

**MBEYA UNIVERSITY OF SCIENCE AND TECHNOLOGY**



**UNDERGRADUATE PROSPECTUS**

**2023/2024**

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## **1.0 INTRODUCTION**

### **1.1 VICE CHANCELLOR'S MESSAGE**

Mbeya University of Science and Technology (MUST) provides Technical Education, Research and Consultancy services. Due to rapid technological changes in the world today in many fields, there are ever widening technical skill gaps in the labour market for scientists, technicians and engineers. MUST has set for itself the task of responding to these changes at the same pace as that at which the technology is changing by making frequent reviews of its curricula and developing new curricula and Programmes to fit and fill the skill gaps that new technologies pose. MUST, therefore play its role of training scientists, engineers and technologists in numbers and quality so as to spearhead development in the public and private sector.

### **1.2 HISTORICAL BACKGROUND**

Mbeya University of Science and Technology (MUST) is a result of the transformation of Mbeya Institute of Science and Technology (MIST) through the University Act No. 7 of 2005 and the Charter of Mbeya University of Science and Technology, 2013. The Institute was a result of the transformation of the former Mbeya Technical College (MTC) through the National Council for Technical Education (NACTE) Establishment Order No. 9 of 2004 and Section 9 of the NACTE Act of 1997. MTC was officially launched on 1<sup>st</sup> September, 1986.

The transformation from MTC to MIST and then MUST was done to fulfill a long-term plan, made during the first phase Government, under the then President of the United Republic of Tanzania, the late Mwalimu Julius Kambarage Nyerere.

In a bid to expand and offer services to a wider client base, in 2015, Mbeya University of Science and Technology (MUST) acquired a new Campus (MUST Rukwa Campus College) which is in the Rukwa Region.

### **1.3 LOCATION**

Mbeya University of Science and Technology has two campuses. The Main Campus is located in Mbeya City in the Southern Highlands of Tanzania 10 km outside the city center and about 3 Km from the Mbeya – Tunduma Highway. The road to MUST branches from the highway at the Iyunga/Ituta – TAZARA area. MUST Rukwa Campus College is located at Kianda along the Tunduma- Sumbawanga road, about 50 km from Sumbawanga.

## **1.4 VISION, MISSION AND OBJECTIVES OF THE UNIVERSITY**

### **1.4.1 VISION**

The vision of Mbeya University of Science and Technology is to become the leading centre of excellence for knowledge, skills and applied education in Science and Technology.

### **1.4.2 MISSION**

The mission of Mbeya University of Science and Technology is to develop academically, technologically and socially competent students, staff and other stakeholders who will be responsive to the broader needs and challenges of the society specifically by:

- i. Facilitating appropriate tuition, practical training and support according to the needs of students and other customers.
- ii. Encouraging staff commitment to quality education and services including research, consultancy and innovation.
- iii. Fostering lifelong learning, honesty and responsibility.
- iv. Promoting an environment conducive to human development.

- v. Promoting effective entrepreneurship and usage of appropriate technology that meet national and international needs and standards through skills and practical oriented training, research and consultancy.

#### **1.4.3 UNIVERSITY OBJECTIVES**

- i. To offer training in science and technology, technical education and other training, thus developing a critical mass of highly trained manpower.
- ii. To formulate plans for the promotion, technological development and improvement of the quality of education and training being offered to students and other stakeholders.
- iii. To promote and encourage innovation, initiative and readiness amongst staff and students in their fields of specialization and study.
- iv. To collaborate with other institutions nationally and internationally in the initiation, promotion and conduct of technical education, science and technology Programmes.
- v. To carry out any other assignments given by the government through its various organs.

#### **1.5 ACCREDITATION**

Mbeya University of Science and Technology is fully registered and accredited by the Tanzania Commission for Universities (TCU) to conduct higher education Programmes.

#### **1.6 MEMBERSHIP**

Mbeya University of Science and Technology is a member of the following Institutions;

- i. The Association of Technical Universities and Polytechnics in Africa (ATUPA),
- ii. Commonwealth of Learning (CoL),
- iii. Inter University Council for East Africa (IUCEA),
- iv. African Network of Scientific and Technical Institutions (ANSTI) and
- v. Southern African Regional Universities Association (SARUA).

**1.7 SENIOR OFFICERS OF THE UNIVERSITY****Chancellor**

Hon. Amani Abeid Karume

**Chairperson of the University Council**

Hon. Zakia Hamdani Meghji

**1.8 MEMBERS OF THE COUNCIL****Hon. Zakia Hamdani Meghji**

Chairperson of the University Council

**Prof. Aloys N. Mvuma**

Vice Chancellor (ex-officio)

**Prof. Godliving Mtui**

Ag. Deputy Vice Chancellor Academic, Research and Consultancy (ex-officio)

**Dr. John P. John**

Ag. Deputy Vice Chancellor Planning, Finance and Administration (ex-officio)

**Prof. Ladslaus Laurent Mnyone**

Director of Technology and Innovation - Ministry of Education, Science and Technology

**Prof. Bakari M. Mwinyiwiwa**

Principal of the College of Engineering and Technology- University of Dar es Salaam

**Prof. Lughano Kusiluka**

Vice Chancellor- University of Dodoma

**Ms. Lilian Marwa**

Principal Finance Management Officer

**Ms. Jenifer Tondi**

Southern Highland Zonal Manager- CRDB

**Ms. Leticia Paschal Lutambi**

Women Committee Coordinator- Tanzania Higher Learning Institutions Trade Union (THTU) –MUST

**Dr. Hezron Mwakabona**

Chairman of MUST Academic Staff Association (MUSTASA)

**Mr. Charles Shema Fredy**

President of MUST Students' Organization (MUSTSO)

**Adv. Lugano Mwakilasa**

Corporate Counsel/Secretary to the Council

**1.9 EXECUTIVE OFFICERS OF THE UNIVERSITY****Vice-Chancellor**

Prof. Aloys N. Mvuma – PhD (Hiroshima, Japan), MSc. CIS (Shimane, Japan), BSc. Eng (UDSM).

