	Core	6
CS 123	Introduction to Software Engineering	Core	6
IS 138	Industrial Practical Training I	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming in Java	Core	9
CP 212	Systems Analysis and Design	Core	7.5
CP 211	Introduction to Linux/Unix Systems	Core	9
BT 211	Computerized Accounting Applications	Core	7.5
AM 113	Business Mathematics	Core	7.5
LW 2108	Business Law and Corporate Governance	Core	9
EMM 111	Principles of Marketing	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>64.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 212	E-Business Strategy, Architecture and Designing	Elective	7.5
MS 217	Clearing and Forwarding Management	Elective	7.5
IS 214	Decision and Executive Support Systems	Elective	7.5
CN 211	Computer Networking Protocols	Elective	7.5
CP 213	Data Structures and Algorithms Analysis	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IS 221	ICT Research Methods	Core	7.5

CP 221	Internet Programming and Applications I	Core	9
IM 221	SCM Information Systems	Core	7.5
CP 226	Operating Systems	Core	9
CP 224	Database Management Systems	Core	7.5
EMM 224	E-Marketing	Core	8
IS 238	Industrial Practical Training II	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>65.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 321	Distributed Database Systems	Elective	7.5
CP 423	System Administration and Management	Elective	9
AF 221	Auditing Principles and Practice	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 413	ICT Project Management	Core	6
IM 311	Customer Relationship Management Information System	Core	7.5
CP 311	Internet Programming and Applications II	Core	9
IS 315	Business Information Systems Project I	Core	6
IM 314	Business Intelligence System and Data Visualization	Core	9
EME 314	ICT Entrepreneurship	Core	7.5
IM 411	Human Computer Interaction	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 312	Electronic and Mobile Commerce	Elective	7.5
AF 312	Public Finance and Taxation I	Elective	7.5
CT 312	Computer Maintenance	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IM 326	Knowledge Management Systems	Core	6
IS 325	Management Information System	Core	9
LW 3208	ICT Laws and Ethics	Core	6
IS 328	Geographic Information Systems	Core	7.5
IM 323	Business Analytics-Principles and Applications	Core	7.5
MS 324	Inventory Management	Core	8
MG 323	Import and Export Management	Core	7.5
IS 324	Business Information Systems Project II	Core	9
	One Elective Course	Elective	

	<b>Total</b>		<b>66.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 322	Data Mining and Data Warehousing	Elective	7.5
IS 329	Selected Topics in Business Information Systems	Elective	6
ST 3216	Statistics for Information Analysis	Elective	7.5

### **Special Programme Requirements**

- Every student must attend Industrial Practical Training (IPT) for 2 Months (8 Weeks) after the second semester of the first and the second year.
- In the third year, a student is required to undertake Final Year Project (FYP) for both semesters.
- Estimated cost for IPT is TZS 560,000 per year.
- Estimated cost for FYP is TZS 200,000 per year.

## **2.5.7 Bachelor of Science in Health Information Systems (BSc HIS)**

### **Programme Description**

Students in the BSc-HIS degree programme will develop competences in technical skills to manage health data, computer systems and information in the medical field, and provide information resources to the community. Health information includes all of the information generated in health facilities and other health sectors from the consultation rooms, radiology, laboratory, surgery, insurance companies, registries and more. Also, students will develop competence on analysis and problem solving, project management, systems acquisition, process modelling, design and innovation, development, implementation and management of information systems in health related organizations.

### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Comprehend knowledge and have ability to apply concepts and design principles related to data collection, storage, processing, and visualization in the context of health informatics.
- Apply knowledge of Mathematics, computer sciences, health science, and management science in designing and developing e-health systems.

- Function on multi-disciplinary teams.
- Demonstrate an understanding of theories and practices within local and international contexts of health systems.
- Demonstrate professional, ethical, legal, security, and responsibility attitude on matters pertaining to health endeavours.
- Demonstrate effective oral and written communication skills.
- Critically analyse problems while identifying and defining the appropriate health information system requirements.
- Design, implement and evaluate computer-based health information systems to meet desired needs and budget of a health care unit.

### Programme Structure

<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming in Java	Core	9
CP 212	Systems Analysis and Design	Core	7.5
IM 218	Information Systems Strategy	Core	6
CP 211	Introduction to Linux/Unix Systems	Core	9
HI 212	Telemedicine Design and Principles	Core	7.5
HI 211	Health Information Systems	Core	7.5
LW 2109	Health Law and Ethics	Core	6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HI 215	Bioinformatics Principles	Elective	7.5
NS 213	Community Health Principles	Elective	7.5
CN 211	Computer Networking Protocols	Elective	9
CP 213	Data Structures and Algorithms Analysis	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IS 221	ICT Research Methods	Core	7.5
HI 224	OSS Principles and Development in Healthcare Organizations	Core	7.5
CP 221	Internet Programming and Applications I	Core	7.5
HI 223	Health Information Technology Integration, Interoperability and Standards	Core	7.5
CP 226	Operating Systems	Core	9
CP 224	Database Management Systems	Core	7.5
IS 238	Industrial Practical Training II	Core	9.6

	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 225	Reproductive and Child Health	Elective	7.5
HI 221	Nursing Informatics	Elective	7.5
ET 321	Distance Learning	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 413	ICT Project Management	Core	6
CP 311	Internet Programming and Application II	Core	9
HI 317	Monitoring and Evaluation in Healthcare Projects	Core	7.5
CP 313	Mobile Application Development	Core	9
IS 317	Health Information Systems Projects	Core	6
EME 314	ICT Entrepreneurship	Core	7.5
HI 315	Health Records and Archive Management	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IM 313	Principles of Big Data Management	Elective	7.5
IM 411	Human Computer Interactions	Elective	7.5
CT 312	Computer Maintenance	Elective	7.5
IM 314	Business Intelligence and Data Visualization	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HI 329	Leadership and Management in Health	Core	6
LW 3208	ICT Laws and Ethics	Core	6
IS 327	Health Information System Project II	Core	9
IS 328	Geographic Information System	Core	7.5
IM 323	Business Analytics-Principle and Application	Core	7.5
MD 222	Medical Epidemiology and Research Methods	Core	7.5
IS 322	Information System Competences	Core	6
IS 321	Information System Theories	Core	6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HI 326	Selected Topics in Health Information Systems	Elective	6
IM 326	Knowledge Management Systems	Elective	6
CP 321	Distributed Database Systems	Elective	9
NS 324	Introduction to Psychiatric and Mental Health	Elective	6



CP 423	System Administration and Management	Elective	9
IM 327	Computer Supported Collaborative Work	Elective	6
ST 3216	Statistics for Information Analysis	Elective	7.5

### **Special Programme Requirements**

- Every student must attend Industrial Practical Training (IPT) for 2 Months (8 Weeks) after the second semester of the first and the second year.
- In the third year, a student is required to undertake Final Year Project (FYP) for both semesters.
- Estimated cost for IPT is TZS 560,000 per year.
- Estimated cost for FYP is TZS 200,000 per year.

## **2.5.8 Bachelor of Science in Information Systems (BSc IS)**

### **Programme Description**

The Bachelor of Science in Information Systems degree programme aims at training those who aspire to become professionals in designing, building and managing computer-based information systems.

### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Comprehend knowledge and have ability to apply concepts and design principles related to data collection, storage, processing, and visualization.
- Comprehend knowledge and skills in information sharing and knowledge management.
- Apply knowledge of Mathematics, computer sciences, and management science in the design and development of computer systems.
- Function on multi-disciplinary teams.
- Demonstrate an understanding of professional, ethical, legal, security, and social issues and responsibilities.
- Analyze local and global impact of information systems on individuals, organizations, and society.
- Demonstrate knowledge on methodologies to apply concepts and design principles relating to data collection, storage, processing and visualization.
- Demonstrate knowledge and skills in information sharing and knowledge management.

- Analyze problems facing public and private organizations, identify and define information system requirements appropriate to their e-solutions.
- Design and participate in the implementation of information systems' solutions by considering constraints, both organizational and technological.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LG 102	Communication Skills for Scientists	Core	7.5
DS 102	Development Perspectives	Core	7.5
IM 111	Introduction to Information Systems	Core	7.5
CP 111	Principles of Programming	Core	9
IT 111	Introduction to Information Technology	Core	7.5
MT 1111	Discrete Mathematics	Core	7.5
IS 112	ICT for Development	Core	6
MG 121	Principles and Practice of Management	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1201	Probability Theory	Core	7.5
CP 121	Introduction to Database System	Core	7.5
CN 121	Introduction to Computer Networking	Core	7.5
IA 124	Introduction to IT Security	Core	6
CS 123	Introduction to Software Engineering	Core	6
CP 123	Introduction to High Level Programming	Core	9
PO 113	Government and Politics in Tanzania	Core	7.5
IS 138	Industrial Practical Training I	Core	9.6
	<b>Total</b>		<b>60.6</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming in Java	Core	9
CP 212	System Analysis and Design	Core	7.5
IM 218	Information systems strategies	Core	6
IS 213	E-Government Information System: Design and Implementation	Core	7.5
MS 211	Operation Research for Business Decision	Core	9
CP 211	Introduction to Linux/ Unix systems	Core	9
IS 214	Decision Support Systems	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63</b>

<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
HI 213	E-Health	Elective	7.5
IM 211	Business Information Systems	Elective	7.5
CN 211	Computer Networking Protocol	Elective	7.5
CP 213	Data Structure and Algorithms	Elective	10.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IS 221	ICT Research Methods	Core	7.5
IM 223	Design and Management of Enterprise Systems	Core	7.5
CP 226	Operating System	Core	9
CP 221	Internet Programming and Application I	Core	9
MG 221	Organizational Behavior	Core	8
CP 224	Database Management Systems	Core	7.5
IS 238	Industrial Practical Training II	Core	9.6
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>65.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ET 321	Distance Learning	Elective	7.5
EMM 224	E-Marketing	Elective	8
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>units</b>
BT 413	ICT Project Management	Core	6
MG 316	Organizational Risk Management	Core	9
IS 316	Information Systems Project I	Core	6
CP 311	Internet Programming and Applications II	Core	9
IM 314	Business Intelligence Systems and Data Visualization	Core	7.5
EME 314	ICT Entrepreneurship	Core	7.5
CP 313	Mobile Application Development	Core	9
	One Elective Course	Elective	6
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 312	Computer Maintenance	Elective	9
MG 311	Strategic Management	Elective	7.5
IM 313	Principle of Big Data Management	Elective	7.5
IS 318	E-Agriculture and Environment	Elective	6
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

IS 326	Information Systems Project II	Core	9
IS 328	Geographic Information System	Core	7.5
ST 3216	Statistics for Information Analysis	Core	7.5
LW 3208	ICT Laws and Ethics	Core	6
IM 327	Computer Supported Collaborative Work	Core	6
HR 322	Organizational Change and Development	Core	9
IM 326	Knowledge Management Systems	Core	6
IS 322	Information Systems Competences	Core	6
	One Elective Course	Elective	6
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 423	System Administration and Management	Electives	9
CP 321	Distributed Database Systems	Electives	9
IM 324	Selected Topics in Information Systems	Electives	6
IS 321	Information Systems Theories	Electives	6
CP 424	Cloud Computing	Electives	7.5
IM 323	Business Analytics – Principles and Applications	Electives	7.5

### **Special Programme Requirements**

- Every student must attend Industrial Practical Training (IPT) for 2 Months (8 Weeks) after the second semester of the first and the second year.
- In the third year, a student is required to undertake Final Year Project (FYP) for both semesters.
- Estimated cost for IPT is TZS 560,000 per year.
- Estimated cost for FYP is TZS 200,000 per year.

### **2.5.9 Bachelor of Science in Instructional Design and Information Technology (BSc IDIT)**

#### **Programme Description**

The BSc-IDIT students will be able to design and develop digital contents for digital online and offline learning and teaching using ICT techniques. The courses will be delivered as a combination of lectures, practical, assignments, independent studies, and tutorials.

#### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Demonstrate knowledge and understanding of application of Information Technology in digital content design, creation, manipulation, and storage.

- Demonstrate knowledge and understanding of instructional design and educational technologies.
- Demonstrate knowledge and understanding of the linkage between education and training using computers and related technologies.
- Apply effective personal and interpersonal skills.
- Apply computational and digital skills and knowledge in digital content design, creation, manipulation, storage and transmission for specific public consumption.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LG 102	Communication Skills	Core	7.5
CP 111	Principles of Programming	Core	9
ET 111	Introduction to Educational Technology	Core	7.5
DS 102	Development Perspectives	Core	7.5
CD 112	Foundations of Instructional Design	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
CD 111	Digital Media Psychology	Core	7.5
IM 111	Introduction to Information Systems	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1201	Probability Theory	Core	7.5
CP 121	Introduction to Database Systems	Core	9
CN 122	Introduction to Computer Networking	Core	7.5
CP 123	Introduction to High Level Programming	Core	9
IA 126	Introduction to IT Security	Core	6
CD 121	Desktop Publishing	Core	7.5
CD 122	Multimedia Technology I	Core	7.5
CD 131	Industrial Training I	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming in Java	Core	9
CD 212	Games Development	Core	9
CP 212	Systems Analysis and Design	Core	7.5
ET 213	Technology Management, Integration and Leadership	Core	7.5
CD 213	Graphics Design Tools	Core	9

CD 215	Digital Instructional Design I	Core	9
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 211	Introduction to Linux/ Unix systems	Elective	9
CS 313	Mobile Applications Development	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 226	Operating Systems	Core	9
IS 221	ICT Research Methods	Core	7.5
CD 222	Digital Audio-Video Production	Core	7.5
CD 223	Digital Sound-Video Editing	Core	7.5
CD 221	Fundamentals of 2D Animation	Core	7.5
CP 221	Internet Programming and Applications I	Core	7.5
CD 231	Industrial Training II	Core	9.6
	One Elective Course	Elective	7
	<b>Total</b>		<b>63.1</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CD 327	Learning Management Systems	Elective	7
ET 221	Distance Learning	Elective	7
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 413	ICT Project Management	Core	6
SI 311	Professional Ethics and Conduct	Core	7.5
EME 314	ICT Entrepreneurship	Core	7.5
CD 312	Multimedia Content Development	Core	9
CD 332	IDIT Project I	Core	6
CD 314	Digital Instructional Design II	Core	7.5
CD 311	3D Modelling and Rendering	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CS 313	Mobile Applications Development in Education	Elective	7.5
LW 4110	Legal Aspects in Cyber Security	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CD 322	Digital Creative Advertising and Production	Core	9
CD 321	3D Animations and Special Effects	Core	9
CD 323	Electronic Media Publishing	Core	9

ET 322	Advanced Technology for Education and Training	Core	7.5
CD 333	IDIT Project II	Core	9
CD 328	Multimedia Technology II	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CD 324	Selected Topics in Instructional Design and Information Technology	Electives	7.5
CP 224	Database Management Systems	Electives	7.5

### **Special Programme Requirements**

- Every student must attend Industrial Practical Training (IPT) for 2 Months (8 Weeks) after the second semester of the first and the second year.
- In the third year, a student is required to undertake Final Year Project (FYP) for both semesters.
- Estimated cost for IPT is TZS 560,000 per year.
- Estimated cost for FYP is TZS 200,000 per year.

## **2.5.10 Bachelor of Science in Multimedia Technology and Animation (BSc MTA)**

### **Programme Description**

The BSc-MTA students will be able to design and develop multimedia contents and animations for digital contents to meet the current and future needs in the field of multimedia and animations, both in Tanzania and internationally. The courses will be delivered as a combination of lectures, practical, assignments, independent studies, and tutorials.

### **Learning Outcomes of the Programme**

Graduates of this programme should be able to:

- Recognize the professional, commercial and ethical issues involved in the exploitation of multimedia technology and animations and be guided by appropriate professional, ethical, and legal practices.
- Apply appropriate theories, practices, and tools for specification, design, deployment of multimedia, and animation products.
- Demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to multimedia technology and animations.

- Work effectively as members of development teams, recognizing the different roles within a team and different ways of organizing teams.
- Succinctly present, to a range of audiences (orally, electronically, or in writing), rational and reasoned arguments that explain the construction, application and value of multimedia products.
- Evaluate multimedia products in terms of general quality and attributes, and assess the extent to which they meet specifications for their use and future development.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LG 102	Communication Skills	Core	7.5
CP 111	Principles of Programming	Core	9
MT 1111	Introduction to Educational Technology	Core	7.5
DS 102	Development Perspectives	Core	7.5
CD 112	Foundations of Instructional Design	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
CD 111	Digital Media Psychology	Core	7.5
IM 111	Introduction to Information Systems	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1201	Probability Theory	Core	7.5
CP 121	Introduction to Database Systems	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
CP 123	Introduction to High Level Programming	Core	9
IA 126	Introduction to IT Security	Core	6
CD 121	Desktop Publishing	Core	7.5
CD 122	Multimedia Technology I	Core	7.5
CD 131	Industrial Training I	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming in Java	Core	9
CD 212	Games Development	Core	9
CP 212	Systems Analysis and Design	Core	7.5
TF 211	Writing for Screen	Core	7.5
CD 213	Graphics Design Tools	Core	9
CD 215	Digital Instructional Design I	Core	9



	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 211	Introduction to Linux/Unix systems	Elective	9
CT 211	Computer Organization and Architecture I	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 226	Operating Systems	Core	9
IS 221	ICT Research Methods	Core	7.5
CD 222	Digital Audio-Video Production	Core	7.5
CD 223	Digital Sound-Video Editing	Core	7.5
CD 221	Fundamentals of 2D Animation	Core	7.5
CP 221	Internet Programming and Applications I	Core	7.5
CD 231	Industrial Training II	Core	9.6
	One Elective Course	Elective	7
	<b>Total</b>		<b>63.1</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 224	Database Management Systems	Elective	7
CP 222	Open Source Technologies	Elective	7
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 413	ICT Project Management	Core	6
SI 311	Professional Ethics and Conduct	Core	7.5
EME 314	ICT Entrepreneurship	Core	7.5
CD 311	3D Modelling and Rendering	Core	9
CD 314	Digital Instructional Design II	Core	6
CD 312	Multimedia Content Development	Core	7.5
CD 331	MTA Project I	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 313	Mobile Applications Development	Elective	7.5
CT 315	Mobile Computing	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CD 328	Multimedia Technology II	Core	9
CD 321	3D Animations and Special effects	Core	9
CD 334	MTA Project II	Core	9
AD 326	Practices in Photography	Core	7.5

CD 323	Electronic Media Publishing	Core	9
CD 325	Digital Broadcasting Engineering	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 423	Systems Administration and management	Elective	7.5
CD 329	Selected Topics in Multimedia Technology and Animation	Elective	7.5

### **Special Programme Requirements**

- Every student must attend Industrial Practical Training (IPT) for 2 Months (8 Weeks) after the second semester of the first and the second year.
- In the third year, a student is required to undertake Final Year Project (FYP) for both semesters.
- Estimated cost for IPT is TZS 560,000 per year.
- Estimated cost for FYP is TZS 200,000 per year.

### **2.5.11 Bachelor of Science in Telecommunication Engineering (BSc TE)**

#### **Programme Description**

The BSc-TE degree programme aims at training students who aspire to become engineers in modern digital telecommunications.