**Ag. Deputy Vice Chancellor Academic, Research and Consultancy (ex-officio)**

Prof. Godliving Mtui – PhD (Kanazawa), MSc (Kanazawa), BSc. Hons (UDSM).

**Ag. Deputy Vice Chancellor Planning, Finance and Administration (ex-officio)**

Dr. John P. John - PhD. Energy Eng. (Berlin Tech. University-Germany), MSc. Elect. Eng. (UDSM), B. Eng. Elect. (DIT), FTC. (ATC).

**Principal MUST Rukwa Campus College**

Prof. Osmund Kaunde - PhD. Chem. Eng. (Leeds), MSc. (Leeds), BSc. (Eng) (UDSM).

**Principal of College of Engineering and Technology**

Prof. Zacharia Saimon Katambara - PhD (WITS), MSc Eng. (UDSM), BSc. Eng (UDSM).

**Principal of College of Science and Technical Education**

Dr. John P. John - PhD. Energy Eng. (Berlin Tech. University-Germany), MSc. Elect. Eng. (UDSM), B. Eng. Elect. (DIT), FTC. (ATC).

**Principal of College of Architecture and Construction Technology**

Dr. Mwajuma I. Lingwanda - PhD Geotechnical Eng. (UDSM), MSc. Highway Eng. (UDSM), PGD Civil Eng. (UDSM), ADE Civil Eng. (DIT). FTC Archt. (MTC).

**Principal of College of Humanities and Business Studies**

Dr. Visent T. Kipene - PhD (SUA), MBA (SUA), Bsc Ed (SUA), Dip.Ed. (Monduli).

**Ag. Principal of College of Information & Communication Technology**

Dr. Juma S. Ally – PhD in ICE (USTC, China), MSc. in CIS (HUST, China), BEng. in TE (HUST, China).

**Ag. Principal College of Agricultural Sciences and Technology**

Dr. Eliezer Brown Mwakalapa- PhD. Veterinary Sciences (Norwegian University of Life Sciences, Norway); MSc. Marine Sciences (UDSM); BSc. Aquaculture (SUA).

**Director of the Internationalization and Convocation Unit**

Dr. Buberwa M. Tibesigwa - PhD Eng. In Architecture (Chongqing University, China), M.Arch. (HIT China) B.Arch. (University of Dar es Salaam).

**Director of Quality Assurance**

Dr. Lulu C. Luflenge - PhD (PJ TSAU), MA (Rural Development) (SUA), BSc (Home Economics and Human Nutrition) (SUA).

**Director of the Center for Innovation and Technology Transfer**

Dr. Juma A. Mpangule - PhD in Civil Engineering and Construction Management (Technical University Dortmund, Germany), MSc. Const. Mgt (ARU), BSC (BE) – UDSM

**Ag. Director of the Centre for Gender Studies**

Dr. Yasinta Amani Kassimba- PhD in Management in Business Management (Supply Chain) CUEB – (Beijing), Master of Science in supply chain Management- University of Bolton. Bsc.in Procurement and supply chain Management – SAUT Mwanza

**Director of Postgraduate Studies, Research and Publication**

Dr. Asheri Mwidege - PhD (SUA); MA Econ. BSc. Ed. (UDSM), Dip. In Ed. (Mkwawa).

**Ag. Director of Undergraduate Studies**

Dr. Muya S. Mgaza - PhD in Geotechnical Engineering (HUST) Msc in Geotechnical Engineering (HUST), BSc in Geology (UDSM).

**Director of Administration and Human Resource Management**

Ms. Devota M. Sanga – Master of Human Resource Management (Mzumbe), Bachelor (Mzumbe).

**Director of Finance**

Ms. Willieth Tilwetwa – MBA Finance (OUT), CPA (NBAA) & Adv. Dipl. Acc. (IAA).

**Director of Planning and Development**

Mr. Cornel Msemwa - MBA (SUA), BSc. FST (SUA).

**Director of Library Services**

Mr. Novatus Luanda – MA. (UDSM), BA. (UDSM), DIP (NYEGEZI).

**Ag. Director of Information and Communication Technology Services**

Mr. Imani Mwalumbwe - MSc (UDSM), MBA (Coventry Univ), PGD (UDSM), Adv.Diploma (IFM).

**Director of MUST Consultancy Bureau**

Mr. Ivor J. Ndimbo - Master of Technology in Water Resources Development. (IIT-Roorkee INDIA), BSc. Civil Engineering (UDSM).

**Chief Internal Auditor**

Mr. Frank Kindimba - MBA Finance (ASSAM, India), CPA (NBAA) & BAF (MU).

**Director of Estates Management**

Dr. Hieronimi Mboya- PhD in Material Science and Engineering (Structural Materials), Msc. Structural Engineering, Postgraduate Diploma- Structural Engineering, Advanced Diploma-Civil Engineering.

**Director of Students Affairs**

Mr. Augustine Matem - MA in Ed. (UDOM) BSc. Ed. (UDSM), Dip.Ed. (MKWAWA).

**Corporate Counsel**

Adv. Lugano Mwakilasa - LL.M. (UDSM) LL.B. (Tumaini University - Iringa).

**1.10 ACADEMIC ORGANS**

Mbeya University of Science and Technology consists of five (5) Colleges and one (1) Campus College.

**1.10.1 DEPARTMENTS UNDER THE COLLEGE OF ENGINEERING AND TECHNOLOGY (CET)**

- i. Department of Civil Engineering;
- ii. Department of Electrical and Power Engineering;
- iii. Department of Geosciences and Mining Technology;
- iv. Department of Mechanical and Industrial Engineering; and
- v. Department of Chemical and Environmental Engineering.

**1.10.2 DEPARTMENT UNDER THE COLLEGE OF ARCHITECTURE AND CONSTRUCTION TECHNOLOGY (CoACT)**

- i. Department of Architecture and Art Design;
- ii. Department of Construction Management and Technology; and
- iii. Department of Urban Planning and Real Estate Studies.

**1.10.3 DEPARTMENT UNDER THE COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGY (CoICT)**

- i. Department of Computer Science and Engineering;
- ii. Department of Electronics and Telecommunications Engineering;
- iii. Department of Informatics; and
- iv. Department of Information Systems and Technology.

**1.10.4 DEPARTMENTS UNDER THE COLLEGE OF SCIENCE AND TECHNICAL EDUCATION (CoSTE)**

- i. Department of Applied Sciences;
- ii. Department of Medical Sciences and Technology;
- iii. Department of Natural Sciences;
- iv. Department of Technical Education;
- v. Department of Earth Sciences; and
- vi. Department of Mathematics and Statistics.

**1.10.5 DEPARTMENTS UNDER THE COLLEGE OF HUMANITIES AND BUSINESS STUDIES (CoHBS)**

- i. Department of Business Management; and
- ii. Department of Humanities.

**1.10.6 DEPARTMENTS UNDER THE COLLEGE OF AGRICULTURAL SCIENCE AND TECHNOLOGY (CoAST)**

- i. Department of Food Sciences and Technology; and
- ii. Department of Crop Science and Horticulture.

**1.10.7 DEPARTMENTS UNDER MUST RUKWA CAMPUS COLLEGE (MRCC)**

- i. Department of Business Management; and
- ii. Department of Mechanical and Industrial Engineering.

**1.11 CONTACT ADDRESSES AND TELEPHONE NUMBERS****General Administration Mbeya University of Science and Technology**

P.O. Box 131

Mbeya, Tanzania.

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**Vice Chancellor**

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**Directorate of Undergraduate Studies**

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**College of Science and Technical Education**

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**College of Architecture and Construction Technology**

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E-mail: coact@must.ac.tz

**College of Humanities and Business Studies**

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**College of Information and Communication Technology**

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**MUST Rukwa Campus College**

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**Industrial Linkage and Labour**

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E-mail: dillm@must.ac.tz

**MUST Health Centre**

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**Students' Organization (MUSTSO)**

P.O. Box 131, Mbeya

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**Directorate of Postgraduate Studies, Research and Publications**

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E-mail: dpsrp@must.ac.tz

**Centre for Virtual Learning and Continuing Education**

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E-mail: cvce@must.ac.tz

**MCB**

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**Directorate of Students Services**

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Fax: 255 (0) 25 2957552

E-mail: dss@must.ac.tz

**Department of Examinations**

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E-mail: de@must.ac.tz

**Department of Admissions**

P.O. Box 131, Mbeya

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E-mail: admission@must.ac.tz

**Communication and Marketing Unit**

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## **1.12 STUDENTS SERVICES**

### **1.12.1 MEDICAL SERVICES**

The University has a Dispensary, which provides clinical and health services. The Dispensary has full-time Medical Staff who attend students and University staff as well as the neighbouring community.

All students are required to join the National Health Insurance Fund (NHIF), which guarantees medical treatment at the University Dispensary and elsewhere.

All New Year students are required to furnish the University with a medical report, including a chest X-ray from a recognized medical practitioner or medical officer for registration. Medical check-up service can be obtained at the University Dispensary by paying a small amount of TZS 5,000/=.

### **1.12.2 STUDENTS WELFARE**

The Directorate of Students Services (DSS) is responsible to provide administrative support for students, general information for both current and past students, personal and social at the University. The Director of Students Services is assisted by two Heads of Departments: Students Welfare Services and Students Governance. The head of Students welfare is assisted by Wardens, Janitors and Spots/Games Tutors.

The directorate also provides the following facilities: residence, catering, games and sports. The Director of Students Services oversees the activities of students' organizations and provides general guidance and counselling in social, financial, academic and worship issues.

### **1.12.3 RESIDENCE**

The University has limited on-campus accommodation spaces and therefore only few students accommodated in University hostels. The majority of students should find their own accommodation outside the campus. Students who secure on-campus accommodation are obliged to pay accommodation fees at an authorized rate. All payments for on-campus accommodation shall be made in advance and no student shall be accommodated without payment of accommodation fee.

Currently, the University has four (4) hostel blocks with a capacity to accommodate 2100 students at a time. Priority for on-campus accommodation is given to certificate students, government sponsored Diploma students, female students, foreign students and those with disabilities. Regardless of the Programme one is undertaking, the University will not offer accommodation for students with children; such students will be required to look for their own accommodation off-campus. All students will be required to observe the student by-laws and Students Accommodation guidelines 2022.

### **1.12.4 MBEYA UNIVERSITY OF SCIENCE AND TECHNOLOGY STUDENTS' ORGANIZATION (MUSTSO)**

Formal student activities are administered by the Mbeya University of Science and Technology Students Organization (MUSTSO). The organization deals with students' academic, social and recreational activities. Every MUST full time registered student is automatically a member of MUSTSO. The students' organization shall address itself to aspects of representing students' interest in various decision-making bodies such as College boards, Senate, Council Committees and University Council. MUSTSO under leadership of its president is a formal active voice of students, within and outside the University.

Under MUSTSO, there are other affiliated organizations such as religious and foreign students' organizations.

### **1.12.5 GAMES AND SPORTS**

The University has sports facilities that include football grounds, volleyball, tennis, netball, and basketball courts. Students are therefore, encouraged to participate in athletics, jogging, table tennis, football, basketball, and netball.