#### **Learning Outcomes of the Programme**

Upon completion of the programme, graduates should be able to:

- Comprehend principles pertaining to computer design, development, manufacturing based on Mathematics, sciences, and telecommunication engineering fundamentals.
- Apply knowledge of Mathematics, science, and engineering in solving real life problems by designing, developing, and manufacturing hardware and software within the field of telecommunications.
- Function on multi-disciplinary teams.
- Design and develop telecommunication systems, components, or processes to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

- Design and conduct experiments as well as analyze and interpret data related to telecommunications engineering.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 111	Introduction to Information Technology	Core	7.5
CT 111	Fundamentals of Engineering Drawing with CAD	Core	9
CP 111	Principles of Programming	Core	9
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
MT 1117	Linear Algebra for ICT	Core	7.5
CN 111	Introduction to Telecommunications Engineering	Core	7.5
EC 111	Fundamentals of Electrical Engineering	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 122	Introduction to Computer Engineering	Core	7.5
CP 123	Introduction to High Level Programming	Core	9
CP 121	Introduction to Database Systems	Core	9
IA 124	Introduction to IT Security	Core	6
ST 1210	Introduction to Probability and Statistics	Core	7.5
CN 121	Introduction to Computer Networking	Core	7.5
CT 121	Introduction to Electronics Engineering	Core	7.5
TN 131	Industrial Training I	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 215	Object Oriented Programming in Java	Core	9
CP 213	Data Structures and Algorithms Analysis	Core	10.5
MT 2113	Calculus for Engineers	Core	7.5
CN 211	Computer Networking Protocols	Core	9
EC 211	Electrical Networks Analysis	Core	7.5
CT 212	Analogue Electronics	Core	7.5
EC 212	Measurements and Instrumentation Engineering	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

IS 221	ICT Research Methods	Core	7.5
EC 221	Classical Control Systems Engineering	Core	9
CT 221	Digital Electronics	Core	9
TN 223	Signals and Systems	Core	9
CN 221	Networking Routers and Routing Protocols	Core	9
TN 225	Electromagnetic Theory I	Core	7.5
TN 231	Industrial Practical Training II	Core	9.6
	<b>Total</b>		<b>60.6</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TN 311	Analogue Telecommunications	Core	7.5
CN 311	Wireless Networking	Core	9
CT 311	Microprocessor and Interfacing	Core	9
TN 312	Optical Communication Systems	Core	9
TN 314	Electromagnetic Theory II	Core	9
CT 313	Very Large Scale Integrated Circuits	Core	7
EC 311	Intelligent Instrumentation	Elective	7.5
	<b>Total</b>		<b>58</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TN 321	Fuzzy Logic for Engineering Application	Core	9
TN 322	Microwave Engineering	Core	9
TN 323	Digital Telecommunications	Core	9
CN 322	LAN Switching	Core	9
CN 321	Tele-traffic Engineering	Core	9
TN 331	Industrial Practical Training III	Core	9.6
	One Elective Course	Elective	9
	<b>Total</b>		<b>63.6</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 321	Microcontroller Systems	Elective	9
CP 226	Operating Systems	Elective	9
IA 321	Information and Communication Systems Security	Elective	9
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 413	ICT Project Management	Core	6
EME 314	ICT Entrepreneurship	Core	7.5
TN 411	Mobile Communication	Core	7.5
TN 412	Digital Signal Processing	Core	9
TN 413	Information Theory and Coding	Core	7.5

SI 311	Professional Ethics and Conduct	Core	7.5
TN 431	Telecommunications Engineering Project I	Core	6
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 311	Network Forensics	Elective	9
CT 411	Embedded Systems I	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CN 421	Telecommunication Switching and Transmission Systems	Core	9
TN 422	Satellite Communications	Core	9
CP 423	System Administration and Management	Core	9
TN 423	Television Systems	Core	7.5
CN 422	WAN Technologies	Core	9
TN 432	Telecommunications Engineering Project II	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 421	Digital Image Processing	Elective	7.5
IA 425	Legal Aspects of Information Security	Elective	7.5

### Special Programme Requirements

- Industrial Practical Training (IPT) should be conducted for 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> year students at the end of semester II of each academic year.
- The maximum cost for IPT is TZS 532,000 per academic year.
- Final Year Project (FYP) should be done by 4<sup>th</sup> year students during semester I and II and its maximum cost is TZS 500,000.

## 2.5.12 Bachelor of Science in Digital Content and Broadcasting Engineering (BSc-DCBE)

### Programme Description

BSc DCBE is aimed at imparting skills and knowledge in designing, mounting and broadcasting digital content using the modern digital-based communication technology. It is aimed at training modern technologists in digital content design and broadcasting engineering.

## Learning Outcomes of the Programme

Upon completion of the programme, graduates should be able to:

- Carry out the process of digital content design, development, production, management, modelling, conversion, and content use and transmission/broadcasting.
- Use the variety of advanced (especially object-oriented) programming languages, and paradigms and computer-based tools; including operating systems to produce, transmit/ broadcast digital content in various digital media.
- Apply theoretical knowledge of computer science and digital telecommunications to implement appropriate algorithms and data structures as can be used in content development and its transmission.
- Use and provide maintenance in digital information networks, services, and infrastructure.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LG 102	Communication Skills	Core	7.5
CP 111	Principles of Programming	Core	9
DS 102	Development Perspectives	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
MT 1102	Linear Algebra and Applications	Core	7.5
CD 113	Fundamentals of Content Engineering	Core	7.5
CN111	Introduction to Telecommunications Engineering	Core	7.5
CD 111	Digital Media Psychology	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1201	Probability Theory	Core	7.5
CP 121	Introduction to Database Systems	Core	9
CN 121	Introduction to Computer Networking	Core	7.5
CD 122	Multimedia Technology I	Core	7.5
CT 121	Introduction to Electronics Engineering	Core	7.5
IA 126	Introduction to IT Security	Core	6
CP 123	Introduction to High Level Programming	Core	9
CD 131	Industrial Training I	Core	9.6
	<b>Total</b>		<b>63.6</b>
<b>Year Two</b>			
<b>Semester One</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CN 211	Computer Networking Protocols	Core	9
CD 214	Broadcast Facility Maintenance	Core	9
CP 213	Systems Analysis and Design	Core	7.5
CD 213	Graphics Design Tools	Core	9
CD 217	Broadcasting Systems Engineering	Core	9
CD 212	Games Development	Core	7.5
CP 215	Object Oriented Programming In Java	Core	9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 226	Operating Systems	Core	9
IS 221	ICT Research Methods	Core	7.5
CP 221	Internet Programming and Applications I	Core	7.5
CD 231	Industrial Training II	Core	9
CD 224	Broadcasting Systems Integration I	Core	7.5
CD 223	Digital Sound-Video Editing	Core	7.5
CT 221	Digital Electronics	Core	9.6
CD 225	Video and Audio Systems I	Core	7.5
	<b>Total</b>		<b>65.1</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CT 312	Computer Maintenance	Core	9
CD 313	Digital Recording Engineering	Core	7.5
EME 314	ICT Entrepreneurship	Core	7.5
CD 315	Synthesis and Computer Based Audio Engineering	Core	9
CD 312	Multimedia Content Development	Core	9
CP 313	Mobile Applications Development	Core	9
	One Elective Course	Elective	9
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 211	Introduction to Linux/Unix Systems	Elective	9
CP 311	Internet Programming and Applications II	Elective	9
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CD 326	Analogue and High Definition Television	Core	7.5
CD 328	Multimedia Technology II	Core	9
CD 325	Digital Broadcasting Engineering	Core	9
CD 323	Electronic Media Publishing	Core	9
CD 327	Learning Management Systems	Core	7

CD 331	Industrial Training III	Core	9.6
	One Elective Course	Elective	9
	<b>Total</b>		<b>60.1</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CN 322	LAN Switching	Elective	9
CP 321	Distributed Database Systems	Elective	9
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 413	ICT Project Management	Core	6
CD 431	Content Engineering Project I	Core	6
CD 411	Project Studio Production and Sound Synthesis	Core	9
TN 412	Digital Signal Processing	Core	9
CD 412	Video and Audio Systems II	Core	9
IM 411	Human Computer Interaction	Core	6
SI 311	Professional Ethics and Conduct	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
SI 312	Organizational Management	Elective	7.5
LW 4110	Legal Aspects in Cyber Security	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
TN 422	Satellite Communications	Core	9
CD 432	Content Engineering Project II	Core	9
CD 421	Advanced Multimedia Infrastructure	Core	9
CP 322	Data Mining and Warehousing	Core	9
TN 423	Television Systems	Core	7.5
CD 423	Broadcasting Systems Integration II	Core	7.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>58.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 421	Digital Image Processing	Elective	7.5
CD 424	Selected Topics in Content Engineering	Elective	7.5

### Special Programme Requirements

- Industrial Practical Training (IPT) should be conducted for 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> year students at the end of semester II of each academic year. The maximum cost for IPT is TZS 532,000 per academic year.



- Final Year Project (FYP) should be done by 4<sup>th</sup> year students during semester I and II and its maximum cost is TZS 500,000.

### 2.5.13 Diploma in Cyber Security and Digital Forensics (Dip. CSDF)

#### Programme Description

The Diploma in Cyber Security and Digital Forensics programme prepares competent professionals who can fight against cyber-crime and hackers.

#### Learning Outcomes of the Programme

Upon completion of the programme, graduates should be able to:

- Identify, evaluate, and counteract the cyber risks and threats prevalent on the cyber space.
- Analyze, trace, and respond to cybercrimes and their perpetrators and uncover evidences that can be used in a court of law.
- Implement appropriate digital forensic tools and countermeasures.
- Interpret the moral, ethical, political, and legal implications of cybercrime and digital forensics.
- Implement the cyber security and digital forensic policies, laws, and strategies of an organization and country at large.

#### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
LG 0103	Communication Skills	Core	7.5
DS 0103	Development Perspectives	Core	7.5
IA 0112	Cyber Security Laws and Ethics	Core	9
CN 0113	Introduction to Web Technologies	Core	9
IT 0112	Information Technology Fundamentals	Core	10.5
CS 0110	Computing Mathematics	Core	7.5
IA 0111	Introduction to Cyber Crime and Digital Forensics	Core	9
	<b>Total</b>		<b>60</b>
Semester Two			
Code	Course Title	Status	Credits
CN 0123	Introduction to Computer Networking	Core	7.5
CS 0128	Introduction to Database Management Systems	Core	7.5
CS 0129	Operating Systems and Programming Concepts	Core	7.5

CT 0121	Introduction to Computer Organization and Architecture	Core	7.5
CS 0127	Introduction to High Level Programming with Python	Core	7.5
IA 0122	Cryptography	Core	9
CS 0130	Industrial Practical Training I	Core	9.6
IA 0121	Introduction to IT Security	Core	9
	<b>Total</b>		<b>65.1</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 0211	Secure Software Development	Core	9
IA 0212	Computer Networks Security	Core	9
IA 0213	Fundamentals of Digital Forensics	Core	9
IA 0214	Penetration Testing and Vulnerability Scanning	Core	9
IA 0215	Digital Crime Investigation	Core	9
CS 0216	Artificial Intelligence	Core	9
SI 0211	Project Management and Entrepreneurship	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IA 0221	Multimedia Forensics	Core	7.5
IA 0222	Cyber Threat Intelligence	Core	9
IA 0223	Social media and Cloud Security	Core	9
IA 0224	Ethical Hacking	Core	9
IA 0225	Mobile Device Security and Forensics	Core	9
CS 0222	Data Mining and Data Warehousing	Core	7.5
CS 0240	Final Year Project	Core	7.5
CS 0230	Industrial Practical Training II	Core	9.6
	<b>Total</b>		<b>68.1</b>

### Special Programme Requirements

- Student must attend Industrial Practical Training (IPT) at the second semester of the first and the second year.
- At the second year, a student is required to undertake Final Year Project (FYP) in the second semester.
- Estimated cost for IPT is TZS 560,000 per year.
- Estimated cost for FYP is TZS 200,000 per year.

## 2.5.14 Diploma in Educational Technology (Dip. ET)

### Programme Description

Diploma in Education Technology graduates will be able to design and develop digital contents for digital online and offline learning and teaching using ICT techniques. This programme targets to develop a cadre of teachers and other professionals equipped with the knowledge and skills for organizing teaching and training with the help of appropriate technologies. The programme has been designed to achieve the following main objectives: to develop an understanding of the nature of educational technology and its impact on teaching and learning; to build up an awareness about the various educational technologies and their pedagogic uniqueness; to impart the skills needed for making optimum use of the technologies and make judicious selection of technology enabling collaborative practices and sharing of educational resources; and to impart the know-how of designing and developing courseware for various media. The DET programme shall take two years. There shall be two semesters of 17 weeks for each semester per year, of which 15 shall be teaching weeks and two for examination purposes. Each student shall be required to take a minimum of 120 and a maximum of 144 credits of taught courses per year

### Learning Outcomes of the Programme

Graduates of this programme are expected to:

- Apply effective personal and interpersonal skills.
- Apply computational and digital skills and knowledge in digital content design, creation, manipulation, storage, and transmission for specific public consumption.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
CS 0110	Computing Mathematics	Core	10
FB 0111	FB 0111 Introduction to Educational	Core	10
BT 0115	Introduction to Information Technology	Core	10
FB 0114	FB 0114 Introduction to Instructional design	Core	10
FB 0112	FB 0112 Introduction to Educational	Core	10
FB 0115	E-Learning Tools	Core	10
LG 0103	Communication Skills	Core	10

FB 0113	Curriculum Development and Teaching	Core	10
	<b>Total</b>		<b>77</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CS 0120	Introduction to Database Management System	Core	10
CS 0121	Operating Systems	Core	10
CS 0124	System Analysis and Design	Core	10
CS 0126	Introduction to High Level Programming with C++	Core	10
CN 0120	Introduction to Computer Architecture and Organization	Core	7
CN 0122	Design and Implementation of Websites	Core	10
TN 0120	Introduction to Computer Networking	Core	10
FB 0130	Practical Training I	Core	7
FB 0121	Foundation of Education	Core	10
	<b>Total</b>		<b>84</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FB 0211	Designing Web-Based Learning	Core	10
FB 0213	Assessment of Software and Information	Core	10
CD 0215	Integration of Instructional Design and Information Technology	Core	10
CS 0217	Implementation of Database Systems	Core	10
CD 0214	Multimedia Authoring Tools	Core	10
FB 0212	Strategies For Effective Teaching	Core	10
BT 0210	Project Management and Entrepreneurship	Core	10
	<b>Total</b>		<b>70</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 0220	Professional Issues and Ethics	Core	10
FB 0221	Information Management in Education Environments	Core	10
CN 0220	Computer Hardware Maintenance	Core	10
FB 0222	Application of Learning Theory in Education Multimedia Design	Core	10
FB 0120	Technology Planning for Educational	Core	10
CD 0225	Multimedia Content Development	Core	10
FB 0230	Industrial Training II	Core	7
FB 0240	Final Year Project	Core	10
	<b>Total</b>		<b>77</b>

### **Special Programme Requirements**

- Every student must attend Industrial Practical Training (IPT) for 2 Months (8 Weeks) after the second semester of the first and the second year.
- At the second year, a student is required to undertake Final Year Project (FYP) for both semesters.
- Estimated cost for IPT is TZS 560,000 per year.
- Estimated cost for FYP is TZS 200,000 per year.

### **2.5.15 Diploma in Information and Communication Technology (Dip. ICT)**

#### **Programme Description**

Dip. ICT programme is designed to prepare competent professionals who can handle ICT issues efficiently and effectively. The program offers an authentic, professionally focused and practice-based courses and two practical courses that depict real workplace setting, i.e. IPT and Final Year Project at the end of each academic year respectively. The programme also provides students with foundations for further advancement in ICT related programmes in higher education. The courses will be delivered in a combination of lectures, practicals, assignments, independent studies, and tutorials. Dip. ICT programme aims at producing experts to cater for the needs in all areas of ICT in public and private sectors. These experts will critically analyze ICT problems and develop creative and innovative enterprise solutions; devise, develop, implement, and manage new and existing information systems. Graduates will also have roles of helping business professionals make wise decisions about ICT as it applies to business services and practices. The Dip. ICT programme shall take two years. There shall be two semesters of 17 weeks for each semester per year of which 15 shall be teaching weeks and two for examination purposes. Each student shall be required to take a minimum of 120 and a maximum of 144 credits of taught courses per year.

#### **Learning Outcomes of the Programme**

Upon completion of the programme, graduates should be able to:

- Develop ICT projects which meet up-to-date international standards.
- Demonstrate understanding in professional ethics and conduct in all ICT projects.
- Demonstrate knowledge and understanding of essential facts, concepts, principles, and theories relating to ICT.
- Demonstrate effective oral and written communication skills.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CS 0110	Computing Mathematics	Core	10
CS 0111	Introduction to IT Security	Core	10
BT 0115	Introduction to Information Technology	Core	10
CD 0119	Multimedia Technologies	Core	10
CD 0114	Desktop Publishing	Core	10
FB 0115	E-Learning Tools	Core	10
LG 0103	Communication Skills	Core	10
	<b>Total</b>		<b>70</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CS 0120	Introduction to Database Management System	Core	10
CS 0121	Operating Systems	Core	10
CS 0124	System Analysis and Design	Core	10
CS 0126	Introduction to High Level Programming with C++	Core	10
CN 0120	Introduction to Computer Architecture and Organization	Core	7
CN 0122	Design and Implementation of Websites	Core	10
TN 0120	Introduction to Networking	Core	7
CS 0130	Practical Training I	Core	7
	<b>Total</b>		<b>71</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CS 0213	Linux Operating System	Core	7
CS 0215	Visual Basic Programming	Core	10
CS 0216	Linux System Administration I	Core	10
CS 0217	Implementation of Database Systems	Core	10
CS 0219	Internet Programming and Application	Core	10
TN 0211	LAN Switching and Routing	Core	10
BT 0210	Project Management and Entrepreneurship	Core	10
	<b>Total</b>		<b>67</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BT 0220	Professional Issues and Ethics	Core	10
BT 0221	Electronic Commerce	Core	10
CN 0220	Computer Hardware Maintenance	Core	10
CD 0220	Digital Image Editing (Using Adobe Illustrator)	Core	10
CD 0221	Digital Image Editing (Using Adobe	Core	10

	Photoshop)		
CD 0225	Multimedia Content Development	Core	10
CS 0230	Industrial Training II	Core	7
CS 0240	Final Year Project	Elective	10
	<b>Total</b>		<b>77</b>

### Special Programme Requirements

- Every student must attend Industrial Practical Training (IPT) for 2 Months (8 Weeks) after the second semester of the first and the second year.
- At the second year, a student is required to undertake Final Year Project (FYP) for both semesters.
- Estimated cost for IPT is TZS 560,000 per year.
- Estimated cost for FYP is TZS 200,000 per year.

## **2.6 COLLEGE OF NATURAL AND MATHEMATICAL SCIENCES (CNMS)**

The College of Natural and Mathematical Sciences offers the following undergraduate programmes:

1. Bachelor of Science with Education (BSc ED)
2. Bachelor of Science in Biology (BSc BIOL)
3. Bachelor of Science in Biotechnology and Bioinformatics (BSc BB)
4. Bachelor of Science in Chemistry (BSc CHEM)
5. Bachelor of Science in Mathematics (BSc MATH)
6. Bachelor of Science in Aquaculture and Aquatic Science (BSc AAS)
7. Bachelor of Science in Statistics (BSc STAT)
8. Bachelor of Science in Mathematics and Statistics (BSc MATH & STAT)
9. Bachelor of Science in Actuarial Statistics (BSc AS)
10. Bachelor of Science in Physics (BSc Physics)
11. Diploma in Forensic Science (Dip. FS)
12. Diploma in Forest Management and Nature Conservation (Dip. FMNC)

### **2.6.1 Bachelor of Science with Education (BSc ED)**

#### **Programme Description**

The main aim of this programme is to prepare qualified teachers in their respective science subject specializations. In that regard, the programme prepares science teachers with broader knowledge in two science subjects through 'Major-Major' subject system. Students in this programme will take a combination of any two subjects in addition to education courses. Therefore, a student may take any combination of two subjects among Chemistry, Biology, Physics, Mathematics, and Geography.