Mbeya University of Science and Technology, takes part in sports and games competitions organized by various sports bodies, such as the East African University Sports Federation (S), East, Central and Southern African Universities Sports Association (ECSAUSA), the Federation of African University Sports (FASU) and Federation of International University Sports (FISU), Tanzania Universities Sports Association (TUSA).

#### 1.12.6 CATERING SERVICES

Catering services at the University are free for Diploma Government sponsored students. The services are commercialized for all other students. Under commercialization, students are required to pay for their meals. The cafeteria services are outsourced to private catering service providers approved by the University to give the meal service to students. Students are not allowed to cook in the halls of residence and therefore are required to use the catering services approved by the University.

#### 1.12.7 RELIGIOUS ACTIVITIES

MUST is a non-religious institution but it provides opportunities to students to participate in various faiths. Religious facilities and services are available on campus and students are free to join in any one of the religious groups existing in the University.

#### 1.12.8 BANKING SERVICES

Financial facilities include (CRDB and NMB) Automatic Teller Machines (ATMs) which are installed within the campus. Other services include money transfer facilities are provided by major mobile phone companies. Bank services are provided by Bank Agents within the campus and in the city centre.

#### 1.13 UNIVERSITY LIBRARY

The Dr. Magufuli Library offers information services to support roles of the University in teaching, learning and research activities. It has well trained staff members who can assist in meeting user needs and, it provides huge and conducive reading space for users. Also, it provides information resources in both print and electronic formats in which the available print resources contain text and reference books for all courses offered at MUST including those in Engineering, Science and Technology, Technical Education as well as Business Administration. In addition, it has computer rooms to facilitate training and access to electronic resources in CD ROMS as well as online resources. Furthermore, the Dr. Magufuli Library provides access to various international journal databases through annual subscription to those databases. Other services available in the library are: wireless internet, printing, photocopying, cloak room service where users can keep their bags while studying in the library.

##### **Working Hours**

##### ***During Semester***

08:30 am – 09:00 pm EAT (Monday – Friday)  
Friday)

08:30 am – 12:30 pm EAT (Saturday)

02:00 pm – 06:00 pm EAT (Sunday)

##### ***During Vacation***

8:00 am – 03:30 pm EAT (Monday –

**Public Holidays: Closed**

#### 1.14 VIRTUAL AND CONTINUING EDUCATION SERVICES

The services on virtual and continuing education are offered by the Centre for Virtual and Continuing Education (CVCE). The CVCE has two departments: Virtual Education Department and Continuing Education Department. The Virtual Education Department is responsible for coordinating online non-degree and degree programmes while the Continuing Education Department is responsible for coordinating face to face short courses at Campus. The CVCE is the best place for educational development. Currently, the CVCE is developing curricula which will

be offered through face-to-face sessions and distance education mode for non-degree educational certificate, virtual education degree and non-degree programmes. With this directorate, a learner will learn a specific topic of education and be competent in that area of a discipline. Also, the CVCE offers short courses including Chinese language. Furthermore, it conducts sensitization campaign annually by visiting various secondary schools in Tanzania to encourage female students as well as male students to opt for science subjects at secondary school level.

#### **1.15 INNOVATION AND TECHNOLOGY TRANSFER SERVICES**

The innovation and technology transfer services are offered by the Centre for Innovation and Technology Transfer (CITT). The University established CITT to promote the generation of ideas, the creation of new knowledge, technology licensing, intellectual property securing, venture capital and funding, and the development of business plans and business growth. CITT is geared towards co-operation with science and business; it offers various types of support for students and staff, start-ups and scale-ups. CITT also aims to contribute to Tanzania's social and economic development by providing quality supervision and coordination of all inventions, innovation and entrepreneurship activities and initiatives that result in the creation of spin-offs and start-ups, thereby contributing to Tanzania's diversification and economic self-reliance of current and future generations. In this view, the role of CITT is to foster creativity by bringing and managing innovative, technological, and entrepreneurship development. Overall, CITT's mission is to provide objectives, guidelines, procedures, and standards for managing inventions, innovations, entrepreneurship, and technology transfer activities through;

- i. Developing, reviewing and implementing programmes, policies and guidelines in the field of innovation and technology transfer;
- ii. Monitoring and evaluating performance of innovation and technology transfer programmes;
- iii. Facilitating training and mentoring of inventors and innovators through incubation, seminars, workshops and boot camps;
- iv. Managing research activities in liaison with the Directorate of Postgraduate Studies, Research and Publications; and
- v. Providing consultancy services in Liaison with the Directorate of Internationalization and Convocation Unit.

#### **1.16 UNIVERSITY QUALITY ASSURANCE**

The University's Quality Assurance mission is to create consciousness of quality standards and best practices, facilitate and enhance quality by Compliance to the efficient and effective delivery of teaching, learning and research, services and overall governance through cooperation and interaction among staff members, students as well as the external stakeholders of Mbeya University of Science and Technology.

The objectives of the QA are to:

- i. Safeguard and ensure the integrity of academic awards of the University;
- ii. Provide guidance in development and implementation of quality assurance and enhancement procedures and practices;
- iii. Outline the internal and external quality assurance procedures and practices necessary to realize the vision and mission as well as uphold the core functions of the University;
- iv. Layout the structure to ensure that quality assurance systems are coordinated and managed with maximum effectiveness; and

- v. Facilitate development of a culture of self-evaluation and continuous quality improvement in the University.

#### 1.17 UNIVERSITY COLLABORATION

The University collaborates with peer universities and other higher learning institutions. Currently, the University is collaborating with various international higher learning institutions including; The University of Texas Rio Grande Valley (UTRGV), the University of Applied Sciences Burgenland in Austria, Southern Methodist University (SMU), Malawi University of Science and Technology, Kassel Through East Africa Network of Learning Administrators (EANLA), Hanze University of Applied Sciences in the Netherlands, Meru University of Science and Technology (MUST-Kenya), Chuka University in Kenya, Acharya Institutes (ACHARYA) in India. National wise, the University has Memoranda of Understanding in academic activities with the University of Dar es Salaam, Ardhi University (ARU), University of Dodoma (UoD), Confucius Institute at the University of Dar es Salaam, Sokoine University of Agriculture (SUA), Muhimbili University of Health and Allied Sciences (MUHAS), The Open University of Tanzania (OUT), Dar es Salaam Institute of Technology (DIT), Arusha Technical College (ATC), Ardhi Institute -Morogoro (ARIMO), Teofilo Kisanji University (TEKU) and The Technical and Vocational Education and Training (TVET).

Furthermore, the University is collaborating with other non-academic institutions and companies including;

- i. United Nations Development Program (UNDP),
- ii. Tanzania Industrial Research and Development Organization (TIRDO),
- iii. Small Industries Development Organization (SIDO),
- iv. Tanzania Communications Regulatory Authority (TCRA),
- v. e-Government,
- vi. Mbeya Cement,
- vii. MIC Tanzania Limited (TIGO),
- viii. HELP TO HELP,
- ix. All Green Energy,
- x. Rujewa Integrated Efforts to Fight Poverty (RIEFP),
- xi. HUAWEI,
- xii. Mwanza Polytechnic Institute (MWAPOI),
- xiii. K'S Hospital
- xiv. Youth For Africa (YOA).
- xv. YARA Tanzania Ltd
- xvi. Tanzania Geothermal Development Company (TGDC)
- xvii. Tanzania Agricultural Research Institute (TARI)
- xviii. Nature Tanzania
- xix. Ifakara Health Institute
- xx. Mbeya Zonal Referral Hospital,
- xxi. Universal Communications Service Access Fund (UCSAF) – Tanzania
- xxii. Tanzania Engineering and Manufacturing Design Organization (TEMDO)

**2.0 UNIVERSITY CERTIFICATE, DIPLOMA AND BACHELOR DEGREE AWARDS****2.1 DIPLOMA AND BACHELOR DEGREES OFFERED BY THE COLLEGE OF ENGINEERING AND TECHNOLOGY (CET)**

- a) Diploma in Civil Engineering;
- b) Diploma in Highway Engineering;
- c) Diploma in Electrical and Electronic Engineering;
- d) Diploma in Mechanical Engineering;
- e) Diploma in Mechatronics Engineering;
- f) Diploma in Mining Engineering;
- g) Diploma in Mechanical Engineering with Industrial Safety and Occupational Health;
- h) Diploma in Automotive and Autoelectrical Engineering;
- i) Bachelor of Civil Engineering;
- j) Bachelor of Electrical and Electronic Engineering and
- k) Bachelor of Mechanical Engineering.

**2.2 DIPLOMA AND BACHELOR DEGREE PROGRAMMES OFFERED BY THE COLLEGE OF ARCHITECTURE AND CONSTRUCTION TECHNOLOGY (CoACT)**

- a) Diploma in Architecture;
- b) Bachelor of Technology in Architecture and
- c) Bachelor of Technology in Landscape Architecture.

**2.3 DIPLOMA AND BACHELOR DEGREE PROGRAMMES OFFERED BY THE COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGY (CoICT)**

- a) Diploma in Computer Engineering;
- b) Diploma in Computer Science;
- c) Diploma in Information and Communication Technology;
- d) Diploma in Electronic and Telecommunication Engineering;
- e) Diploma in Business Computing;
- f) Bachelor of Computer Engineering;
- g) Bachelor of Computer Science;
- h) Bachelor of Science in Information and Communication Technology;
- i) Bachelor of Engineering in Telecommunication Systems; and
- j) Bachelor of Engineering in Data Science.

**2.4 DIPLOMA AND BACHELOR DEGREE PROGRAMMES OFFERED BY THE COLLEGE OF SCIENCE AND TECHNICAL EDUCATION (CoSTE)**

- a) Diploma in Biomedical Equipment Engineering;
- b) Diploma in Laboratory Science and Technology;
- c) Diploma in Food Science and Technology;
- d) Diploma of Technical Education in Architectural Technology;
- e) Diploma of Technical Education in Civil Engineering;
- f) Diploma of Technical Education in Electrical and Electronic Engineering;
- g) Diploma of Technical Education in Mechanical Engineering;
- h) Diploma in Biotechnology;
- i) Bachelor of Technical Education in Architectural Technology;
- j) Bachelor of Technical Education in Civil Engineering;
- k) Bachelor of Technical Education in Electrical and Electronics Engineering;
- l) Bachelor of Technical Education in Mechanical Engineering;
- m) Bachelor of Science with Education in the following specializations;
  - Chemistry and Biology
  - Chemistry and Mathematics
  - Chemistry and Physics
  - Physics and Mathematics
- n) Bachelor of Laboratory Science and Technology;
- o) Bachelor of Science in Food Science and Technology
- p) Bachelor of Science in Natural Resources Conservation
- q) Bachelor of Science in Chemistry;
- r) Bachelor of Science in Biotechnology; and
- s) Bachelor of Science in Environmental Science and Technology.

**2.5 CERTIFICATE, DIPLOMA AND BACHELOR DEGREE PROGRAMMES OFFERED BY THE COLLEGE OF HUMANITIES AND BUSINESS STUDIES (CoHBS)**

- a) Certificate in Business Administration;
- b) Certificate in Agribusiness with Technology;
- c) Diploma in Business Administration;
- d) Diploma in Agribusiness with Technology;
- e) Diploma of Business Administration in Accounting and Finance;
- f) Diploma of Business Administration in Marketing and Entrepreneurship;
- g) Bachelor of Business Administration with the following specialization:
  - Accounting and Finance;
  - Human Resources Management;

- Marketing and Entrepreneurship and
  - Procurement and Supply Chain Management.
- h) Bachelor of Agribusiness Management and Technology.