#### **Learning Outcomes of the Programme**

Upon completion of the programme, graduates should be able to:

- Demonstrate sufficient skills and knowledge in their respective teaching subjects and pedagogy.
- Teach the respective subjects effectively with confidence.



## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Chemistry/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1101	General Chemistry	Elective	9
CH 1102	Basic Analytical Chemistry	Elective	9
BI 111	Introductory Cell Biology and Genetics	Elective	10
BI 112	Invertebrate Zoology	Elective	10
BI 114	Introductory Botany	Elective	10
FE 111	Principles of Education	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
	<b>Total</b>		<b>78</b>
<b>Chemistry/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1101	General Chemistry	Elective	9
CH 1102	Basic Analytical Chemistry	Elective	9
MT 1101	Foundation of Analysis	Elective	9
MT 1102	Linear Algebra and Applications	Elective	10.5
FE 111	Principles of Education	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to ICT	Core	7.5
	<b>Total</b>		<b>67.5</b>
<b>Chemistry/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1101	General Chemistry	Elective	9
CH 1102	Basic Analytical Chemistry	Elective	9
GO 111	Background to Geomorphology	Elective	10
GO 112	Climatology	Elective	10
GO 113	Spatial Organization	Elective	10
FE 111	Principles of Education	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to ICT	Core	7.5
	<b>Total</b>		<b>78</b>
<b>Chemistry/Physics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1101	General Chemistry	Elective	9

CH 1102	Basic Analytical Chemistry	Elective	9
PH 1101	Mechanics	Elective	9
PH 1102	Electricity and Magnetism I	Elective	9
FE 111	Principles of Education	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to ICT	Core	7.5
	<b>Total</b>		<b>66</b>
<b>Physics/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1101	Mechanics	Elective	9
PH 1102	Electricity and Magnetism I	Elective	9
MT 1101	Foundation of Analysis	Elective	9
MT 1102	Linear Algebra and Applications	Elective	9
FE 111	Principles of Education	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to ICT	Core	7.5
	<b>Total</b>		<b>66</b>
<b>Physics/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1101	Mechanics	Elective	9
PH 1102	Electricity and Magnetism I	Elective	9
BI 111	Introductory Cell Biology and Genetics	Elective	10
BI 112	Invertebrate Zoology	Elective	10
BI 114	Introductory Botany	Elective	10
FE 111	Principles of Education	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to ICT	Core	7.5
	<b>Total</b>		<b>78</b>
<b>Biology/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 111	Background to Geomorphology	Elective	10
GO 112	Climatology	Elective	10
GO 113	Spatial Organization	Elective	10
BI 111	Introductory Cell Biology and Genetics	Elective	10
BI 112	Invertebrate Zoology	Elective	10
BI 114	Introductory Botany	Elective	10
FE 111	Principles of Education	Core	7.5
DS 102	Development Perspectives	Core	7.5

LG 102	Communication Skills	Core	7.5
IT 111	Introduction to ICT	Core	7.5
	<b>Total</b>		<b>90</b>
<b>Physics/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1101	Mechanics	Elective	9
PH 1102	Electricity and Magnetism I	Elective	9
GO 111	Background to Geomorphology	Elective	10
GO 112	Climatology	Elective	10
GO 113	Spatial Organization	Elective	10
FE 111	Principles of Education	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to ICT	Core	7.5
	<b>Total</b>		<b>78</b>
<b>Year One</b>			
<b>Semester Two</b>			
<b>Chemistry/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1201	Organic Chemistry I	Elective	9
CH 1204	Basic Inorganic Chemistry	Elective	9
CH 1205	Chemistry for Life Science Students	Elective	9
BI 121	Introduction to Plant Physiology	Elective	7.5
BI 122	Chordate Zoology	Elective	10
BI 123	Developmental Biology	Elective	7.5
SC 121	General Science Teaching Methodology	Core	7.5
ME 121	Introduction to Educational Management and School Administration	Core	7.5
	<b>Total</b>		<b>67</b>
<b>Chemistry/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1201	Organic Chemistry I	Elective	9
CH 1204	Basic Inorganic Chemistry	Elective	9
CH 1205	Chemistry for Life Science Students	Elective	9
MT 1201	Mathematical Analysis I	Elective	9
MT 1202	Ordinary Differential Equations	Elective	9
ST 1201	Probability Theory	Elective	9
ST 1202	Operation Research I	Elective	9
SC 121	General Science Teaching Methodology	Core	7.5
ME 121	Introduction to Educational Management and School Administration	Core	7.5

	<b>Total</b>		<b>78</b>
<b>Chemistry/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1201	Organic Chemistry I	Elective	9
CH 1204	Basic Inorganic Chemistry	Elective	9
CH 1205	Chemistry for Life Science Students	Elective	9
GO 121	Land Surveying and Mapping Science	Elective	10
GO 122	Environmental Conservation Education	Elective	10
GO 124	Natural Resources Management and Development	Elective	7.5
SC 121	General Science Teaching Methodology	Core	7.5
ME 121	Introduction to Educational Management and School Administration	Core	7.5
	<b>Total</b>		<b>69.5</b>
<b>Chemistry/Physics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1201	Organic Chemistry I	Elective	9
CH 1204	Basic Inorganic Chemistry	Elective	9
CH 1205	Chemistry for Life Science Students	Elective	9
PH 1203	Oscillations and Waves	Elective	7.5
PH 1204	Optics	Elective	7.5
PH 1202	Electricity and Magnetism II	Elective	9
SC 121	General Science Teaching Methodology	Core	7.5
ME 121	Introduction to Educational Management and School Administration	Core	7.5
	<b>Total</b>		<b>66</b>
<b>Physics/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1203	Oscillations and Waves	Elective	7.5
PH 1204	Optics	Elective	7.5
PH 1202	Electricity and Magnetism II	Elective	9
ST 1201	Probability Theory	Elective	9
ST 1202	Operation Research I	Elective	9
MT 1201	Mathematical Analysis I	Elective	9
MT 1202	Ordinary Differential Equations	Elective	9
SC 121	General Science Teaching Methodology	Core	7.5
ME 121	Introduction to Educational Management and School Administration	Core	7.5
	<b>Total</b>		<b>66</b>
<b>Physics/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1203	Oscillations and Waves	Elective	7.5

PH 1204	Optics	Elective	7.5
PH 1202	Electricity and Magnetism II	Elective	9
BI 121	Introduction to Plant Physiology	Elective	7.5
BI 122	Chordate Zoology	Elective	10
BI 123	Developmental Biology	Elective	7.5
SC 121	General Science Teaching Methodology	Core	7.5
ME 121	Introduction to Educational Management and School Administration	Core	7.5
	<b>Total</b>		<b>64</b>
<b>Biology/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 121	Land Surveying and Mapping Science	Elective	10
GO 122	Environmental Conservation Education	Elective	10
GO 124	Natural Resources Management and Development	Elective	7.5
BI 121	Introduction to Plant Physiology	Elective	7.5
BI 122	Chordate Zoology	Elective	10
BI 123	Developmental Biology	Elective	7.5
SC 121	General Science Teaching Methodology	Core	7.5
ME 121	Introduction to Educational Management and School Administration	Core	7.5
	<b>Total</b>		<b>67.5</b>
<b>Physics/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 121	Land Surveying and Mapping Science	Elective	10
GO 122	Environmental Conservation Education	Elective	10
GO 124	Natural Resources Management and Development	Elective	7.5
PH 1203	Oscillations and Waves	Elective	7.5
PH 1204	Optics	Elective	7.5
PH 1202	Electricity and Magnetism II	Elective	9
SC 121	General Science Teaching Methodology	Core	7.5
ME 121	Introduction to Educational Management and School Administration	Core	7.5
	<b>Total</b>		<b>66.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Chemistry/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 212	Vertebrate Anatomy and Physiology I	Elective	10
BI 213	Molecular Genetics	Elective	10
CH 1103	Chemistry Practicals I	Elective	6

CH 2101	Chemical Thermodynamics	Elective	9
CH 2104	Organic Chemistry II	Elective	9
CE 122	First Year Teaching Practice	Core	10
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	10
	<b>Total</b>		<b>71.5</b>
<b>Chemistry/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1103	Chemistry Practicals I	Elective	6
CH 2101	Chemical Thermodynamics	Elective	9
CH 2104	Organic Chemistry II	Elective	9
MT 1103	Coordinate Geometry	Elective	9
MT 2101	Mathematical Analysis II	Elective	9
ST 1101	Basic Statistics	Core	10
CE 122	First Year Teaching Practice	Core	10
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	10
	<b>Total</b>		<b>79.5</b>
<b>Chemistry/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1103	Chemistry Practicals I	Elective	6
CH 2101	Chemical Thermodynamics	Elective	9
CH 2104	Organic Chemistry II	Elective	9
GO 211	Soil Science	Elective	10
GO 212	Agricultural Systems and Locations	Elective	7.5
GO 216	Urban Systems	Elective	10
CE 122	First Year Teaching Practice	Core	10
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	10
	<b>Total</b>		<b>79</b>
<b>Chemistry/Physics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1103	Chemistry Practicals I	Elective	6
CH 2101	Chemical Thermodynamics	Elective	9
CH 2104	Organic Chemistry II	Elective	9
PH 1103	Physics Practicals I	Elective	6
PH 2103	Theory of Relativity	Elective	7.5
PH 2104	Electronic Devices and Circuits	Elective	9
PH 2105	Quantum Physics I	Elective	6

CE 122	First Year Teaching Practice	Core	10
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	10
	<b>Total</b>		<b>80</b>
<b>Physics/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 1103	Coordinate Geometry	Elective	9
MT 2101	Mathematical Analysis II	Elective	9
PH 1103	Physics Practicals I	Elective	6
PH 2103	Theory of Relativity	Elective	7.5
PH 2104	Electronic Devices and Circuits	Elective	9
PH 2105	Quantum Physics I	Elective	6
CE 122	First Year Teaching Practice	Core	10
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	10
ST 1101	Basic Statistics	Core	10
	<b>Total</b>		<b>84</b>
<b>Physics/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1103	Physics Practicals I	Core	6
PH 2103	Theory of Relativity	Elective	7.5
PH 2104	Electronic Devices and Circuits	Elective	9
PH 2105	Quantum Physics I	Elective	6
BI 212	Vertebrate Anatomy and Physiology I	Elective	10
BI 213	Molecular Genetics	Elective	10
CE 122	First Year Teaching Practice	Core	10
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	10
	<b>Total</b>		<b>76</b>
<b>Biology/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 212	Vertebrate Anatomy and Physiology I	Elective	10
BI 213	Molecular Genetics	Elective	10
GO 211	Soil Science	Elective	10
GO 212	Agricultural Systems and Locations	Elective	7.5
GO 216	Urban Systems	Elective	10
CE 122	First Year Teaching Practice	Core	10
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5

CE 212	Educational Media and Technology	Core	10
	<b>Total</b>		<b>75</b>
<b>Physics/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1103	Physics Practicals I	Elective	6
PH 2103	Theory of Relativity	Elective	7.5
PH 2104	Electronic Devices and Circuits	Elective	9
PH 2105	Quantum Physics I	Elective	6
GO 125	Biogeography	Elective	7.5
GO 221	Remote Sensing and Geographical Information Systems	Elective	10
GO 223	Population Perspectives	Elective	7.5
CE 122	First Year Teaching Practice	Core	10
CE 211	Principles of Curriculum Development and Evaluation	Core	7.5
CE 212	Educational Media and Technology	Core	10
	<b>Total</b>		<b>81</b>
<b>Year Two</b>			
<b>Semester Two</b>			
<b>Chemistry/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 126	Introduction to Parasitology	Elective	10
BI 221	Vertebrate Anatomy and Physiology II	Elective	10
CH 1202	Chemistry Practicals II	Elective	6
CH 2201	Organometallic and Catalysis Chemistry	Elective	9
CH 2203	Chemical Kinetics and Catalysis	Elective	9
SC 222	Chemistry Teaching Methods	Core	10
SC 224	Biology Teaching Methods	Core	10
SE 121	Introduction to Educational Psychology	Core	7.5
	<b>Total</b>		<b>71.5</b>
<b>Chemistry/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1202	Chemistry Practicals II	Elective	6
CH 2201	Organometallic and Catalysis Chemistry	Elective	9
CH 2203	Chemical Kinetics and Catalysis	Elective	9
MT 1204	Numbers and Polynomials	Elective	9
SC 222	Chemistry Teaching Methods	Core	10
SC 223	Mathematics Teaching Methods	Core	10
SE 121	Introduction to Educational Psychology	Core	7.5
ST 1201	Probability Theory	Core	7.5
	<b>Total</b>		<b>68</b>



<b>Chemistry/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1201	Organic Chemistry I	Elective	9
CH 1202	Chemistry Practicals II	Elective	6
CH 2201	Organometallic and Catalysis Chemistry	Elective	9
CH 2203	Chemical Kinetics and Catalysis	Elective	9
GO 125	Biogeography	Elective	7.5
GO 221	Remote Sensing and Geographical Information Systems	Elective	10
GO 223	Population Perspectives	Elective	7.5
SC 222	Chemistry Teaching Methods	Core	10
SE 121	Introduction to Educational Psychology	Core	7.5
BC 221	Geography Teaching Methods	Core	10
	<b>Total</b>		<b>85.5</b>
<b>Chemistry/Physics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 1201	Organic Chemistry I	Elective	9
CH 1202	Chemistry Practicals II	Elective	6
CH 2201	Organometallic and Catalysis Chemistry	Elective	9
CH 2203	Chemical Kinetics and Catalysis	Elective	9
PH 1205	Thermal Physics	Elective	7.5
PH 1206	Physics Practicals II	Elective	6
PH 2203	Atomic and Molecular Physics	Elective	7.5
SC 221	Physics Teaching Methods	Core	10
SC 222	Chemistry Teaching Methods	Core	10
SE 121	Introduction to Educational Psychology	Core	7.5
	<b>Total</b>		<b>81.5</b>
<b>Physics/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 1204	Numbers and Polynomials	Elective	9
PH 1202	Electricity and Magnetism II	Elective	9
PH 1205	Thermal Physics	Elective	7.5
PH 1206	Physics Practicals II	Elective	6
PH 2203	Atomic and Molecular Physics	Elective	7.5
SC 221	Physics Teaching Methods	Core	10
SC 223	Mathematics Teaching Methods	Core	10
SE 121	Introduction to Educational Psychology	Core	7.5
ST 1201	Probability Theory	Core	7.5
	<b>Total</b>		<b>74</b>
<b>Physics/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

BI 126	Introduction to Parasitology	Elective	10
BI 221	Vertebrate Anatomy and Physiology II	Elective	10
PH 1205	Thermal Physics	Elective	7.5
PH 1206	Physics Practicals II	Elective	6
PH 2203	Atomic and Molecular Physics	Elective	7.5
SC 221	Physics Teaching Methods	Core	10
SC 224	Biology Teaching Methods	Core	10
SE 121	Introduction to Educational Psychology	Core	7.5
	<b>Total</b>		<b>68.5</b>

#### **Biology/Geography Combination**

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 126	Introduction to Parasitology	Elective	10
BI 221	Vertebrate Anatomy and Physiology II	Elective	10
GO 125	Biogeography	Elective	7.5
GO 221	Remote Sensing and Geographical Information Systems	Elective	10
GO 223	Population Perspectives	Elective	7.5
BC 221	Geography Teaching Methods	Core	10
SC 224	Biology Teaching Methods	Core	10
SE 121	Introduction to Educational Psychology	Core	7.5
	<b>Total</b>		<b>72.5</b>

#### **Physics/Geography Combination**

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1205	Thermal Physics	Elective	7.5
PH 1206	Physics Practicals II	Elective	6
PH 2203	Atomic and Molecular Physics	Elective	7.5
GO 125	Biogeography	Elective	7.5
GO 221	Remote Sensing and Geographical Information Systems	Elective	10
GO 223	Population Perspectives	Elective	7.5
SC 221	Physics Teaching Methods	Core	10
BC 221	Geography Teaching Methods	Core	10
SE 121	Introduction to Educational Psychology	Core	7.5
	<b>Total</b>		<b>73.5</b>

#### **Year Three**

##### **Semester One**

#### **Chemistry/Biology Combination**

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3101	Organic Spectroscopy	Elective	9
CH 3103	Instrumental Methods in Analytical Chemistry	Elective	9
CH 2105	Electrochemistry and Corrosion Protection	Elective	9

CH 2102	Chemistry Practicals III	Elective	6
BI 312	Evolution	Elective	10
BI 216	Introduction to Entomology	Elective	7.5
BI 315	Introduction to Biodiversity Conservation	Elective	10
SE 311	Educational Measurement and Evaluation	Core	7.5
SE 312	Research Methods in Education	Core	10
	<b>Total</b>		<b>78</b>
<b>Chemistry/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3101	Organic Spectroscopy	Elective	9
CH 3103	Instrumental Methods in Analytical Chemistry	Elective	9
CH 2105	Electrochemistry and Corrosion Protection	Elective	9
CH 2102	Chemistry Practicals III	Elective	6
MT 3101	Abstract Algebra	Elective	9
MT 3102	Mathematical Analysis III	Elective	9
MT 3103	Topology	Elective	9
SE 311	Educational Measurement and Evaluation	Core	7.5
SE 312	Research Methods in Education	Core	10
	<b>Total</b>		<b>77.5</b>
<b>Chemistry/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3101	Organic Spectroscopy	Elective	9
CH 3103	Instrumental Methods in Analytical Chemistry	Elective	9
CH 2102	Chemistry Practicals III	Elective	6
CH 2103	Chemistry of Transition Elements	Elective	9
GO 312	Population and Development	Elective	7.5
GO 313	Resource Use and Conservation	Elective	7.5
GO 316	Regional Planning	Elective	7.5
SE 311	Educational Measurement and Evaluation	Core	7.5
SE312	Research Methods in Education	Core	10
	<b>Total</b>		<b>73</b>
<b>Chemistry/Physics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3101	Organic Spectroscopy	Elective	9
CH 3103	Instrumental Methods in Analytical Chemistry	Elective	9
CH 2102	Chemistry Practicals III	Elective	6
CH 2105	Electrochemistry and Corrosion Protection	Elective	9
PH 2104	Analog Electronics	Elective	10
PH 2106	Physics Practicals III	Elective	7.5
PH 2107	Nuclear Physics	Elective	7.5
PH 2112	Earth Atmosphere system	Elective	7.5

SE 311	Educational Measurement and Evaluation	Core	7.5
SE312	Research Methods in Education	Core	10
	<b>Total</b>		<b>83</b>
<b>Physics/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 2104	Analog Electronics	Elective	10
PH 2106	Physics Practicals III	Elective	7.5
PH 2107	Nuclear Physics	Elective	7.5
PH 2112	Earth Atmosphere system	Elective	7.5
MT 3101	Abstract Algebra	Elective	9
MT 3102	Mathematical Analysis III	Elective	9
MT 3103	Topology	Elective	9
SE 311	Educational Measurement and Evaluation	Core	7.5
SE 312	Research Methods in Education	Core	10
	<b>Total</b>		<b>77</b>
<b>Physics/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 2104	Analog Electronics	Elective	10
PH 2106	Physics Practicals III	Elective	7.5
PH 2107	Nuclear Physics	Elective	7.5
PH 2112	Earth Atmosphere system	Elective	7.5
BI 312	Evolution	Elective	10
BI 216	Introduction to Entomology	Elective	7.5
BI 315	Introduction to Biodiversity Conservation	Elective	10
SE 311	Educational Measurement and Evaluation	Core	7.5
SE312	Research Methods in Education	Core	10
	<b>Total</b>		<b>77.5</b>
<b>Biology/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 312	Population and Development	Elective	7.5
GO 313	Resource Use and Conservation	Elective	7.5
GO 316	Regional Planning	Elective	7.5
BI 312	Evolution	Elective	10
BI 216	Introduction to Entomology	Elective	7.5
BI 315	Introduction to Biodiversity Conservation	Elective	10
SE 311	Educational Measurement and Evaluation	Core	7.5
SE312	Research Methods in Education	Core	10
	<b>Total</b>		<b>67.5</b>
<b>Physics/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 312	Population and Development	Elective	7.5

GO 313	Resource Use and Conservation	Elective	7.5
GO 316	Regional Planning	Elective	7.5
PH 2104	Analog Electronics	Elective	10
PH 2107	Nuclear Physics	Elective	7.5
PH 2112	Earth Atmosphere system	Elective	7.5
SE 311	Educational Measurement and Evaluation	Core	7.5
SE312	Research Methods in Education	Core	10
	<b>Total</b>		<b>65</b>
<b>Year Three</b>			
<b>Semester Two</b>			
<b>Chemistry/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3201	Quantum Chemistry	Elective	9
CH 3202	Surface and Colloid Chemistry	Elective	9
CH 3203	Bio- and Environmental Inorganic Chemistry	Elective	9
BI 323	Plant Pathology	Elective	10
BI 325	Mammalian Biology	Elective	7.5
BI 223	Metabolic Physiology and Plant Growth	Elective	7.5
FE 324	Professionalism and Ethics in Education	Core	7.5
SE 321	Educational Careers Guidance and Counselling	Core	7.5
	<b>Total</b>		<b>67</b>
<b>Chemistry/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3201	Quantum Chemistry	Elective	9
CH 3202	Surface and Colloid Chemistry	Elective	9
CH 3203	Bio- and Environmental Inorganic Chemistry	Elective	9
MT 3201	Basic Functional Analysis	Elective	9
MT 3202	Introduction to Differential Geometry	Elective	9
MT 2201	Complex analysis	Elective	9
FE 324	Professionalism and Ethics in Education	Core	7.5
SE 321	Educational Careers Guidance and Counselling	Core	7.5
	<b>Total</b>		<b>69</b>
<b>Chemistry/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3201	Quantum Chemistry	Elective	9
CH 3202	Surface and Colloid Chemistry	Elective	9
CH 3203	Bio- and Environmental Inorganic Chemistry	Elective	9
GO 321	Environmental Policy and Planning	Elective	9
GO 323	Environmental and Social Impact Assessment	Elective	9
GO 324	Urban Planning and Management	Elective	7.5
FE 324	Professionalism and Ethics in Education	Core	7.5

SE 321	Educational Careers Guidance and Counselling	Core	7.5
	<b>Total</b>		<b>67.5</b>
<b>Chemistry/Physics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3201	Quantum Chemistry	Elective	9
CH 3202	Surface and Colloid Chemistry	Elective	9
CH 3203	Bio- and Environmental Inorganic Chemistry	Elective	9
PH 2201	Pulse and Digital Electronics	Elective	10
PH 3202	Applied Nuclear Physics	Elective	7.5
PH 3203	Modern Optics	Elective	7.5
FE 324	Professionalism and Ethics in Education	Core	7.5
SE 321	Educational Careers Guidance and Counselling	Core	7.5
	<b>Total</b>		<b>67</b>
<b>Physics/Mathematics Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 2201	Pulse and Digital Electronics	Elective	10
PH 3202	Applied Nuclear Physics	Elective	7.5
PH 3203	Modern Optics	Elective	7.5
MT 3201	Basic Functional Analysis	Elective	9
MT 3202	Introduction to Differential Geometry	Elective	9
MT 2201	Complex Analysis	Elective	9
FE 324	Professionalism and Ethics in Education	Core	7.5
SE 321	Educational Careers Guidance and Counselling	Core	7.5
	<b>Total</b>		<b>67</b>
<b>Physics/Biology Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 2201	Pulse and Digital Electronics	Elective	10
PH 3202	Applied Nuclear Physics	Elective	7.5
PH 3203	Modern Optics	Elective	7.5
BI 323	Plant Pathology	Elective	10
BI 325	Mammalian Biology	Elective	7.5
BI 223	Metabolic Physiology and Plant Growth	Elective	7.5
FE 324	Professionalism and Ethics in Education	Core	7.5
SE 321	Educational Careers Guidance and Counselling	Core	7.5
	<b>Total</b>		<b>65</b>
<b>Biology/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
GO 321	Environmental Policy and Planning	Elective	9
GO 323	Environmental and Social Impact Assessment	Elective	10
GO 324	Urban Planning and Management	Elective	7.5
BI 323	Plant Pathology	Elective	10

BI 325	Mammalian Biology	Elective	7.5
BI 223	Metabolic Physiology and Plant Growth	Elective	7.5
FE 324	Professionalism and Ethics in Education	Core	7.5
SE 321	Educational Careers Guidance and Counselling	Core	7.5
	<b>Total</b>		<b>66.5</b>
<b>Physics/Geography Combination</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 2201	Pulse and Digital Electronics	Elective	10
PH 3202	Applied Nuclear Physics	Elective	7.5
PH 3203	Modern Optics	Elective	7.5
GO 321	Environmental Policy and Planning	Elective	9
GO 323	Environmental and Social Impact Assessment	Elective	10
GO 324	Urban Planning and Management	Elective	7.5
FE 324	Professionalism and Ethics in Education	Core	7.5
SE 321	Educational Careers Guidance and Counselling	Core	7.5
	<b>Total</b>		<b>66.5</b>

**Note:** All education courses indicated are core courses. For each subject combination, students select at least two courses from each teaching subject per semester.

### Special Programme Requirements

<b>Programme</b>	<b>Requirements</b>	<b>Cost (TZS)</b>
BSc. with Education (C/M)	calculator, laboratory coat and googles	300,000
BSc. with Education (C/B)	calculator, laboratory coat and googles, gloves	350,000
BSc. with Education (B/G)	calculator, laboratory coat and googles, gloves	350,000
BSc. with Education (P/M)	calculator and laboratory coat	100,000

- There will be 8 weeks Practical Training in Year I and II.
- Estimated cost for each Practical Training is TZS 560,000.

## 2.6.2 Bachelor of Science in Biology (BSc BIOL)

### Programme Description

The Bachelor of Science in Biology programme is expected to meet the demand of stakeholders including students, public service, business industry, research, and training institutions dealing with biological sciences. The programme provides specializations in three key areas, namely, Conservation Biology, Plant Sciences, and Zoology. At the same time, the programme maintains flexibility through a wide range of elective courses in each semester from semester two in the second year. The courses have been prepared for improving clarity, content, as well as course outlines. The courses have been clarified and instructors have been given adequate contact hours to plan and execute lessons and practicals. Course objectives and learning outcomes have been designed to equip students with the ability to solve environmental and social problems that are facing communities and the country, through the application of biological approaches.

### Learning Outcomes of the Programme

Upon completion of this programme, graduates should be able to:

- Show competence in the application of biological concepts to solve different biological challenges.
- Design and supervise programmes aiming at resolving biological challenges like environmental degradation, food security, disease control, pest control and wildlife management, and conservation.
- Measure the biodiversity in both protected and unprotected habitats.
- Apply genetic manipulation to improve livestock, wildlife, and crop production.
- Manage aquatic and land resources.
- Educate students and the local communities on biological principles.
- Communicate effectively, develop, and run small business for self-employment.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
BI 111	Introductory Cell Biology and Genetics	Core	10
BI 112	Invertebrate Zoology	Core	10
BI 113	Ecology I	Core	7.5
BI 114	Introductory Botany	Core	10
DS 102	Development Perspectives	Core	7.5



BI 115	Biochemistry	Core	10
LG 102	Communication Skills	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 121	Introduction to Plant Physiology	Core	10
BI 122	Chordate Zoology	Core	10
BI 123	Developmental Biology	Core	10
BI 124	Introduction to Microbiology	Core	10
BI 125	Environmental Science	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
BI 126	Introduction to Parasitology	Core	10
	<b>Total</b>		<b>65</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 211	Aquatic Biology	Core	10
BI 212	Vertebrate Anatomy and Physiology I	Core	10
BI 213	Molecular Genetics	Core	10
BI 214	Fundamentals of Soil Science	Core	7.5
BI 215	Biostatistics I	Core	10
BI 216	Introduction to Entomology	Core	7.5
BI 217	Introduction to Mycology	Core	10
	<b>Total</b>		<b>65</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 221	Vertebrate Anatomy and Physiology II	Core	10
BI 222	Introduction to Research Methodology	Core	10
BI 223	Metabolic Physiology and Plant Growth	Core	10
BI 224	Soil Fertility and Plant Nutrition	Core	10
BI 225	Ecology II	Core	10
	Elective Course	Elective	7.5
	Elective Course	Elective	7.5
	<b>Total</b>		<b>65</b>
<b>Elective</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 201	Biogeography	Elective	7.5
BI 202	Medical Biotechnology	Elective	7.5
BI 203	Plant Diversity and Evolution	Elective	7.5
BI 204	Biostatistics II	Elective	7.5
BI 205	Introduction to Bioinformatics	Elective	7.5
<b>Year Three</b>	<b>Specialization in Conservation Biology</b>		

Semester One			
Code	Course Title	Status	Credits
BI 311	Research Project	Core	7.5
BI 312	Evolution	Core	7.5
BI 313	Animal Behaviour	Core	10
BI 314	Introduction to Biodiversity Conservation	Core	10
BI 339	Introduction to Environmental Impact Assessment	Core	10
GO 221	Remote Sensing and GIS	Core	10
BI 317	Biology Field Course	Core	7.5
BI 320	Practical Training	Core	7.5
	Total		70
Semester Two			
Code	Course Title	Status	Credits
BI 311	Research Project	Core	7.5
EM 306	Small Business and Entrepreneurship	Core	10
BI 321	Applied Ecology	Core	7.5
BI 322	Estuarine and Wetland Ecology	Core	7.5
BI 323	Restoration Ecology	Core	7.5
BI 324	Natural Resources Management and Utilization	Core	7.5
BI 325	Policy and Legislation for Biodiversity conservation	Core	7.5
BI 337	Contemporary Issues in Biodiversity Conservation	Core	7.5
	Total		62.5
Year Three	Specialization in Plant Sciences		
Semester One			
Code	Course Title	Status	Credits
BI 311	Research Project	Core	7.5
BI 312	Evolution	Core	7.5
BI 318	Plant Breeding and Genetic Manipulation	Core	7.5
BI 319	Plant Tissue Culture	Core	7.5
BI 310	Physiology of Natural Products	Core	7.5
BI 332	Applied Plant Physiology	Core	7.5
BI 333	Taxonomy of Higher Plants	Core	7.5
BI 317	Biology Field Course	Core	7.5
BI 320	Practical Training	Core	7.5
	Total		67.5
Semester Two			
Code	Course Title	Status	Credits
BI 311	Research Project	Core	7.5
EM 306	Small Business and Entrepreneurship	Core	10

BI 326	Plant Pathology	Core	7.5
BI 327	Anatomy of Angiosperms	Core	7.5
BI 328	Plant Genetics	Core	7.5
BI 329	Economic Botany	Core	7.5
BI 330	Algal Ecology and Systematic	Core	7.5
BI 303	Introduction to Ethnobotany	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Year Three</b>	<b>Specialization in Zoology</b>		
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 311	Research Project	Core	7.5
BI 312	Evolution	Core	7.5
BI 301	Ichthyology	Core	7.5
BI 302	Herpetology	Core	7.5
BI 315	Applied Entomology	Core	7.5
BI 316	Mammalian Biology	Core	7.5
BI 331	Virology and Microbial Genetics	Core	7.5
BI 317	Biology Field Course	Core	7.5
BI 320	Practical Training	Core	7.5
	<b>Total</b>		<b>67.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 311	Research Project	Core	7.5
EM 306	Small Business and Entrepreneurship	Core	10
BI 334	Applied Parasitology	Core	7.5
BI 307	Immunology	Core	7.5
BI 308	Economic Zoology	Core	7.5
BI 335	Ornithology	Core	7.5
BI 336	Molecular Biology of Parasites	Core	7.5
BI 338	Physiology of Nutrition	Core	7.5
	<b>Total</b>		<b>62.5</b>

### Special Programme Requirements

- There will be 8 weeks Practical Training in Year I and II.
- Estimated cost for each Practical Training is TZS 560,000.
- The students will be required to undertake a Special Project (Research Report) semester I and II in Year III.

### **2.6.3 Bachelor of Science in Biotechnology and Bioinformatics (BSc BB)**

#### **Programme Description**

Biotechnology is the technological application that uses biological systems, living organisms or derivatives thereof, to make or modify products or processes for human benefits. It involves the use of biological organisms, processes or systems to perform specific industrial processes. On the other hand, bioinformatics is an interdisciplinary field that combines life sciences and computer sciences in order to develop and utilize database and software for management of data associated with bio-molecules on a large-scale. Bioinformatics is an important link between computer sciences, Mathematics, Statistics and life sciences such as biology, genetics, medicines or pharmaceuticals.

#### **Learning Outcomes of the Programme**

Upon completion of this programme, graduates should have:

- Broad and comparative knowledge of the general scope of biotechnology and bioinformatics, their different areas and applications, and interactions with related subjects.
- A detailed knowledge of branches of biotechnology and bioinformatics balanced by a wider range of study.
- Critical understanding of the essential theories, principles, and concepts in biotechnology and bioinformatics.
- An awareness of the provisional nature of knowledge in biotechnology and bioinformatics with reference to current developments in these disciplines.
- Well-developed skills for the gathering, evaluation, analysis and presentation of information, ideas, concepts and quantitative and/or qualitative data, drawing on a wide range of current sources.
- Knowledge, understanding and skills in biotechnology and bioinformatics, in both identifying and analysing problems and issues and in formulating, evaluating and applying evidence-based solutions and arguments.
- Knowledge to communicate the results of their studies and other works accurately and reliably in a range of different contexts using the main specialist concepts, constructs, and techniques.
- Ability to apply their biotechnology and bioinformatics and transferable skills to contexts where criteria for decisions and the scope of the task may be well defined but where personal responsibility, initiative, and decision-making are also required.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BB 1101	Introductory Cell Biology and Genetics	Core	9
BB 1102	Introductory Zoology	Core	10.5
BB 1103	Introductory Botany	Core	7.5
BB 1104	Introduction to Biotechnology	Core	7.5
BB 1105	Biochemistry	Core	10.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication skills	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
BI 1201	Introduction to Bioinformatics	Core	7.5
BI 1202	Microbiology and Microbial Genetics	Core	10.5
BI 1203	Introduction to Parasitology and Entomology	Core	10.5
BI 1204	Developmental Biology	Core	10.5
BI 1205	Molecular Genetics	Core	10.5
IT 111	Introduction to Information Technology	Core	7.5
BB 1206	Practical Training I	Core	7.5
	<b>Total</b>		<b>60</b>
PT*= Practical Training Course			
<b>Year Two</b>			
<b>Semester One</b>			
BB 2101	Molecular Biotechnology	Core	10.5
BB 2102	Genomics and Bioinformatics I	Core	10.5
BB 2103	Biostatistics and Bioinformatics	Core	10.5
BB 2104	Animal and Plant Physiology	Core	10.5
BB 2105	Introduction to Biophysics and Bioinstrumentation	Core	10.5
BB 2106	Introduction to Virology	Core	10.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BB2202	Medical Biotechnology	Core	10.5
BB2203	Enzymology	Core	10.5
BB2204	Scientific Methods	Core	10.5
BB 2205	Introductory Immunology and Immunotechnology	Core	10.5
BB 2208	Algal Biotechnology	Core	10.5
BB 2206	Practical Training II	Core	7.5

BB 2207	Fungal Biotechnology	Elective	7.5
BB 2209	Forensic Biotechnology	Elective	7.5
	<b>Total</b>		<b>75</b>
PT*= Practical Training Course			
<b>Year Three</b>			
<b>Semester One</b>			
BB 3101	Research Project I		7.5
BB 3102	Genomics and Bioinformatics II	Core	10.5
BB 3103	Food Biotechnology	Core	10.5
BB 3104	Bioinformatics Databases and Ontologies	Core	10.5
BB 3105	Plant Biotechnology	Core	10.5
BB 3106	Introduction to Programming in Bioinformatics	Core	10.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
BB 3201	Research Project II		7.5
BB 3202	Animal Biotechnology	Core	10.5
BB 3203	Environmental Biotechnology	Core	9
BB 3204	Ethical and Legal Issues in Biotechnology and Bioinformatics	Core	9
BB 3205	Genome Maintenance and Regulation	Core	10.5
EM 306	Small Business and Entrepreneurship	Core	10
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>63</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BB 3207	Molecular Pathogenesis of Infectious Diseases	Elective	7.5
BB 3208	Introduction to Nanobiotechnology	Elective	7.5
BB 3209	Introduction to Structural Bioinformatics	Elective	7.5
BB 3210	Gene Regulation and Diseases	Elective	7.5

## 2.6.4 Bachelor of Science in Chemistry (BSc CHEM)

### Programme Description

Bachelor of Science in Chemistry is a three-year programme offered by The University of Dodoma. It has been designed to produce graduates who will have working knowledge in the main areas of Chemistry, namely; organic, inorganic, analytical, and physical. Moreover, this programme cuts across latest science and technology inventions, including Materials Science, Green Chemistry, and Biosensors together with Forensic Sciences.

## Learning Outcomes of the Programme

Bachelor of Science in Chemistry graduates from The University of Dodoma should be able to:

- Apply the principles of Chemistry to their everyday lives and in professional fields.
- Solve problems and critically evaluate information with respect to Chemistry issues.
- Effectively communicate scientific ideas and the results of scientific inquiry.
- Properly use chemical instrumentation to conduct inquiries in composition, structure and reactivity.
- Design scientific experiments, interpret experimental results, and draw reasonable conclusions from those results.

## Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
CH 1101	General Chemistry	Core	9
CH 1102	Basic Analytical Chemistry	Core	9
CH 1103	Chemistry Practicals I	Core	6
CH 1104	Mathematics for Chemists	Core	9
CP 111	Principles of Programming Languages	Core	9
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
IT 111	Introduction to Information Technology	Core	7.5
	<b>Total</b>		<b>64.5</b>
Semester Two			
Code	Course Title	Status	Credits
CH 1105	Introduction to Computational Chemistry	Core	9
CH1201	Organic Chemistry I	Core	9
CH1202	Chemistry Practicals II	Core	6
CH1203	Methods for Chemical Separation	Core	9
CH1204	Basic Inorganic Chemistry	Core	9
CH 1205	Chemistry for Life Science Students	Core	9
CH1209	Practical Training	Core	9
	<b>Total</b>		<b>60</b>
Year Two			
Semester One			
Code	Course Title	Status	Credits
CH 2101	Chemical Thermodynamics	Core	9

CH 2102	Chemistry Practicals III	Core	6
CH 2103	Chemistry of Transition Elements	Core	9
CH 2104	Organic Chemistry II	Core	9
CH 2105	Electrochemistry and Corrosion Protection	Core	9
CH 2106	Solid State Chemistry	Core	9
CH 2107	Molecular Spectroscopy	Elective	9
CH 2108	Food and Beverage Chemistry	Elective	9
	<b>Total</b>		<b>69</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 2201	Organometallic and Catalysis Chemistry	Core	9
CH 2202	Organic Reactions and Mechanisms	Core	9
CH 2203	Chemical Kinetics and Catalysis	Core	9
CH 2204	Chemistry Practicals IV	Core	6
CH 2205	Forensic Chemistry	Core	9
CH 2206	Medicinal Chemistry and Drug Design	Core	9
CH 2207	Polymer Chemistry	Core	9
RM 2100	Introduction to Research Methodology	Core	9
CH 2209	Practical Training	Core	9
	<b>Total</b>		<b>78</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 2208	Nanotechnology and Sensors	Elective	9
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3100	Chemistry Projects	Core	9
CH 3101	Organic Spectroscopy	Core	9
CH 3102	Chemistry Practicals V	Core	6
CH 3103	Instrumental Methods in Analytical Chemistry	Core	9
CH 3104	Bio-organic Chemistry	Core	9
CH 3105	Chemical Speciation Analysis	Core	9
CH 3106	Quality Control and Assurance	Core	9
CH 3107	Materials Science	Elective	9
CH 3108	Industrial Chemistry	Elective	9
	<b>Total</b>		<b>78</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CH 3100	Chemistry Projects	Core	9
CH 3201	Quantum Chemistry	Core	9
CH 3202	Surface and Colloid Chemistry	Core	9



CH 3203	Bio- and Environmental Inorganic Chemistry	Core	9
CH 3204	Chemistry Practicals VI	Core	6
CH 3205	Organic Synthesis	Core	9
CH 3207	Basics of Biotechnology	Elective	9
EM 306	Small Business and Entrepreneurship	Core	10
	<b>Total</b>		<b>70</b>

### Special Programme Requirements

- Calculator, laboratory coat and goggles TZS 300,000.
- There will be 8 weeks Practical training in Year I and II.
- Estimated cost for each Practical Training is TZS 560,000.