**2.6 DIPLOMA AND BACHELOR DEGREE PROGRAMMES OFFERED BY THE COLLEGE OF AGRICULTURAL SCIENCES AND TECHNOLOGY (CoAST)**

- a) Diploma in Food Science and Technology; and
- b) Bachelor of Science in Food Science and Technology.

**2.7 CERTIFICATES, DIPLOMA AND BACHELOR DEGREE PROGRAMMES OFFERED BY MUST RUKWA CAMPUS COLLEGE (MRCC)**

- a) Certificate in Business Administration;
- b) Diploma in Business Administration;
- c) Diploma in Mechanical Engineering;
- d) Bachelor of Mechanical Engineering and
- e) Bachelor of Business Administration with the following specialization: -
- Accounting and Finance
  - Human Resources Management
  - Marketing and Entrepreneurship
  - Procurement and Supply Chain Management.

**3.0 ACTIVITIES UNDER THE CENTRE FOR VIRTUAL LEARNING AND CONTINUING EDUCATION**

- i. Managing and Administering Short courses Programmes.
- ii. Managing and Administering Distance Learning Programmes.
- iii. Managing and administering courses through Flexible Skills Development.

**4.0 GRADUATION AWARDS FOR STUDENTS**

The following list indicates the types of academic awards/prizes offered by the University:

- i. Chancellor's Prize
- ii. University Best Female Student Award
- iii. Undergraduate Programme Award
- iv. Best Student's Final Project Award
- v. Best Research Award
- vi. Innovation Award
- vii. Individual/Organisation/Company Prizes

## 5.0 FEES AND BURSARIES

Students pursuing Diploma Programmes may join the University under either Government sponsorship or private sponsorship. Students pursuing Bachelor Programmes may apply for scholarships or loans from the Higher Education Students Loan Board (HESLB).

Note: Fees may change due to prevailing circumstances. The fee structure for Government and privately sponsored students are as shown in the following tables:

### 5.1 FEE STRUCTURE FOR DIPLOMA STUDENTS (UQF 6)

#### 5.1.1 GOVERNMENT SPONSORED STUDENTS

**Table 1:** Fee structure for Diploma government sponsored students in (TZS)

S/N	Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year
<b>1</b>	<b>Tuition fee (cost sharing fee)</b>	-	<b>130,000</b>	<b>130,000</b>
<b>2</b>	<b>Other Expenses</b>			
i	Caution Money (Non refundable)	20,000	-	-
ii	Hiring University mattress	10,000	10,000	10,000
iii	Hiring University bed	10,000	10,000	10,000
iv	Library membership fees	30,000	30,000	30,000
v	Examination fee	50,000	50,000	50,000
vi	Certification	40,000	-	-
vii	Students' Organization fee	10,000	10,000	10,000
viii	Registration fee	10,000	10,000	10,000
ix	Student's Identity Card	10,000	10,000	10,000
x	Medical Contribution (NHIF)	50,400	50,400	50,400
xi	Capitation fee	10,000	10,000	10,000
xii	Prospectus	-	-	-
xiii	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Subtotal; Other Expenses</b>	<b>270,400</b>	<b>210,400</b>	<b>210,400</b>
	<b>Total fees</b>	<b>270,400</b>	<b>340,400</b>	<b>340,400</b>

#### 5.1.2 PRIVATE SPONSORED STUDENTS (UQF 6)

**Table 2:** Fee structure for Diploma in Engineering, Architecture, Science Courses and Business computing (1<sup>st</sup> Year) private sponsored students in (TZS)

S/N	Item	In campus		Off campus
		Meals and accommodation	Accommodation Only	
<b>1</b>	<b>Tuition fee</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>
<b>2</b>	<b>Other Expenses</b>			
i	Meal Costs	1,176,000		
ii	Accommodation	107,100	107,100	
iii	Caution money (Non refundable)	20,000	20,000	20,000
iv	Library membership fees	30,000	30,000	30,000

v	Examinations fee	50,000	50,000	50,000
vi	Certification	40,000	40,000	40,000
vii	Students' Organization fee	10,000	10,000	10,000
viii	Registration fee	10,000	10,000	10,000
ix	Student's Identity Card	10,000	10,000	10,000
x	Medical Contribution (NHIF)	50,400	50,400	50,400
xi	Capitation fee	10,000	10,000	10,000
xii	Prospectus	-	-	-
xiii	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total; Other Expenses</b>	<b>1,533,500</b>	<b>357,500</b>	<b>250,400</b>
	<b>Total fees</b>	<b>2,433,500</b>	<b>1,257,500</b>	<b>1,150,400</b>

**Table 3:** Fee Structure for Certificate and Diploma in Business Administration and Agri business Course (1<sup>st</sup> Year) Private sponsored students in (TZS)

S/N	Item	In campus		Off campus
		Meals and accommodation	Accommodation Only	
<b>1</b>	<b>Tuition fee</b>	<b>700,000</b>	<b>700,000</b>	<b>700,000</b>
<b>2</b>	<b>Other Expenses</b>			
I	Meal Costs	1,176,000	-	-
Ii	Accommodation	107,100	107,100	-
iii	Caution money (Non refundable)	20,000	20,000	20,000
Iv	Library membership fees	30,000	30,000	30,000
V	Examinations fee	50,000	50,000	50,000
Vi	Certification	40,000	40,000	40,000
Vii	Students' Organization fee	10,000	10,000	10,000
viii	Registration fee	10,000	10,000	10,000
Ix	Student's Identity Card	10,000	10,000	10,000
X	Medical Contribution (NHIF)	50,400	50,400	50,400
Xi	Capitation fee	10,000	10,000	10,000
Xii	Prospectus	-	-	-
Xiii	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total ; Other Expenses</b>	<b>1,533,500</b>	<b>357,500</b>	<b>250,400</b>
	<b>Total fees</b>	<b>2,233,500</b>	<b>1,057,500</b>	<b>950,400</b>