S/N	Programme	Requirements	Costs (TZS)
1.	BSc. Chemistry	Calculator, laboratory coat and goggles.	300,000
2.	BSc. with Education (C/M)		
3.	BSc. with Education (C/B)	Calculator, laboratory coat and goggles, gloves.	350,000
4.	BSc. with Education (B/G)	Calculator, laboratory coat and goggles, gloves.	350,000
5.	BSc. with Education (P/M)	Calculator & laboratory coat.	100,000

## 2.6.5 Bachelor of Science in Mathematics (BSc MATH)

### Programme Description

The programme aims at preparing qualified mathematicians who can serve different sectors in the country and worldwide; which include but not limited to financial institutions, statistical bureaus, research institutions, industries, etc. With that in mind, almost all courses are designed toward tuning students to gain analytical skills which are the main ingredient in all jobs which require mathematicians.

### Learning Outcomes of the Programme

Upon successful completion of the programme, graduates should be able to:

- Demonstrate a deeper understanding of the mathematical concepts of undergraduate level.
- Express mathematical concepts and ideas clearly.
- Design and implement computer programmes that can be used to solve different mathematical problems, using different computer Programming languages.

- Identify some specific problem, develop its mathematical model, and then solve it analytically or numerically.
- Manage statistical data and activities in different sectors.
- Plan and conduct sample survey as well as computing different statistics and drawing out some interpretations.
- Plan and run different instances of small business.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 1101	Foundation of Analysis	Core	9
MT 1102	Linear Algebra and Applications	Core	10.5
MT 1103	Coordinate Geometry	Core	9
ST 1101	Basic Statistics	Core	9
IT 110	Introduction to Information Technology	Core	7.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communications Skills	Core	7.5
CP 111	Principles of Programming	Core	9
	<b>Total</b>		<b>69</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 1201	Mathematical Analysis I	Core	9
MT 1202	Ordinary Differential Equations	Core	9
MT 1204	Numbers and Polynomials	Core	9
MT 1205	Dynamics	Core	7.5
ST 1201	Probability Theory	Core	9
ST 1202	Operations Research 1	Core	9
CP 123	Introduction to High Level Programming	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 2101	Mathematical Analysis II	Core	9
MT 2102	Numerical Analysis I	Core	9
MT 2103	Graph Theory and Network Optimization	Core	7.5
ST 2101	Probability Distributions	Core	10.5
ST 2102	Statistical Inference	Core	10.5
ST 2105	Research Methods and Practices	Core	7.5
CP 213	Data Structures and Algorithms Analysis	Core	9
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 2200	MATLAB and Problem Solving	Core	9
MT 2201	Complex Analysis	Core	9
MT 2202	Partial Differential Equations	Core	9
MT 2203	Fluid Mechanics	Core	9
MT 2204	Numerical Analysis II	Core	10.5
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>61.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 2105	Rigid Body Mechanics	Elective	7.5
MT 2106	Intermediate Linear Algebra	Elective	7.5
MT 2204	Numerical Analysis II	Elective	7.5
ST 2104	Operations Research II	Elective	10.5
SC 121	Introduction to Methods of Teaching and Learning Science and Mathematics	Elective	9
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 3101	Abstract Algebra	Core	9
MT 3102	Mathematical Analysis III	Core	9
MT 3103	Topology	Core	9
MT 3105	Stochastic Processes	Core	9
MT 3109	Practical Training	Core	7.5
	Two Elective Courses	Electives	16.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 3200	Mathematics Project	Core	9.8
MT 3201	Basic Functional Analysis	Core	9
MT 3202	Introduction to Differential Geometry	Core	9
EME 211	Entrepreneurships and Small Business	Core	9
	Four Elective Courses	Elective	30
	<b>Total</b>		<b>66.8</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 3104	Discrete Mathematics	Elective	7.5
MT 3105	Introduction to Measure Theory	Elective	9
MT 3106	Introduction to Simulation	Elective	7.5
MT 3107	Introduction to Mathematical Modelling	Elective	7.5

MT 3204	Methods of Mathematical Physics	Elective	7.5
MT 3205	Financial Mathematics	Elective	7.5
MT 3206	Hydrodynamics	Elective	9
SC 223	Mathematics Teaching Methods	Elective	9
SE 311	Education Measurement and Evaluation	Elective	7.5

### **Special Programme Requirements**

- There will be 8 weeks Practical training in Year II.
- Estimated cost for the Practical Training is TZS 560,000.
- Special Project (MT 320: Mathematics Project) in Semester II of Year III. The cost for the Special Project per student is TZS 300,000.
- Special Faculty requirement in Semester I of Year I. The amount per student is TZS 100,000.

## **2.6.6 Bachelor of Science in Aquaculture and Aquatic Science (BSc AAS)**

### **Programme Description**

Aquaculture is an art and science that deals with farming of aquatic organisms (eg. fishes, shrimps, seaweeds, echinoderms, and crocodiles). Aquaculture and Aquatic Sciences is an essential knowledge and practice in enhancing the sustainable availability of fish resources and maintaining the aquatic ecological goods and services. Aquaculture uses artificial techniques for rearing of both aquatic plants and animals in a confined artificial environment whether earthen ponds, concrete ponds, tanks, raceways, pens, or floating cages. On the other hand, aquatic environment like lakes, rivers and ocean provides food and income to fisherfolk at local level and contributes to national export and global food security.

World human population is increasing while many natural resources are not increasing at the same rate; causing depletion of such resources in their natural settings. Following this, there is a need to establish artificial production of natural resources that are over utilized by human population in order to reduce pressure on natural resources. Furthermore, it is important to train experts who can lead others in such operations. Fish is one of the natural resources that are highly utilized by human in an unsustainable way, thus causing depletion of different species of fish. However, many species of fresh water fishes can be farmed. Thus, it is important to train people on basic principles of fish farming to improve food security as well as generation of household income.

Notwithstanding the human related impacts to fish populations, global climate change is also contributing substantively to the decline of fish population due to changes in water body environment (e.g. salinity, temperature, dissolved oxygen) which may affect plankton that fishes feed on. Inland water bodies (lakes and rivers) are polluted by heavy metals from mining industries which causes health hazards to human who feed on fishes and other aquatic resources. Therefore, it is important to farm fishes in local areas where such pollution cannot contaminate such local ponds. The BSc. Aquaculture and Aquatic Science Programme emphasizes on practical production of fish in local areas where contamination is minimal in order to improve food security as well as household income.

### **Learning Outcomes of the Programme**

Upon completion of this programme, graduates should be able to:

- Apply concepts, theories, and methodologies to tackle emerging problems related to aquaculture and aquatic science.
- Access, analyse, synthesize, and evaluate information objectively and act professionally and ethically towards clients, the public, and agency personnel in the aquaculture sector.
- Apply knowledge to advice authority in sustainable utilization of aquatic resources, proper management, and policy development.
- Conduct research in aquaculture and aquatic science fields to generate sustainable solutions for aquatic resource utilization.
- Apply hands-on experience in aquatic sampling inventory and measurement techniques.
- Apply modern technology, products, and services to optimize production of aquatic products.

### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AA 111	General Aspects in Aquaculture and Aquatic Sciences	Core	7.5
BI 112	Invertebrate Zoology	Core	10
BI 113	Ecology I	Core	7.5
DS 102	Development Perspective	Core	7.5
CH 115	Chemistry for Life Science	Core	10
LG 102	Communication Skills	Core	7.5
MT 110	Introduction to Information and Communication Technology	Core	7.5

BI 111	Introductory Cell Biology and Genetics	Core	10
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 111	Introductory Cell Biology and Genetics	Elective	7.5
BI 114	Introductory Botany	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AA 121	Practical Training, I	Core	7.5
BI 122	Chordate Zoology	Core	10
BI 126	Introduction to Parasitology	Core	7.5
BI 125	Environmental Science	Core	7.5
BI 304	Estuarine and Wetland Ecology	Core	7.5
AA 123	Aquatic Environment and Biodiversity	Core	7.5
AA 124	Principles and Practices of Swimming and Snorkeling	Core	7.5
BI 124	Introduction to Microbiology	Elective	7.5
	<b>Total</b>		<b>62.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AA 216	Mollusc and Crustacean Culture	Core	7.5
AA 212	Aquatic Microbiology	Core	7.5
AA 213	Fish Nutrition and Feed Technology	Core	7.5
BI 215	Biostatistics I	Core	10
AA 215	Mangrove and Seagrass Ecosystems	Core	7.5
AA 211	Principles of Aquaculture	Core	7.5
AA 219	Aquatic Pathology	Core	7.5
AA 214	Fish Processing Technology and Quality Assurance	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Elective</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
BI 213	Ecology II	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AA 221	Non-Food Aquaculture	Core	7.5
BI 222	Introduction to Research Methodology	Core	7.5
AA 224	Oceanography	Core	7.5
AA 226	Practical Training II	Core	7.5
AA 227	Aquatic Field Practical	Core	7.5
AA 225	Aquatic Resources and Management	Core	7.5
AA 228	Algal Biology and Culture	Core	7.5

AA 222	Mariculture	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AA 318	Research Project	Core	7.5
AA 311	Fish Genetics and Breeding	Core	10
AA 314	Larviculture and Larval Food Production	Core	7.5
AA 315	Introduction to Remote Sensing and GIS	Core	7.5
AA 317	Law of the Sea and Inland Waters	Core	10
AA 316	Aquatic Pollution and Management	Core	10
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AA 319	Coral Reef Biology and Ecology	Elective	7.5
AA 313	Aquatic Toxicology	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AA 320	Research Project*	Core	7.5
EM 306	Small Business and Entrepreneurship	Core	10
AA 323	Seed Production and Hatchery Management	Core	10
BI 301	Ichthyology	Core	7.5
BI 327	Environmental and Social Impact Assessment	Core	7.5
AA 325	Integrated Coastal Zone Management	Core	10
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
AA 324	Aquaculture and Environment	Elective	7.5
BI 306	Conservation Biology	Elective	7.5

### Special Programme Requirements

- PT requirement, semester II: Year I and Year II.
- Field Requirement, semester II: Year II.
- Special Project (Research Report) semester I and II: Year III.

## 2.6.7 Bachelor of Science in Statistics (BSc STAT)

### Programme Description

The Bachelor of Science in Statistics is geared towards producing graduates who are well versed with the skills necessary to assist in planning, decision making, and research within various institutions. The curriculum provides training in general statistical techniques, specialized statistical methods, aspects of statistical management which enable graduates to be employed as statisticians in any corporate or public sectors or in academic institutions. In addition, they can also serve as bank officers, quality control officers, economists and other related professionals.

### Learning Outcomes of the Programme

After the completion of the programme, graduates are expected to:

- Demonstrate the ability to handle and manipulate data for decision making processes.
- Manage statistical activities at different offices and institutions: public or private.
- Plan and conduct sample surveys and experimental designs.
- Demonstrate the ability to write reports and provide statistical service consultancy.
- Demonstrate competence in using various statistical software packages for data analysis.
- Demonstrate ability to identify, design, and manage different social and economic projects.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
ST 1100	Statistical Computing	Core	9
ST 1101	Basic Statistics	Core	9
CP 111	Principles of Programming	Core	9
MT 1101	Foundations of Analysis	Core	9
MT 1102	Linear Algebra and Applications	Core	10.5
LG 102	Communication Skills	Core	7.5
DS 102	Development Perspectives	Core	7.5
	<b>Total</b>		<b>61.5</b>
Semester Two			
Code	Course Title	Status	Credits
ST 1201	Probability Theory	Core	9



ST 1202	Operations Research I	Core	9
ST 1203	Basic Demographic Models	Core	9
MT 1201	Mathematical Analysis I	Core	9
MT 1202	Ordinary Differential Equations	Core	9
EN 126	Statistical Methods in Economics I	Core	7.5
CP 123	Introduction to High Level Programming	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 2101	Probability Distributions	Core	10.5
ST 2102	Statistical Inference	Core	10.5
ST 2103	Statistical Methods for Quality Control	Core	9
ST 2104	Operations Research II	Core	9
ST 2105	Research Methods and Practice	Core	7.5
ST 2299	Practical Training I	Core	7.5
EN 216	Statistical Methods in Economics II	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 2201	Sampling Theory and Methods	Core	9
ST 2202	Regression Analysis I	Core	9
ST 2203	Actuarial Statistics	Core	9
ST 2204	Non Parametric Methods	Core	9
ST 2205	Time Series and Forecasting	Core	9
ST 2206	Financial Statistics	Core	7.5
CP 121	Introduction to Database Systems	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 3101	Design and Analysis of Experiments	Core	9
ST 3102	Introduction to Multivariate Analysis	Core	10.5
ST 3104	Categorical Data Analysis	Core	7.5
ST 3105	Stochastic Processes	Core	9
IM 315	Management Information Systems for Statisticians	Core	7.5
EME 211	Small Business Management and Entrepreneurship	Core	9
ST 3299	Practical Training II	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

ST 3201	Biostatistics and epidemiology	Core	10.5
ST 3202	Applied Spatial Statistics	Core	9
ST 3296	Statistical Project	Core	10.5
ST 3206	Regression Analysis II	Core	10.5
	Two elective Courses	Electives	19.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 3204	Panel Data Analysis	Elective	10.5
ST 3205	Statistical Methods for Projects Evaluation	Elective	10.5
CS 329	Big Data Analysis	Elective	9
CP 224	Database Management System	Elective	9

### Special Programme Requirements

- The first Field Practical Training (FPT) will be conducted at the end of first academic year, where students will be required to attend PT at The University of Dodoma (in-house practical training sessions) for four weeks. Students will be given practical training on some software on computing laboratory. The cost for this training per student is TZS 300,000 for four weeks.
- The second Field Practical Training (FPT) will be conducted in different government and private institutions for eight weeks at the end of second year academic year. The cost for this training per student is TZS 600,000 for eight weeks.
- Special Project (ST 320 Statistics Project) will be done from the beginning of Semester II of Year III. The cost for the Special Project per each student is TZS 300,000 for one semester.
- Special Faculty requirement in Semester I of Year I. The amount per student is TZS 100,000.

### 2.6.8 Bachelor of Science in Mathematics and Statistics (BSc MATH & STAT)

#### Programme Description

Mathematicians who have a high level of competency in computing and expertise in analytical and structured thinking are involved in problem modelling and solving. Mathematicians are in great demand in broad areas of employment that include but not limited to modelling and simulations, information security, data analysis and programming. They can also work as statisticians to develop techniques to overcome problems in data collection and analysis. They use statistical methods to collect and analyse data to address real world problems. Large manufacturing companies need

statisticians to determine and analyse their quality control processes. There is a high demand of graduates with a good background in Mathematics and Statistics in the Tanzania, one of the emerging economies in the world. Hence, BSc. in Mathematics and Statistics programme aims at meeting the required demand, both within and outside Tanzania.

### Learning Outcomes of the Programme

After the successful completion of the programme, graduates should be able to:

- Demonstrate mathematical problem-solving skills for certain types of problems and their variants in a variety of mathematical and statistical contexts.
- Attain professionalism in making use of computer software and packages like SPSS, R, MATLAB, MINITAB, MAPLE, C, C++, and EXCEL., as vehicles for mathematical and statistical exploration.
- Design and analyse raw data with appropriate treatment of errors and uncertainties and form conclusions based on the statistical analysis.
- Achieve transferable and attitudinal skills through organization and integrity of work, value for intellect, respect for truth and professional ethics.
- Develop advanced skills in innovation and engage in entrepreneurship in the field of specialization.
- Exhibit professional excellence in teaching, research, industry, and consultancy in the related fields.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
MT 1101	Foundation of Analysis	Core	9
MT 1102	Linear Algebra and Applications	Core	10.5
ST 1100	Statistical Computing	Core	9
ST 1101	Basic Statistics	Core	9
CP 111	Principles of Programming	Core	9
DS 102	Development Perspectives	Core	7.5
LG 102	Communications Skills	Core	7.5
	<b>Total</b>		<b>61.5</b>
Semester Two			
Code	Course Title	Status	Credits
MT 1201	Mathematical Analysis I	Core	9

MT 1202	Ordinary Differential Equations	Core	9
EN 126	Statistical Methods in Economics I	Core	7.5
ST 1201	Probability Theory	Core	9
ST 1202	Operation Research I	Core	9
ST1203	Basic Demographic Models	Core	9
CP 123	Introduction to High Level Programming	Core	9
	<b>Total</b>		<b>61.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 2101	Mathematical Analysis II	Core	9
MT 2102	Numerical Analysis I	Core	9
MT 2103	Graph Theory and Network Optimization	Core	7.5
ST 2101	Probability Distributions	Core	10.5
ST 2102	Statistical Inference	Core	10.5
ST 2105	Research Methods and Practices	Core	7.5
EN 216	Statistical Methods in Economics II	Core	7.5
	<b>Total</b>		<b>61.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 2201	Complex Analysis	Core	9
MT 2202	Partial Differential Equations	Core	9
ST 2201	Sampling Theory and Methods	Core	10.5
ST 2202	Regression Analysis I	Core	10.5
ST 2204	Operation Research II	Core	10.5
ST 2205	Time Series and Forecasting	Core	10.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CP 213	Data Structures and Algorithms and Analysis	Elective	9
MT 2100	MATLAB and Problem Solving	Elective	9
MT 2204	Numerical Analysis II	Elective	7.5
ST 2206	Actuarial Statistics	Elective	9
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

MT 3101	Abstract Algebra	Core	9
MT 3105	Introduction to Measure Theory	Core	9
ST 3101	Design and Analysis of Experiments	Core	10.5
ST 3102	Introduction to Multivariate Analysis	Core	10.5
ST 3104	Categorical Data Analysis	Core	7.5
ST 3105	Stochastic Process	Core	9
MT 3109	Practical Training	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 3200/ST 3200	Mathematics Project/ Statistics Project	Core	9.8
MT 3201	Basic Functional Analysis	Core	9
MT 3205	Financial Mathematics	Core	9
ST 2204	Non Parametric Methods	Core	9
EME211	Entrepreneurship and Small Business	Core	9
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>60.8</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MT 3104	Discrete Mathematics	Elective	7.5
MT 3106	Introduction to Simulation	Elective	9
MT 3107	Introduction Mathematical Modelling	Elective	7.5
CP 329	Big Data Analysis	Elective	9
ST 3201	Biostatistics and Epidomology	Elective	10.5
ST 3203	Financial Statistics	Elective	10.5

### Special Programme Requirements

- The first Field Practical Training (FPT) will be conducted at the end of the first academic year where students will be required to attend PT at The University of Dodoma (in-house practical training sessions) for four weeks. Students will be given practical training on some software on computing laboratory. The cost for this training per each student is TZS 300,000 for four weeks.
- The second Field Practical Training (FPT) will be conducted in different government and private institutions for eight weeks at the end of the second academic year. The cost for this training per each student is TZS 600,000 for eight weeks.
- There will be Special Project (ST 320 Statistics Project) from the beginning of Semester II of Year III. The cost for the Special Project per student is TZS 300,000.

- Special Faculty requirement will be in Semester I of Year I. The amount is TZS 100,000.

### **2.6.9 Bachelor of Science in Actuarial Statistics (BSc AS)**

#### **Programme Description**

The BSc AS programme aims at producing graduates with the theoretical and practical knowledge of Statistics, Mathematics and Actuarial Sciences in line with the mission of The University of Dodoma. Furthermore, the programme provides all the modules for them to work in life and non-life insurance companies (designing insurance products and valuing financial contracts and investing funds); consultancy (offering advice to occupational pension funds and employee benefit plans); government service (supervising insurance companies and advising on the national insurance); and also in the stock exchange industry, commerce, and academia.

#### **Learning Outcomes of the Programme**

After the completion of the programme, graduates should be able to:

- Solve financial problems involving uncertainty.
- Manage various actuarial activities at different accounting and financial organizations.
- Plan and conduct sample surveys for actuarial work.
- Forecast insurance risks by using their expertise in the valuation of sophisticated investment derivatives.
- Interact effectively and harmoniously in the community through teamwork, adaptability, and problem solving.

#### **Programme Structure**

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1100	Statistical Computing	Core	9
ST 1101	Basic Statistics	Core	9
MT 1102	Linear Algebra and Applications	Core	9
ST 1104	Introduction to Microeconomics	Core	9
ST 1103	Introduction to Actuarial Sciences I	Core	10.5
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
CP 111	Principles of Programming	Elective	9

	<b>Total</b>		<b>70.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 1201	Probability Theory	Core	9
ST 1206	Introduction to Macroeconomics	Core	9
ST 1205	Introduction to Actuarial Science II	Core	10.5
ST 1204	Basic Demographic Models	Core	10.5
MT 1202	Ordinary Differential Equations	Core	9
MT 1201	Mathematical Analysis I	Core	9
CP 123	Introduction to High Level Programming	Core	9
	<b>Total</b>		<b>66</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 2101	Probability Distributions	Core	10.5
ST 2102	Statistical Inference	Core	10.5
ST 2109	Risk Theory and Management	Core	9
ST 2105	Research Methods and Practice	Core	7.5
ST 2107	Financial Management I	Core	10.5
ST 2108	Principles of Insurance	Core	7.5
ST 1299	Practical Training I	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 2201	Sampling Theory and Methods	Core	9
ST 2202	Regression Analysis	Core	9
ST 2204	Non-Parametric Methods	Core	9
ST 2205	Time Series and Forecasting:	Core	9
ST 2207	Professional Financial Planning in Insurance	Core	10.5
ST 2208	Financial Management II	Core	10.5
ST 2206	Statistical Databases	Core	7.5
	<b>Total</b>		<b>64.5</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 3102	Introduction to Multivariate Analysis	Core	10.5
ST 3103	Statistical Methods for Econometrics	Core	10.5

ST 3105	Stochastic Processes	Core	9
ST 3106	Management Information Systems	Core	7.5
ST 3107	Investment Portfolio Management	Core	10.5
ST 3108	Theory of Life Tables	Core	7.5
ST 2299	Practical Training II	Core	7.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 3297	Actuarial Project	Core	7.5
ST 3207	Survival Data Analysis	Core	10.5
ST 3208	Actuarial Methods in Pension Funds	Core	10.5
ST 3209	Stochastic Models in Life Insurance	Core	10.5
EM 3006	Entrepreneurship and Small Business	Core	10.5
	One Elective Course	Elective	10.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ST 3203	Financial Statistics	Elective	10.5
ST 3205	Statistical Methods for Projects Evaluation	Elective	10.5
ST 3206	Introduction to Big Data	Elective	10.5

### Special Programme Requirements

- The first Field Practical Training (FPT) will be conducted at the end semester II of Year I where students will be required to attend PT at The University of Dodoma (in-house practical training sessions) for four weeks. Students will be given practical training on some software in computing laboratory. The cost for this training per each student is TZS 300,000 for four weeks.
- The second Field Practical Training (FPT) will be conducted in different government and private institutions for eight weeks at the end of the second academic year. The cost for this training per each student is TZS 600,000 for eight weeks.
- There will be Special Project (ST 320: Statistics Project) from the beginning of Semester II of Year III. The cost for the Special Project per student is TZS 300,000.
- Special Faculty requirement will be in Semester I of Year I. The amount is TZS 100,000.



## 2.6.10 Bachelor of Science in Physics (BSc Physics)

### Programme Description

The Bachelor of Science in Physics is a three year programme which offers a wider variety of options in the areas of Physics, Energy Resources and Systems, Materials and Nano Physics, Applied Geophysics, Meteorology and Climate Science, Nuclear Radiation and Medical Physics, and Applied Electronics. The programme equips students with physical knowledge and skills that most employers would expect a graduate in physics to possess. Moreover, the programme contains some courses from other disciplines which should help to fine-tune the skills of the prospective graduates in their chosen area of specializations. All the first year Physics courses are core courses which focus on the fundamental theories of Physics. As they move to second and third years, they are opened to core as well as elective and specialization courses. This gives chances to diversify themselves to specific disciplines of their interest in the study of Physics.

### Learning Outcomes of the Programme

Upon the completion of this programme, graduates should be able to:

- Determine the relationship between theory and practical aspects in selected areas of Physics.
- Identify, assess, and formulate methods for solving physics related problems.
- Independently conduct scientific research and communicate the scientific findings to both specialized and non-specialized audiences.

### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
PH 1101	Mechanics	Core	9
PH 1102	Electricity and Magnetism I	Core	9
PH 1103	Physics Practicals I	Core	6
MT 112	Linear Algebra and Application	Core	9
IT 110	Introduction to ICT	Core	9
DS 102	Development Perspectives	Core	7.5
LG 102	Communication skills	Core	7.5
CP 111	Principles of Programming	Core	9
	<b>Total</b>		<b>66</b>
Semester Two			

<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 1201	Mathematics for Physicists I	Core	9
PH 1202	Electricity and Magnetism II	Core	9
PH 1203	Oscillations and Waves	Core	7.5
PH 1204	Optics	Core	7.5
PH 1205	Thermal Physics	Core	7.5
PH 1206	Physics Practicals II	Core	7.5
MT 1202	Ordinary Differential Equation	core	9
	<b>Total</b>		<b>57</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 2101	Classical Mechanics	Core	7.5
PH 2102	Mathematics for Physicists II	Core	9
PH 2103	Theory of Relativity	Core	7.5
PH 2104	Electronic Devices and Circuits	Core	9
PH 2105	Quantum Physics I	Core	6
PH 2106	Physics Practicals III	Core	7.5
PH 2107	Nuclear Physics	Core	7.5
PH 2111	Introduction to Astrophysics and Astronomy	Elective	7.5
PH 2112	Earth Atmosphere System	Elective	7.5
	<b>Total</b>		<b>69</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 2201	Pulse and Digital Electronics	Core	9
PH 2202	Solid State Physics I	Core	7.5
PH 2203	Atomic and Molecular Physics	Core	9
PH 2204	Computation and Practical Physics	Core	9
RM 2100	Introduction to Research Methodology	Core	9
PH 2209	Practical Training	Core	9
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 2221	Introduction to Materials Science	Elective	7.5
PH 2241	Introduction to Meteorology and Weather Forecasting	Elective	7.5
PH 2251	Radiation Dosimetry	Elective	7.5

PH 2261	Signals and Systems	Elective	7.5
PH 2211	Renewable Energy Technologies and Decentralization of Electricity	Elective	12
AG 112	Introduction to Geology and Geological Processes	Elective	7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 3100	Physics Projects	Core	9
PH 3101	Solid State Physics II	Core	9
PH 3102	Quantum Physics II	Core	9
PH 3103	Fluid Mechanics	Core	9
PH 3104	Statistical Physics	Core	7.5
PH 3110	Electronics Instrumentation	Core	9
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 3112	Renewable Energy Enterprises Management	Elective	7.5
PH 3113	Renewable Energy Financing and Modelling	Elective	7.5
PH 3114	Energy and Sustainable Development	Elective	7.5
PH 3122	Physical Properties of Materials	Elective	7.5
PH 3123	Amorphous Materials	Elective	7.5
PH 3152	Physics of Medical Imaging	Elective	7.5
PH 3153	Physics of Radiation Therapy	Elective	7.5
PH 3162	Control System	Elective	7.5
PH 3163	Microprocessor and Microcontroller	Elective	7.5
	<b>Total</b>		<b>58.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 3100	Physics Projects	Core	10
PH 3201	Fundamental of Electrodynamics	Core	7.5
PH 3202	Applied Nuclear Physics	Core	7.5
PH 3203	Modern Optics	Core	10
PH 3206	Elementary Particles	Elective	7.5
EME 211	Small Business Management and Entrepreneurship	Core	9
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>66.5</b>

<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PH 3215	Energy Efficiency and Storage Application	Elective	12
PH 3216	Business and Financial Models for Renewable Energy	Elective	7.5
PH 3224	Nanotechnology	Elective	7.5
PH 3225	Thin Film Technology	Elective	7.5
PH 3254	Radiation Biophysics	Elective	7.5
PH 3255	Radiation Protection and Nuclear Technology Application	Elective	7.5
PH 3264	Communication System	Elective	7.5
PH 3265	Power Electronics	Elective	7.5

### **Special Programme Requirements**

- **Laboratory Practical Work:** The programme has practical work in the relevant laboratories located at the College of Natural and Mathematical Sciences. This will be in both semesters of year 1 and semester I of year 2. Students should have scientific calculators, laboratory coat, soldering gun and goggles. The special Faculty requirement in Semester I Year of I per student is TZS 300,000.
- **Physics Project:** Students in their final year (Year 3) in semester 1 and semester 2 will have Special Physics Project (PH 3100 Physics Project) as a core course) in their field of specialization for the completion of their course work. The cost for the Special Project per each student is TZS 300,000 for one semester.
- **The Practical Training:** The practical training will be conducted at different institutions at the end of semester II of the second year. There will be 8 weeks Practical training in Year I and II. Estimated cost for the Practical Training per each student is TZS 600,000 for eight weeks.

#### **2.6.11 Diploma in Forensic Science (Dip. FS)**

##### **Programme Description**

Diploma in Forensic Sciences is a two-year programme designed to produce graduates who will have working knowledge in the forensic sciences. The main areas of forensic sciences addressed include crime scene investigation and management, inorganic, analytical, and physical chemistry.

## Learning Outcomes of the Programme

Upon graduation, Diploma in Forensic Science graduates should be able to:

- Demonstrate competency in collecting, processing, analysing, and evaluating data for evidential uses.
- Apply skills and knowledge in a professional environment.
- Demonstrate hands-on capability in handling samples, measuring various parameters, presenting findings, and using forensic laboratory.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
IT 0112	Information Technology	Core	10.5
FS 0111	General Chemistry	Core	9
FS 0112	Forensic Laboratory Practical I	Core	7.5
FS 0113	Human Anatomy	Core	9
FS 0114	Introduction to Forensic Science	Core	9
DS 0106	Development Studies	Core	7.5
LG 0106	Communication Skills	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FS 0121	Fingerprints and Impression	Core	9
FS 0122	Forensic Laboratory Practical II (fingerprint, impressions, and questioned documents)	Core	9
FS 0123	Chemical Separation Methods	Core	7.5
FS 0124	Crime Scene Investigation	Core	9
FS 0125	Forensic Pathology	Core	9
FS 0126	Questioned Documents	Core	9
FS 0127	Forensic Practical Training I	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FS 0211	Forensic Anthropology	Core	7.5
FS 0212	Forensic Chemistry	Core	9
FS 0213	Forensic Physics and Ballistics	Core	9
FS 0214	Forensic Laboratory Practical III (Chemistry, Toxicology, and Biology)	Core	7.5
FS 0215	Forensic Biology	Core	9

FS 0216	Forensic Laboratory Practical IV (Physics, Ballistics, and Anthropology)	Core	7.5
FS 0217	Analytical Instrumentation	Core	7.5
IA 0213	Fundamentals of Digital Forensics	Core	9
	<b>Total</b>		<b>66</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FS 0221	Introduction to Environmental Forensics	Core	9
FS 0222	Forensic Toxicology	Core	9
FS 0223	Forensic Science Laboratory Management	Core	7.5
FS 0224	Forensic Legal	Core	9
FS 0225	Crime Scene Investigation Practicals	Core	9
FS 0227	Forensic Accounting and Fraud Investigation	Core	7.5
FS 0228	Forensic Practical Training II	Core	9
EN 0206	Small Scale Business and Entrepreneurship	Core	7.5
	<b>Total</b>		<b>67.5</b>

### **Special Programme Requirements**

- Calculator, laboratory coat and goggles TZS. 300,000.
- There will be 8 weeks Practical Training in Year I and II.
- Estimated cost for each Practical Training is TZS. 560,000.

## **2.6.12 Diploma in Forest Management and Nature Conservation (Dip. FMNC)**

### **Programme Description**

The Diploma in Forest Management and Nature Conservation is a two-year programme which is designed carefully to equip students with ability to solve terrestrial environmental and socio-cultural challenges that are facing communities and the country in general through the application of biological approaches. Natural forests are disappearing mainly due to anthropogenic activities such as charcoal production, lumbering, conversion of forest to settlements and clearing forests for agricultural production. Conservation of natural forests is important for ecosystem functioning. Forests are the sources of life for most terrestrial organisms through the provision of food, shelter, and water. Thus, conservation of forests is important for ecosystem functioning, including improvement of human livelihood. From the forest; human benefit from fruits, firewood, honey, timber, poles for construction, and collection of mushroom. The programme is expected to meet the demand of important stakeholders including students. The course outlines have been clarified

and instructors have been given adequate contact hours to plan and execute lessons and practical.

### Learning Outcomes of the Programme

Upon the completion of this programme, graduates should be able to:

- Show competence in the application of biological concepts in combating deforestation problems.
- Participate fully in programmes aiming at resolving biological challenges like forest degradation, soil erosion, food security, disease control, pest control and wildlife management and conservation.
- Measure the biodiversity in both protected and unprotected habitats.
- Educate local communities on forest biodiversity conservation practices and nature conservation.
- Develop forest entrepreneurship for self-employment.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FC 0111	Introductory Botany and Plant Physiology	Core	12.5
FC 0112	Introductory Soil Science	Core	7.5
FC 0113	Introductory Forest Ecology	Core	10
LG 0104	Communication Skills	Core	10
DS 0006	Development Perspective	Core	10
MT 0110	Introduction to Information and Communication Technology	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FC 0121	Introduction to Forest Genetics	Core	12.5
FC 0122	Forest and Hydrology	Core	10
FC 0123	Forest Biometry	Core	10
FC 0124	Agroforestry	Core	7.5
FC 0213	Silviculture	Core	7.5
FC 0126	Ecotourism	Core	7.5
FC 0127	Restoration Ecology	Core	7.5
	<b>Total</b>		<b>62.5</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FC 0211	Forest Protection	Core	15

FC 0212	Wood Anatomy	Core	12.5
FC 0125	Logging	Core	10
FC 0214	Forestry Extension	Core	7.5
FC 0215	Special Project	Core	12.5
FC 0216	Introduction to Forest Survey	Core	7.5
	<b>Total</b>		<b>65</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
FC 0221	Introduction to GIS and Remote Sensing	Core	10
FC 0222	Forest Resources Assessment	Core	7.5
FC 0223	Introduction to Climate Change	Core	7.5
FC 0224	Non Wood Forest Products	Core	7.5
FC 0225	Integrated Wildlife Management	Core	7.5
EN 0206	Small Business and Entrepreneurship	Core	10
FC 0226	Forest Economics	Core	10
	<b>Total</b>		<b>60</b>

### Special Programme Requirements

- Students will have PT at the end of first and second years of study.
- Students in the second year of study will be required to do a small research project.
- There will be field excursions for the first and second year students.
-



## **2.7 SCHOOL OF MEDICINE AND DENTISTRY**

The School of Medicine and Dentistry offers one undergraduate degree programme and two diploma programmes. These include:

1. Doctor of Medicine (MD)
2. Diploma in Pharmacy (DPHARM)
3. Diploma in Medical Laboratory Technology (DMLT)

### **2.7.1 Doctor of Medicine (MD)**

#### **Programme Description**

Doctor of Medicine is a five-year programme which intends to train a general duty medical doctor who has broad knowledge of common human diseases and conditions with emphasis on diseases endemic in tropical countries. The programme is coined such that the graduates will have proper skills and competencies that will enable them to manage and deliver preventive and curative health services efficiently. To achieve these, the programme is clustered into two aspects of training: Basic Sciences and Clinical Training. The student will spend the first three years studying the relevant basic sciences before embarking onto clinical years at designated teaching hospitals in the last two years (Junior and Clinical Rotations).

#### **Learning Outcomes of the Programme**

Upon the completion of this programme, graduates should be able to:

- Demonstrate an understanding of normal and abnormal structure, function, development and growth of the human body and personality.
- Evaluate patients clinically and by laboratory investigations to reach appropriate diagnosis.
- Provide correct medical and surgical interventions to the patients and refer where appropriate.
- Manage health services at different levels of the health delivery system.
- Identify and provide relevant preventive and curative community health services according to national and community priorities.
- Conduct relevant training and supervision of other health personnel.
- Conduct research and utilize the findings to improve the quality of health services.
- Demonstrate good ethical conduct.

## Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 111	Gross and Neuroanatomy	Core	33
MD 112	Medical Biochemistry	Core	23
LG 105	Communication Skills	Core	7.5
DS 105	Development Perspectives	Core	7.5
	<b>Total</b>		<b>71</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 121	Human Embryology	Core	10
MD 122	Cell Biology and Histology	Core	16
MD 123	Basic Physiology	Core	14
MD 124	Behavioural Sciences	Core	14
MD 125	Biostatistics and ICT	Core	7
	<b>Total</b>		<b>61</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 211	Clinical Physiology	Core	8
MD 212	Medical Microbiology and Immunology	Core	24
MD 213	Basic Pathology	Core	12
MD 214	Basic Clinical Methods	Core	4
MD 215	Epidemiology and Research Methodology	Core	12
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 221	Systemic Pathology	Core	24
MD 222	Medical Parasitology and Entomology	Core	20
MD 223	Basic Pharmacology	Core	10
MD 224	Community Medicine I: Nutrition Field Work	Core	6
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 311	Forensic Medicine	Core	4
MD 312	Radiology I	Core	7
MD 313	Clinical Pharmacology	Core	15
MD 314	Psychopathology	Core	10
MD 315	Internal Medicine I	Core	15
MD 316	Otorhinolaryngology I	Core	4
MD 317	Orthopaedics and Traumatology I	Core	5

	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 321	Ophthalmology I	Core	4
MD 322	General Surgery I	Core	12
MD 323	Psychiatry I	Core	12
MD 324	Anaesthesiology and Critical Care I	Core	4
MD 325	Paediatrics and Child Health I	Core	11
MD 326	Obstetrics and Gynaecology I	Core	11
MD 327	Community Medicine II: Communicable Disease Control Field Work	Core	6
	<b>Total</b>		<b>60</b>
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 411	Community Medicine III: Community Medicine Rotation	Core	20
MD 412	Paediatrics and Child Health II: Junior Clinical Rotation	Core	20
MD 413	Obstetrics and Gynaecology II: Junior Clinical Rotation	Core	20
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 421	General Surgery II: Junior Clinical Rotation	Core	20
MD 422	Internal Medicine II: Junior Clinical Rotation	Core	20
MD 423	Elective Research	Core	20
	<b>Total</b>		<b>60</b>
<b>Year Five</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 511	Paediatrics and Child Health III: Senior Clinical Rotation	Core	12
MD 512	Obstetrics and Gynaecology III: Senior Clinical Rotation	Core	12
MD 513	General Surgery III: Senior Clinical Rotation	Core	12
MD 514	Internal Medicine III: Senior Clinical Rotation	Core	12
MD 515	Psychiatry II: Clinical Rotation	Core	12
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 521	Otorhinolaryngology II: Clinical Rotation	Core	10
MD 522	Ophthalmology II: Clinical Rotation	Core	10

MD 523	Anaesthesiology and Critical Care II: Clinical Rotation	Core	10
MD 524	Orthopaedics and Traumatology II: Clinical Rotation	Core	16
MD 525	Medical Ethics	Core	4
MD 526	Radiology II: Clinical Rotation	Core	10
	<b>Total</b>		<b>60</b>

## **Special Programme Requirements**

### **Field Practical Training**

- The students will be engaged in Nutrition Field in their second year, and in Communicable Diseases Control Field in their third year. They are conducted in various selected communities around Tanzania.
- Nutrition Field Project is a community based fieldwork practical training which aims to develop knowledge on nutrition and nutritional disorders to individuals and the community. It is done during the long vacation after second semester of year two. This field study provides broad based academic training that develops an understanding of nutrition and its role in the community health and diseases.
- Community Health and Communicable Disease Control Field allows students to integrate theory into field practice on how to diagnose diseases at the community and take necessary preventive measures towards the control of such diseases.