**Table 4:** Fee structure for Diploma in Engineering, Architecture and Science Courses (2<sup>nd</sup>& 3<sup>rd</sup> Year) private sponsored students in (TZS)

S/N	Item	In campus		Off campus
		Meals and accommodation	Accommodation only	
<b>1</b>	<b>Tuition fee</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>
<b>2.0</b>	<b>Other Expenses</b>			
I	Meal Costs	1,142,400	-	-

Ii	Accommodation	107,100	107,100	-
Iii	Caution money	-	-	-
Iv	Library membership fees	30,000	30,000	30,000
V	Examinations fee	50,000	50,000	50,000
Vi	Certification	-	-	-
vii	Students' Organization fee	10,000	10,000	10,000
viii	Registration fee	10,000	10,000	10,000
Ix	Student's Identity Card	10,000	10,000	10,000
X	Medical Contribution (NHIF)	50,400	50,400	50,400
xi	Capitation fee	10,000	10,000	10,000
xii	Prospectus	-	-	-
xiii	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total ; Other Expenses</b>	<b>1,439,900</b>	<b>297,500</b>	<b>190,400</b>
	<b>Total fees</b>	<b>2,339,900</b>	<b>1,197,500</b>	<b>1,090,400</b>

**Table 5:** Fee structure for Diploma in Business Administration and Agri Business Course (2<sup>nd</sup> and 3<sup>rd</sup> Year) private sponsored students in (TZS)

S/N	Item	In campus		Off campus
		Meals and accommodation	Accommodation Only	
<b>1</b>	<b>Tuition fee</b>	<b>700,000</b>	<b>700,000</b>	<b>700,000</b>
<b>2</b>	<b>Other Expenses</b>			
I	Meal Costs	1,142,400	-	-
Ii	Accommodation	107,100	107,100	-
Iii	Caution money (Non refundable)	-	-	-
Iv	Library membership fees	30,000	30,000	30,000
V	Examinations fee	50,000	50,000	50,000
Vi	Certification	-	-	-
Vii	Students' Organization fee	10,000	10,000	10,000
viii	Registration fee	10,000	10,000	10,000
Ix	Student's Identity Card	10,000	10,000	10,000
X	Medical Contribution (NHIF)	50,400	50,400	50,400
Xi	Capitation fee	10,000	10,000	10,000
xii	Prospectus	-	-	-
xiii	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total ; Other Expenses</b>	<b>1,439,900</b>	<b>297,500</b>	<b>190,400</b>
	<b>Total fees</b>	<b>2,139,900</b>	<b>997,500</b>	<b>890,400</b>

**Table 6:** Fee structure for Diploma in **Biotechnology** (1<sup>st</sup> Year) private sponsored students in (TZS)

S/N	Item	In campus		Off campus
		Meals and accommodation	Accommodation Only	
<b>1</b>	<b>Tuition fee</b>	<b>1,100,000</b>	<b>1,100,000</b>	<b>1,100,000</b>

<b>2</b>	<b>Other Expenses</b>			
i	Meal Costs	1,176,000		
ii	Accommodation	107,100	107,100	
iii	Caution money (Non refundable)	20,000	20,000	20,000
iv	Library membership fees	30,000	30,000	30,000
v	Examinations fee	50,000	50,000	50,000
vi	Certification	40,000	40,000	40,000
vii	Students' Organization fee	10,000	10,000	10,000
viii	Registration fee	10,000	10,000	10,000
ix	Student's Identity Card	10,000	10,000	10,000
x	Medical Contribution (NHIF)	50,400	50,400	50,400
xi	Capitation fee	10,000	10,000	10,000
xii	Prospectus	-	-	-
xiii	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total; Other Expenses</b>	<b>1,533,500</b>	<b>357,500</b>	<b>250,400</b>
	<b>Total fees</b>	<b>2,633,500</b>	<b>1,457,500</b>	<b>1,350,400</b>

**Table 7:** Fee structure for Diploma in **Biotechnology** (2<sup>nd</sup>& 3<sup>rd</sup> Year) private sponsored students in (TZS)

S/N	Item	In campus		Off campus
		Meals and accommodation	Accommodation only	
<b>1</b>	<b>Tuition fee</b>	<b>1,100,000</b>	<b>1,100,000</b>	<b>1,100,000</b>
<b>2.0</b>	<b>Other Expenses</b>			
I	Meal Costs	1,142,400	-	-
Ii	Accommodation	107,100	107,100	-
Iii	Caution money	-	-	-
Iv	Library membership fees	30,000	30,000	30,000
V	Examinations fee	50,000	50,000	50,000
Vi	Certification	-	-	-
vii	Students' Organization fee	10,000	10,000	10,000
viii	Registration fee	10,000	10,000	10,000
Ix	Student's Identity Card	10,000	10,000	10,000
X	Medical Contribution (NHIF)	50,400	50,400	50,400
xi	Capitation fee	10,000	10,000	10,000
xii	Prospectus	-	-	-
xiii	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total ; Other Expenses</b>	<b>1,439,900</b>	<b>297,500</b>	<b>190,400</b>
	<b>Total fees</b>	<b>2,539,900</b>	<b>1,397,500</b>	<b>1,290,400</b>