### **Clinical Rotations (Junior and Senior Clinical Rotations)**

- In this part, students are be exposed to Junior (fourth year) and Senior (fifth year) clinical rotations where they learn apprenticeship as related to surgical and surgical specialties practice, internal medicine, community medicine, psychiatry, paediatrics and child health, and obstetrics and Gynaecology.
- These clinical rotations aims at developing knowledge, practical skills, situation analysis, disease formulation and management of medical diseases to students who upon completion of the course should be competent without supervision to diagnose, treat, prevent common medical conditions, and recognize complex conditions needing referral to specialists and institute preventive measures where appropriate.

### **Research Skills/Report**

- It is a training whereby a student conducts a health related research project of his own choice under supervision. The research can be performed within the country or abroad, and is co-coordinated by the Department of Community Health. It aims at developing an individualized practical experience in research methodology.

## **2.7.4 Diploma in Pharmacy (DPHARM)**

### **Programme Description**

Diploma in Pharmacy is a three-year programme organized in six semesters, each consisting of 20 weeks in which the first part of the curriculum is largely general/basic sciences and the second part consists of the professional pharmaceutical courses. During both basic sciences and pharmaceutical courses, students will be exposed to theory classes, laboratory works, and clinical works in our teaching hospitals so that they acquire all the necessary knowledge, skills and attitudes as per the requirement of the Tanzania Pharmacy Council. All courses of Diploma in Pharmacy are core courses.

### **Learning Outcomes of the Programme**

The graduates should be able to:

- Process prescriptions accurately in compliance with pertinent legislation and established standards, policies, and procedures in practice settings.
- Promote quality assurance by performing effective and efficient administrative functions in practice settings.
- Develop and implement effective strategies for ongoing personal and professional development that support currency, competence, ethics, and values in the pharmacy sector.
- Practice safely within a legal, ethical, and professional framework in practice settings.
- Collaborate with pharmacists and other health care providers to optimize the patients' health and well-being within the scope of practice of the pharmacy technician.
- Release pharmaceutical products in compliance with pertinent legislation and established standards, policies and procedures in practice settings.

- Prepare pharmaceutical products for dispensing in compliance with pertinent legislation and established standards, policies and procedures in practice settings.
- Optimize medication therapy management and product distribution using current technologies in practice settings.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DP 0111	Disease Control and Prevention	Core	10
DP 0112	Pharmaceutical Inorganic Chemistry	Core	15
DP 0113	Pharmaceutical Calculations I	Core	15
DP 0114	Pharmaceutical Theory I	Core	20
DP 0115	Communication Skills	Core	3
DP 0116	Basic Computer Applications	Core	3
	<b>Total</b>		<b>66</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DP 0121	Anatomy and Physiology	Core	15
DP 0122	Pharmaceutical Microbiology	Core	18
DP 0123	Pharmaceutical Calculations II	Core	7
DP 0124	Pharmaceutical Theory II	Core	8
DP 0125	Pharmaceutical Practical I	Core	12
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DP 0211	Pharmaceutical Organic Chemistry	Core	15
DP 0212	Drug and Medical Supplies Management I	Core	8
DP 0213	Pharmacology I	Core	12
DP 0214	Pharmaceutical Calculations III	Core	15
DP 0215	Pharmaceutics Practical II	Core	12
DP 0216	Pharmaceutical Theory III	Core	5
	<b>Total</b>		<b>67</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DP 0221	Pharmacognosy	Core	15
DP 0222	Forensic Pharmacy I	Core	5
DP 0223	Drug and Medical Supplies Management II	Core	10
DP 0224	Pharmacology II	Core	15
DP 0225	Pharmaceutics Theory IV	Core	5

DP 0226	Pharmaceutics Practical III	Core	10
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DP 0311	Field Work Project	Core	10
DP 0312	Pharmacology III	Core	10
DP 0313	Pharmaceutics Theory V	Core	10
DP 0314	Forensic Pharmacy II	Core	5
DP 0315	Introduction to Entrepreneurship	Core	10
DP 0316	Pharmaceutics Practical IV	Core	15
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DP 0321	Pharmacology IV	Core	20
DP 0322	Pharmaceutics Theory VI	Core	15
DP 0323	Forensic Pharmacy III	Core	5
DP 0324	Pharmaceutics Practical V	Core	15
DP 0325	Drug and Medical Supplies Management III	Core	10
DP 0326	Community Pharmacy	Core	5
	<b>Total</b>		<b>70</b>

## 2.7.5 Diploma in Medical Laboratory Technology (DMTL)

### Programme Description

The Diploma in Medical Laboratory Technology is a full time three-year programme organized in 6 semesters, designed to impart basic knowledge to students with regard to general health laboratory technical works in a view to produce competent technicians who will apply basic skills and knowledge in the field of medical laboratory technology. Courses in each semester are taught and examined at the end of each semester. The academic year is the basic academic accounting unit. All courses of Diploma in Medical Laboratory Technology are core courses.

### Learning Outcomes of the Programme

After successful completion of this programme, graduates are expected to demonstrate:

- Sound knowledge appropriate for health laboratory technician.
- Effective performance of all laboratory activities expected for a health laboratory technician.

- Creativity and innovativeness in response to challenges inherent in medical laboratory sciences practice and health care delivery.
- Critical thinking and problem-solving skills in medical laboratory sciences and health care practice.
- Good sense of accountability and responsibility in their daily activities.
- Culture of lifelong learning for laboratory personnel and advancement of Medical Laboratory Sciences profession.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Name</b>	<b>Status</b>	<b>Credits</b>
ML 0111	Anatomy and Physiology	Core	20
ML 0112	Biostatistics and Research Methodology	Core	10.5
ML 0113	Biochemistry and Molecular Biology	Core	19
ML 0114	Prevention and Control of Disease Transmission	Core	4.5
ML 0115	Professional Ethics and Communication Skills	Core	3
ML 0116	Laboratory Safety and Waste Management	Core	3
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ML 0121	Basic Laboratory Instrumentation and Microcomputers	Core	12.6
ML 0122	Specimen Management	core	12.6
ML 0123	Basic Laboratory Investigations	Core	12.6
ML 0124	Basic Laboratory Stains, Reagents, and Solutions	Core	15.9
ML 0125	Clinical Enzymology	Core	6.3
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ML 0211	Microbiology and Immunology	Core	18
ML 0212	Medical Parasitology and Entomology	Core	10.5
ML 0213	Haematology	Core	10.5
ML 0214	Transfusion Science and Tissue Compatibility	Core	5.25
ML 0215	Clinical Chemistry	Core	10.5
ML 0216	Histocytology	Core	5.25
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ML 0221	Introduction to Computer and Information	Core	9.6



	Technology		
ML 0222	Quality Assurance and Control	Core	12.6
ML 0223	Maintenance of Laboratory Equipment and Supplies	Core	12.6
ML 0224	Health Care Systems and Health Policy	Core	6.3
ML 0225	Field Attachment: Laboratory Practice I	Core	18.9
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ML 0311	Diagnostic Histocytology	Core	15.9
ML 0312	Laboratory Culture Media	Core	12.6
ML 0313	Laboratory Biological Products	Core	6.3
ML 0314	Laboratory Information Management	Core	6.3
ML 0315	Laboratory Practice II	Core	18.9
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
ML 0321	Laboratory Management, Leadership and Entrepreneurship	Core	4
ML 0322	Laboratory Biosafety and Biosecurity	Core	8
ML 0323	Laboratory Animals Keeping	Core	12
ML 0324	Laboratory Practice III	Core	36
	<b>Total</b>		<b>60</b>

## **2.8 SCHOOL OF NURSING AND PUBLIC HEALTH**

The School of Nursing offers the following Programmes:

1. Bachelor of Science in Nursing (BSc Nursing)
2. Bachelor of Science in Clinical Nutrition and Dietetics (BSc CND)
3. Diploma in Nursing (Dip. Nursing)

### **2.8.1 Bachelor of Science in Nursing (BSc Nursing)**

#### **Programme Description**

The major focus of Bachelor of Science in Nursing programme is to produce graduate professional nurses capable of delivering safe health care in local, regional, and international health care systems. The programme prepares professional general trained nurses with the necessary knowledge, skills and attitude required for the delivery of high quality and culturally sensitive services. The programme starts with the foundation of knowledge in the basic sciences, humanities, and related professional disciplines in the first year followed by the body of related nursing knowledge, skills and attitudes in subsequent years. These assist graduates to acquire critical thinking skills relevant for competent and professional practice. The curriculum is a four-year programme organized in eight semesters, each consisting of 20 weeks followed by one-year internship in hospitals approved by the Ministry of Health. After graduation, the nurses should be eligible for registration by the Tanzania Nursing and Midwifery Council (TNMC).

#### **Learning Outcomes of the Programme**

Upon completion of this programme, graduates are expected to:

- Demonstrate broad and comparative knowledge of the general scope of nursing and its different areas, applications, and its interactions with related subjects including anatomy, biochemistry, pharmacology, parasitology, microbiology, epidemiology, infection preventions, biostatistics and ICT, nursing ethics, and professional communication.
- Demonstrate detailed knowledge of nursing or a more coverage of a specialist area balanced by a wider range of study including midwifery, pediatric, mental health, nursing informatics, emergency and critical care, and anaesthesiology.
- Demonstrate critical understanding of the essential theories, principles and concepts of nursing and of the ways in which these theories are developed through the main methods of enquiry in nursing.

- Demonstrate critical understanding of the principles of nursing research and data collection methods as a means of advancing the professional knowledge base of nursing and develop evidence-based nursing care.
- Demonstrate critical understanding of the principles of nursing ethics, laws, and regulations that govern nursing practice.
- Employ universal precautions of infection prevention and control during caring and nursing procedures.
- Conduct complete and relevant nursing assessments in a systematic manner.
- Organize patient care using nursing assessment findings in a comprehensive manner.
- Produce correct and appropriate nursing care plans for individual patients.
- Design appropriate discharge plans and create individualized nursing and/or prevention plans including patient self-management and behaviour change.
- Maintain confidence and comfort in the provision of holistic nursing care.
- Apply knowledge, understanding, and skills in both identifying and analyzing problems and issues and in formulating, evaluating, and applying evidence-based solutions and arguments related to nursing.
- Communicate the results of their researches and other works accurately and reliably in a range of different contexts using the main specialist concepts, constructs, and techniques of nursing.
- Apply their subject and transferable skills to contexts where criteria for decisions and the scope of the task may be well defined but where personal responsibility, initiative, and decision-making are required; and identify and address their own learning needs including being able to draw on a range of current researches, developments, and professional materials.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 111	Human Anatomy	Core	23
MD 112	Biochemistry	Core	20
DS 105	Development Study	Core	9
NS 112	Medical Sociology	Core	5
NS 113	Medical Psychology	Core	5
LG 105	Communication Skills	Core	4
	<b>Total</b>		<b>66</b>

<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 121	Medical Physiology	Core	22
NS 122	Human Nutrition	Core	10
NS 123	Nursing Ethics and Professional Communication	Core	12
NS 124	Embryology and Human Growth and Development	Core	11
MD 125	Biostatistics and ICT	Core	7
	<b>Total</b>		<b>62</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 211	Epidemiology/Research Methodology	Core	8
MD 213	Medical Parasitology and Entomology	Core	20
NS 212	Fundamental Skills of Nursing Practice I	Core	10
MD 212	Microbiology and Immunology	Core	22
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 221	Clinical Pharmacology	Core	20
NS 222	Fundamental Skills for Nursing Practice II	Core	18
NS 223	Curriculum Development and Teaching Methodology	Core	8
NS 224	Medical Nursing I	Core	9
NS 225	Surgical Nursing I	Core	9
	<b>Total</b>		<b>64</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 311	Nutrition Field Work	Core	9
NS 312	Midwifery 1 (theory)	Core	15
NS 313	Community Health Nursing I (theory)	Core	12
NS 314	Pediatric Nursing I (theory)	Core	7
NS 315	Medical Nursing II (clinical)	Core	21
	<b>Total</b>		<b>64</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 321	Surgical Nursing II	Core	20
NS 322	Midwifery II	Core	20
NS 323	Pediatric II (Clinical)	Core	20
	<b>Total</b>		<b>60</b>
<b>Year Four</b>			

<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 411	Mental Health and Psychiatric Nursing I	Core	20
NS 412	Emergency and Critical Care	Core	10
NS 413	Research Methods and Methodology, I	Core	10
NS 414	Community Health Nursing II	Core	15
NS 415	Advanced Concepts and Skills In Nursing and Midwifery	Core	5
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS 421	Mental Health and Psychiatric Nursing II	Core	15
NS 422	Research Methods and Methodology II	Core	20
NS 423	Nursing Leadership and Management	Core	18
NS 424	Nursing Informatics	Core	7
	<b>Total</b>		<b>60</b>

## **2.8.2 Bachelor of Science in Clinical Nutrition and Dietetics (BSc CND)**

### **Programme Description**

The Bachelor of Science in Clinical Nutrition and Dietetics is a full-time four-year comprehensive degree programme. This is the first bachelor degree programme in the country which prepares clinical nutritionists and dietitians who are well suited in clinical settings. Graduates of this programme are expected to be absorbed in popular careers that include hospitals, primary health care facilities, medical centres and clinics; food industry, food catering, and nutraceutical companies; educational institutions, research centres, media centres; social welfare organisations; and wellness clinics in public and private sectors.

### **Learning Outcomes of the Programme**

Upon successful completion of the BSc CND programme, graduates are expected to:

- Demonstrate an understanding of normal and abnormal structure, function, development, and growth of the human body and personality.
- Demonstrate knowledge and understanding of scientific and practical aspects of food science and food security.
- Integrate knowledge of food and food systems, human nutrition, and dietetics in the provision of services.
- Evaluate clients physically, clinically, dietary, and biochemically to establish nutritional status and needs of the clients.

- Apply the nutrition care process based on the expectations and priorities of individuals, group, community, or population.
- Engage in collaborative (shared) practice in providing high quality and cost efficient services to achieve positive health outcomes.
- Reflect and review own dietetic practice.
- Work independently and in partnership to integrate nutrition and dietetics into professional care/service.
- Respect the unique emotional, social, cultural, religious, ecological needs of individuals, groups, communities, or populations.
- Systematically search, judge, interpret and apply findings from food, nutrition, dietetic, social, behavioural and education sciences into practice.
- Identify, design and participate in research and audit to enhance the practice of clinical nutrition and dietetics.
- Apply food and nutrition science to solve problems.
- Adopt an evidence-based approach to dietetics practice.
- Share evidence-based dietetics and nutrition with colleagues and key stakeholders.
- Improve practice through continuous and systematic evaluation maintaining clear and concise records of all activities.
- Administer therapeutic diet and manage patients and other clients.
- Develop menus and recipes that are healthful, tasty, and cost-effective.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LG 105	Communication Skills	Core	4.5
CH124	Basic Inorganic Chemistry	Core	10
BT 112	Introduction to Information Technology	Core	10
CND 112	Human Anatomy	Core	22
CND 111	Organic Chemistry for Health Sciences	Core	10
DS 105	Development Perspectives	Core	7.5
	<b>Total</b>		<b>64</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 121	Medical Physiology	Core	22
MD 112	Medical Biochemistry	Core	20
MD 124	Biostatistics	Core	8
CND 121	Anthropology of Food and Nutrition	Core	10
DM 224	Disaster Science and Management	Elective	6

NS 124	Embryology and Human Growth	Core	10
	<b>Total</b>		<b>76</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
MD 212	Medical Microbiology and Immunology	Core	14
CND 211	Introduction to Food Science and Nutrition	Core	10
CND 212	Medical Epidemiology	Core	8
CND 213	Advanced Human Nutrition and Metabolism	Core	10
SY 215	Anthropological Perspective in Health	Elective	10
	<b>Total</b>		<b>52</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CND 221	Food Microbiology	Core	9
CND 222	Food Safety and Sanitation	Core	9
CND 223	Food Processing and Preservation	Core	9
CND 224	Food and Nutrition Assessment	Core	15
CND 225	Therapeutic Feeding	Core	15
MD 223	Medical Parasitology and Entomology	Core	20
CND 226	Food and Nutrition Practical Attachment – Industries and Regulatory Agencies	Core	24
	<b>Total</b>		<b>101</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CND 311	Nutrition through Life Cycle	Core	12
CND 312	Introduction to Health Systems	Core	6
CND 313	Sensory Evaluation of Foods and Product Development	Core	12
CND 314	Sport Nutrition and Exercise Physiology	Core	9
CND 315	Food and Nutrition in Disasters Management	Core	9
CND 316	Food and Nutrition Counselling	Core	8
MW 311	Reproductive Health I	Elective	10
	<b>Total</b>		<b>66</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CND 321	Maternal and Child Nutrition	Core	8
CND 322	Geriatric Nutrition	Core	8
CND 323	Medical Nutrition Therapy I	Core	15
CND 324	Diet Planning and Diseases 1	Core	12
CND 325	Professional Ethics and Issues in Clinical Nutrition and Dietetics	Core	8
CND 326	Clinical Nutrition and Dietetics Practicum I	Core	11

SY 329	Health Transition and Culture	Elective	8
CND 327	Community Nutrition Field Practical	Core	24
	<b>Total</b>		<b>94</b>
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CND 411	Nutrigenomics	Core	8
CND 412	Health Education and Health Promotion	Core	8
CND 413	Research Methodology I	Core	9
CND 414	Medical Nutrition Therapy 2	Core	15
CND 415	Diet Planning and Diseases 2	Core	12
CND 416	Clinical Nutrition and Dietetics Practicum 2	Core	11
CND 417	Gender and Food and Nutrition Issues	Elective	8
	<b>Total</b>		<b>71</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
CND 421	Catering and Food Service Management	Core	12
CND 422	Research Methodology II	Core	15
CND 423	Entrepreneurship and Business Management for Nutritionist	Core	8
CND 424	Clinical Nutrition and Dietetics Practicum 3	Core	22
CND 425	Nutrition Programme Planning, Management, and Evaluation	Core	10
DS 322	Food Security, Nutrition and Development	Elective	7
	<b>Total</b>		<b>74</b>

### Special Programme Requirements in TZS

1st year	2nd year	3rd year	4th year
Field allowance			
-	620,000	620,000	-
Research allowance			
-	-	-	620,000
Special faculty allowance			
180,000.00	431,000	556,000	221,000



### 2.8.3 Diploma in Nursing (Dip. Nursing)

#### Programme Description

The Diploma in Nursing is a full time three year programme organized in 6 semesters. Courses in each semester are taught and examined at the end of each semester. The academic year is the basic academic accounting unit. All courses in Diploma in Nursing are core courses. The major focus of the diploma in nursing course of study is to produce professional nurses capable of delivering safe health care in local, regional, and international health care systems. The programme prepares professional general trained nurses with the necessary knowledge, skills and attitudes required for the delivery of high quality and culturally sensitive services.

#### Learning Outcomes of the Programme

Upon successful completion of the Diploma in Nursing programme, graduates should be able to:

- Utilize therapeutic communication skills when interacting with clients, significant support persons, and other members of the healthcare team.
- Demonstrate clinical decision-making skills that reflect evidence-based nursing care of clients and significant support persons.
- Utilize the nursing process to provide individualized care to clients and significant support persons throughout the lifespan.
- Demonstrate, through nursing practice, belief in the innate value of each individual within his/her unique cultural heritage.
- Develop individualized teaching plans that utilize principles of teaching and learning for clients and significant support persons.

#### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
NS0111	Anatomy and Physiology	Core	18
NS0112	Biochemistry	Core	18
NS0113	Communication Skills	Core	8
NS0114	Basic Computer Applications and Health Information System	Core	8
NS0115	Human Growth and Development	Core	8
	<b>Total</b>		<b>60</b>
Semester Two			
Code	Course Title	Status	Credits

NS0121	Parasitology and Entomology	Core	15
NS0122	Fundamentals of Nursing and Ethics	Core	10
NS0123	Human Nutrition	Core	11
NS0124	Microbiology and Immunology	Core	12
NS0125	Pathophysiology	Core	12
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS0211	Medical and Surgical Nursing I	Core	15
NS0212	Infection Prevention and Control	Core	8
NS0213	Emergency Care/ Critical Care and Anesthesiology	Core	10
NS0214	Midwifery I	Core	15
NS0215	Clinical Pharmacology	Core	12
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS0221	Medical and Surgical Nursing II	Core	15
NS0222	HIV/ AIDS	Core	10
NS0223	Midwifery II	Core	15
NS0224	Health Education and Counselling	Core	10
NS0225	Epidemiology and Biostatistics	Core	10
	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS0311	Midwifery III	Core	15
NS0312	Community Health Nursing I	Core	5
NS0313	Paediatrics and Child Health Nursing	Core	15
NS0314	Mental Health Nursing I	Core	15
NS0315	Nursing Research I	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
NS0321	Mental Health Nursing II	Core	15
NS0322	Entrepreneurship	Core	8
NS0323	Nursing Research II	Core	15
NS0324	Leadership and Management	Core	10
NS0325	Community Health Nursing II	Core	12
	<b>Total</b>		<b>60</b>

## 2.9 SCHOOL OF LAW

The School of Law currently offers only one bachelor's degree programme; that is, Bachelor of Laws (LLB).

### 2.9.1 Bachelor of Laws (LLB)

#### Programme Description

The Degree of Bachelor of Laws is a four-year programme. Students will have an opportunity to specialize in many law courses. The curriculum is in line with the National Legal Training Guidelines, the Tanzania Commission for Universities (TCU), and the requirements of the Law School of Tanzania. The programme takes into account the existing practice at other universities in Tanzania and in other countries in respect of curriculum, admission, and examination regulations. The programme is ideally intended to produce high quality graduates with skills in litigation, research, argumentation, and reasoning in legal issues.

#### Learning Outcomes of the Programme

Upon successful completion of the LLB programme at The University of Dodoma, graduates should be able to:

- Demonstrate knowledge on theory and practice law.
- Apply critical and argumentation skills in law.
- Show competence and preparedness in legal practice, particularly being capable of offering legal opinions, legal representation, and mastering advocacy and litigation skills.
- Apply the law in solving legal and societal problems relevant to national and international practices.
- Demonstrate both procedural and practical skills in law, particularly applicable in litigation, and arbitration and mediation.

#### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
LW 1101	Constitutional Law and Legal Systems I	Core	10.5
LW 1102	Law of Contract I	Core	10.5
LW 1103	Legal Method I	Core	10.5
LW 1104	Criminal Law and Procedure I	Core	10.5
LW 1107	Communication Skills for Lawyers	Core	10.5
DS 102	Development Studies	Core	7.5
	<b>Total</b>		<b>60</b>

<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 1201	Constitutional Law and Legal Systems II	Core	10.5
LW 1202	Law of Contract II	Core	10.5
LW 1203	Legal Method II	Core	10.5
LW 1204	Criminal Law and Procedure II	Core	10.5
LW 1205	Family Law	Core	10.5
IT 111	Introduction to Information Technology	Core	7.5
	<b>Total</b>		<b>60</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 2101	Administrative Law I	Core	10.5
LW 2102	Public International Law I	Core	10.5
LW 2103	Land Law I	Core	10.5
LW 2104	Law of Torts I	Core	10.5
LW 2105	Law of Evidence I	Core	10.5
	Two Elective Courses	Electives	15
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 2127	East African Community Law		7.5
LW 2110	Banking Law		7.5
LW 2114	Investment Law		7.5
LW2131	Health Law		7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 2201	Administrative Law II	Core	10.5
LW 2202	Public International Law II	Core	10.5
LW 2203	Land Law II	Core	10.5
LW 2204	Law of Torts II	Core	10.5
LW 2205	Law of Evidence II	Core	10.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 2120	Insurance Law		7.5
LW 2128	Refugee Law		7.5
LW 2116	Law of the Child		7.5
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 3101	Jurisprudence I	Core	10.5

LW 3102	Business Associations Law	Core	10.5
LW 3103	Labour Law	Core	10.5
LW 3104	Legal Research	Core	10.5
LW 3105	Tax Law I	Core	10.5
LW 3106	Civil Procedure I	Core	10.5
	<b>Total</b>		<b>63</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 3201	Jurisprudence II	Core	10.5
LW 3206	Civil Procedure II	Core	10.5
LW 3205	Tax Law II	Core	10.5
LW 3202	Human Rights Law	Core	10.5
LW 3203	Clinical Law	Core	10.5
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>60</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 2119	Intellectual Property Law	Elective	7.5
LW 2122	International Humanitarian Law	Elective	7.5
LW 2113	Criminology and Penology	Elective	7.5
<b>Year Four</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 4101	Administration of Estate and Succession	Core	10.5
LW 4102	Private International Law	Core	10.5
LW 4103	Environmental Law	Core	10.5
LW 4106	Mining and Natural Resources Law	Core	10.5
	Three Elective Courses	Electives	22.5
	<b>Total</b>		<b>64.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 2124	International Trade and Finance Law	Elective	7.5
LW 2111	Disability Law	Elective	7.5
LW 2126	Competition and Consumer Protection Law	Elective	7.5
LW 2123	Capital Markets and Securities Law	Elective	7.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
LW 4201	LLB Dissertation	Core	20
LW 4202	Legal Ethics	Core	10.5
LW 4203	Legal Writing and Drafting	Core	10.5
LW 4204	Alternative Dispute Resolution (ADR)	Core	10.5
LW 4205	Cyber Law	Core	10.5
	<b>Total</b>		<b>62</b>

## 2.10 INSTITUTE OF DEVELOPMENT STUDIES (IDS)

The Institute of Development Studies offers the following undergraduate programmes:

1. Bachelor of Arts in Development Studies (BA DS)
2. Bachelor of Arts in Project Planning, Management, and Community Development (BA PPM & CD)

### 2.10.1 Bachelor of Arts in Development Studies (BA DS)

#### Programme Description

The Bachelor of Arts in Development Studies is one of the most popular multidisciplinary programmes offered at The University of Dodoma. It seeks to produce competent graduates who are the most sought-after in the labour market. The programme addresses the most important issues in the world today including development, poverty, inequality as well as sustainable development, focussing on the local and international contexts. In that regard, the programme equips students with skills and understanding of various theories, practice and activities which are useful to facilitate inclusive and holistic focused development.

#### Learning Outcomes of the Programme

At the end of the programme, graduates are expected to:

- Translate theory into practice of central issues of development.
- Demonstrate critical thinking in the application of different approaches in addressing social, political, economic, and other issues related to sustainable development.
- Demonstrate high level of maturity in the application of appropriate skills in dealing with development dynamics and challenges facing the world today.

#### Programme Structure

Year One			
Semester One			
Code	Course Title	Status	Credits
DS 102	Development Perspectives	Core	7.5
DS 111	Poverty and Socio-Economic Development	Core	10
DS 113	Gender and Socio-Economic Development	Core	10
LG 102	Communication Skills	Core	7.5
PM 111	Introduction to Project Planning Management	Core	10
PM 112	Rural Planning and Development	Elective	10
PO 112	Introduction to Public Administration	Elective	7.5

	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 121	Natural Resources Management and Development	Core	10
PM 121	Sustainable Agriculture Development	Core	10
DS 122	Science, Technology, and Development	Core	10
IT 111	Introduction to Information and Communication Technology	Core	7.5
DS 123	Governance, Civil Society, and Development	Core	7.5
DS 124	Poverty and Livelihood	Core	10
DS 125	Population, Demography, and Development	Core	10
PM 123	Community Empowerment and Development	Elective	10
	<b>Total</b>		<b>75</b>
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 211	Population Issues and Development	Core	10
DS 212	Natural Resource Conservation and Governance	Core	10
DS 213	Agricultural Transformation and Rural Development	Core	10
DS 214	Democratization, Governance, and Development	Core	10
PM 212	Poverty Analysis and Intervention	Core	10
SY 216	Introduction to Social Policy	Elective	10
PM 214	Contemporary Community Development Strategies	Elective	10
	<b>Total</b>		<b>70</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 221	Development Policy Planning and Analysis	Core	10
DS 222	Development Research Methods	Core	10
DS 223	Political Development, Conflict Resolution, and Peace Building	Core	10
DS 224	International Trade and Development	Core	10
DS 225	Decentralization and Development	Core	10
DS 220	Field Practical	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>70</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 224	Human Resources Management: Theory and Practice	Elective	10.5
PM 221	Manpower Planning and Administration	Elective	10

<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 311	Globalization and Socio-Economic Development	Core	10
DS 312	Industrialization and Development	Core	10
DS 313	Agricultural Policy and Planning	Core	10
DS 314	Environment and Sustainable Development	Core	10
PM 315	Project Incubation Process and Management	Core	10
PM 311	Project Planning and Management	Core	10
	One Elective Course	Elective	7.5
	<b>Total</b>		<b>67.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 311	Public Bureaucracies and Organizations	Elective	7.5
PO 314	Human Rights: Theory and Practice	Elective	10.5
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 321	Intervention Strategies for Development	Core	10
DS 322	Food, Nutrition, Security, and Development	Core	10
DS 323	Public and Private Sector Management	Core	10
DS 324	Regional Integration and Development	Core	10
PM 323	Community Economic Development	Core	10
DS 325	Research Project	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>70</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 322	Entrepreneurship Skills and Rural Investment	Elective	10
PO 321	Management of Public Resources	Elective	10

### **2.10.2 Bachelor of Arts in Project Planning, Management, and Community Development (BA PPM & CD)**

#### **Programme Description**

The programme of Bachelor of Arts in Project Planning, Management, and Community Development aims at training high-quality transformative community leaders and practitioners who will demonstrate skills, attitudes and capacity to address community development issues that empower individuals for a quality living. It caters for people who strive to lead others towards sustainable development through the application of holistic approaches to help build participatory and inclusive communities both in Tanzania and internationally. In order to achieve its



purpose, the programme is therefore made up of a combination of core courses in community development, project planning and management.

### Learning Outcomes of the Programme

Upon successful completion of this degree programme, graduates are expected to:

- Demonstrate knowledge of theory and practice of central issues in their field of project planning, management, and development.
- Demonstrate critical mind in the application of different strategic approaches and mechanisms of addressing social, political and economic issues related to project management and development in the society.
- Show high level of maturity in application of project planning and management appropriate skills in dealing with dynamics and challenges facing the world today and in the future.

### Programme Structure

<b>Year One</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 102	Development Perspectives	Core	7.5
LG 102	Communication Skills	Core	7.5
PM 111	Introduction to Project Planning and Management	Core	10
PM 112	Rural Planning and Development	Core	10
DS 113	Gender and Socio-Economic Development	Core	10
PM 113	Principles of Economics I	Core	10
PO 112	Introduction to Public Administration	Elective	7.5
	<b>Total</b>		<b>62.5</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 123	Community Empowerment and Economic Development	Core	10
PM 121	Sustainable Agriculture and Development	Core	10
PM 122	Participatory Development Planning	Core	10
PM 124	Principles of Economics II	Core	10
IT 111	Introduction to Information and Communication Technology	Core	7.5
DS 123	Governance, Civil Society, and Development	Core	10
DS 121	Natural Resources Management and Development	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>77.5</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>

DS 122	Science, Technology, and Development	Elective	10
DS 124	Poverty and Livelihood	Elective	10
<b>Year Two</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 211	Consultancy, Planning and Management	Core	10
PM 212	Poverty Analysis and Intervention	Core	10
PM 213	Principles of Strategic Planning and Management	Core	10
PM 214	Contemporary Community Development Strategies	Core	10
PM 216	Computing Application in Project Planning and Management	Core	10
DS 212	Natural Resources Conservation and Governance	Elective	10
DS 214	Democratization, Governance, and Development	Elective	10
	<b>Total</b>		<b>70</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 221	Manpower Planning and Administration	Core	10
PM 222	Project Economic Analysis	Core	10
PM 220	Field Practical	Core	10
PM 224	Project Monitoring and Evaluation	Core	10
DS 224	International Trade and Development	Core	10
DS 222	Development Research Methods	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>70</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PO 224	Human Resource Management: Theory and Practice	Elective	10
DS 225	Decentralization and Development	Elective	10
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 311	Project Planning and Management	Core	10
PM 312	Project Proposal Development	Core	10
PM 313	Business Planning and Development	Core	10
PM 314	Project Sustainability Theories and Application	Core	10
PM 315	Project Incubation Process and Management	Core	10
PM 316	Project Contract Management: Principles and Practices	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>70</b>

<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 311	Globalization and Socio-Economic Development	Elective	10
PO 314	Human Rights: Theory and Practice	Elective	10
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
PM 321	Project Conflict Analysis and Management	Core	10
PM 322	Entrepreneurship Skills and Rural Investment	Core	10
PM 323	Community Economic Development	Core	10
PM 324	Special Project	Core	10
PM 325	Project Appraisal	Core	10
DS 323	Public and Private Sector Management	Core	10
	One Elective Course	Elective	10
	<b>Total</b>		<b>70</b>
<b>Electives</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
DS 322	Food, Nutrition, Security, and Development	Elective	10
PO 324	Democracy: Theory and Practice	Core	10.5

## **2.11 CONFUCIUS INSTITUTE**

The Confucius Institute at The University of Dodoma (CIUDOM) offers only one bachelor's degree programme, that is, Bachelor of Arts in Oriental Languages (BA Chinese).

### **2.11.1 Bachelor of Arts in Oriental Languages (BA Chinese)**

#### **Programme Description**

The relationship between China and Tanzania is firm and stable. However, Chinese remains to be one of the far and unknown languages to many people in the World. Through learning Chinese language, students will acquire an opportunity to explore Chinese culture, spirit, trend and the Chinese people. The language is strongly reflected in the Chinese culture and the way of thinking. Students are welcome to take a ticket to experience China with learning Chinese with native Chinese speakers. At the same time, it is true that students can deepen an appreciation of their own language and culture.

This programme is designed to increase students' Chinese language ability synthetically. In other words, the students will be able to acquire the four well-balanced indispensable skills: speaking, listening, writing, and reading. In addition, this programme places a special emphasis on conversation. It goes without saying that improvement in the students' communication skills is important above all. It also aims to build students basis for favourable relations with Chinese people by talking about themselves, their surroundings, circumstances, and asking about those of others.

#### **Learning Outcomes of the Programme**

At the end of the programme, graduates should be able to demonstrate the following:

- Understanding of Chinese used in everyday situations such as coherent conversations and news reports at naturally-spoken speed.
- Ability to read materials on general topics written in Chinese language such as articles and commentaries in newspaper and magazines.
- Ability to use Chinese language in research and employment.
- Acquisition of a firm foundation for more advanced Chinese language study.
- Comprehension of Chinese custom and culture deeply reflected by Chinese language.

## Programme Structure

### Year One

#### Semester One

Code	Course Title	Status	Credits
OC111	Elementary Comprehensive Chinese 1	Core	10
OC112	Elementary Chinese Listening 1	Core	7.5
OC113	Elementary Spoken Chinese 1	Core	7.5
LG102	Communication Skills	Core	7.5
DS 102	Development Perspectives	Core	7.5
OC114	Elementary Chinese Reading 1	Core	7.5
OC115	Elementary Chinese Writing 1	Core	7.5
OC116	Chinese Cultural Activities 1	Core	7.5
	<b>Total</b>		<b>62.5</b>

#### Semester Two

Code	Course Title	Status	Credits
OC121	Elementary Comprehensive Chinese 2	Core	10
OC122	Elementary Chinese Listening 2	Core	10
OC123	Elementary Spoken Chinese 2	Core	10
OC124	Elementary Chinese Reading 2	Core	10
IT 111	Introduction to Information and Communication Technology	Core	7.5
OC125	Elementary Chinese Writing 2	Core	7.5
OC126	Chinese Cultural Activities 2	Core	7.5
	<b>Total</b>		<b>62.5</b>

### Year Two

#### Semester One

Code	Course Title	Status	Credits
OC211	Intermediate Comprehensive Chinese 1	Core	10
OC212	Intermediate Chinese Listening 1	Core	10
OC213	Intermediate Spoken Chinese 1	Core	10
OC214	Intermediate Chinese Reading 1	Core	10
OC215	Intermediate Chinese Writing 1	Core	10
OC216	Chinese Language and Culture 1	Core	10
	<b>Total</b>		<b>60</b>

#### Semester Two

Code	Course Title	Status	Credits
OC221	Intermediate Comprehensive Chinese 2	Core	10
OC222	Intermediate Chinese Listening 2	Core	10
OC223	Intermediate Spoken Chinese 2	Core	10
OC224	Intermediate Chinese Reading 2	Core	10
OC225	Intermediate Chinese Writing 2	Core	10
OC226	Chinese Language and Culture 2	Core	10

	<b>Total</b>		<b>60</b>
<b>Year Three</b>			
<b>Semester One</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
OC311	Advanced Comprehensive Chinese 1	Core	10
OC312	Advanced Chinese Listening 1	Core	10
OC313	Advances Spoken Chinese 1	Core	10
OC314	Advanced Chinese Reading 1	Core	10
OC315	Advanced Chinese Writing 1	Core	10
OC316	Comparative Research on China-Tanzania Culture 1	Core	10
	<b>Total</b>		<b>60</b>
<b>Semester Two</b>			
<b>Code</b>	<b>Course Title</b>	<b>Status</b>	<b>Credits</b>
OC321	Advanced Comprehensive Chinese 2	Core	10
OC322	Advanced Chinese Listening 2	Core	10
OC323	Advances Spoken Chinese 2	Core	10
OC324	Advanced Chinese Reading 2	Core	10
OC325	Advanced Chinese Writing 2	Core	10
OC326	Comparative Research on China-Tanzania Culture 2	Core	10
	<b>Total</b>		<b>60</b>

### **Special Programme Requirements**

Practical training is not a prerequisite, but students are encouraged to seek internships on their own so as to practice their Chinese language skills during holidays.