**5.2 FEES STRUCTURE FOR BACHELOR PROGRAMME FULL-TIME STUDENTS (UQF 8)**

**5.2.1 COSTS PAYABLE TO THE UNIVERSITY BY BACHELOR OF SCIENCES, EDUCATION AND ICT STUDENTS (3 YEARS PROGRAMMES)**

**Table 8:** University’s Fees and Other Expenses for Bachelor students under 3 years programme in (TZS) Sciences, Education and ICT

S / N	Description	UQF 8 (1 <sup>st</sup> Year)	UQF 8 (2 <sup>nd</sup> Year)	UQF 8 (3 <sup>rd</sup> Year)
<b>1.0</b>	<b>Cost Sharing Fee</b>	<b>1,100,000</b>	<b>1,100,000</b>	<b>1,100,000</b>
<b>2.0</b>	<b>Other Expenses</b>			
i.	Caution Money (Non refundable)	20,000	-	-
ii.	Accommodation Fee	107,100	107,100	107,100
iii.	Library Membership	30,000	30,000	30,000
iv.	Examination Fee	120,000	120,000	120,000
v.	Certification	40,000	-	-
vi.	Students’ Organization	10,000	10,000	10,000
vii.	Registration	10,000	10,000	10,000
viii.	Student’s Identity Card	10,000	10,000	10,000
ix.	Medical Contribution(NHIF)	50,400	50,400	50,400
x.	Capitation fee	10,000	10,000	10,000
xi.	Prospectus	-	-	-
xii.	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total; Other Expenses</b>	<b>427,500</b>	<b>367,500</b>	<b>367,500</b>
	<b>Total fees</b>	<b>1,527,500</b>	<b>1,467,500</b>	<b>1,467,500</b>

**Table 9:** University’s Fees and Other Expenses for Bachelor of Sciences in Biotechnology, Science in Chemistry and Environmental Science and Technology 3 years programme in (TZS)

S/N	Description	UQF 8 (1st Year)	UQF 8 (2 <sup>nd</sup> Year)	UQF 8 (3 <sup>rd</sup> Year)
<b>1.0</b>	<b>Cost Sharing Fee</b>	<b>1,400,000</b>	<b>1,400,000</b>	<b>1,400,000</b>
<b>2.0</b>	<b>Other Expenses</b>			
<b>i.</b>	Caution Money	20,000	-	-
<b>ii.</b>	Accommodation Fee	107,100	107,100	107,100
<b>iii.</b>	Library Membership	30,000	30,000	30,000
<b>iv.</b>	Examination Fee	120,000	120,000	120,000
<b>v.</b>	Certification	40,000	-	-
<b>vi.</b>	Students’ Organization	10,000	10,000	10,000
<b>vii.</b>	Registration	10,000	10,000	10,000
<b>viii.</b>	Student’s Identity Card	10,000	10,000	10,000
<b>ix.</b>	Medical Contribution (NHIF)	50,400	50,400	50,400
<b>x.</b>	Capitation fee	10,000	10,000	10,000
<b>xi.</b>	Prospectus	-	-	-
<b>xii.</b>	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total; Other Expenses</b>	<b>427,500</b>	<b>367,500</b>	<b>367,500</b>
	<b>Total fees</b>	<b>1,827,500</b>	<b>1,767,500</b>	<b>1,767,500</b>

### 5.2.2 COSTS PAYABLE TO THE UNIVERSITY BY BACHELOR OF ENGINEERING AND TECHNOLOGY IN ARCHITECTURE STUDENTS (4 YEARS PROGRAMMES)

**Table 10:** University's Fees and Other Expenses for Bachelor students under 4 years programme in (TZS)

S/N	Description	UQF 8 (1 <sup>st</sup> Year)	UQF 8 (2 <sup>rd</sup> Year)	UQF 8 (3 <sup>rd</sup> Year)	UQF 8 (4 <sup>th</sup> Year)
<b>1.0</b>	<b>Cost Sharing</b>	<b>1,100,000</b>	<b>1,100,000</b>	<b>1,100,000</b>	<b>1,100,000</b>
<b>2.0</b>	<b>Other Expenses</b>				
i.	Caution Money (Non refundable)	20,000	-	-	-
ii.	Accommodation Fees	107,100	107,100	107,100	107,100
iii.	Library Membership	30,000	30,000	30,000	30,000
iv.	Examination Fee	120,000	120,000	120,000	120,000
v.	Certification	40,000	-	-	-
vi.	Students' Organization	10,000	10,000	10,000	10,000
vii.	Registration	10,000	10,000	10,000	5,000
viii.	Student's Identity Card	10,000	10,000	10,000	10,000
ix.	Medical Contribution	50,400	50,400	50,400	50,400
x.	Medical Capitation	10,000	10,000	10,000	10,000
xi.	Prospectus	-	-	-	-
xii.	Quality Assurance fee (TCU)	20,000	20,000	20,000	20,000
	Sub-total; Other Expenses	<b>427,500</b>	<b>367,500</b>	<b>367,500</b>	<b>367,500</b>
	<b>Total Fees</b>	<b>1,527,500</b>	<b>1,467,500</b>	<b>1,467,500</b>	<b>1,467,500</b>

**Table 11:** University's Fees and Other Expenses for Bachelor students in Business Administration in (TZS)

S/N	Description	UQF 8 (1stYear)	UQF 8 (2nd Year)	UQF 8 (3rd Year)
<b>1.0</b>	<b>Cost Sharing Fee</b>	<b>800,000</b>	<b>800,000</b>	<b>800,000</b>
<b>2.0</b>	<b>Other Expenses</b>			
i.	Caution Money (Non refundable)	20,000	-	-
ii.	Accommodation Fees	107,100	107,100	107,100
iii.	Library Membership	30,000	30,000	30,000
iv.	Examination Fee	120,000	120,000	120,000
i.	Certification	40,000	-	-
ii.	Students' Organization	10,000	10,000	10,000
iii.	Registration	10,000	10,000	10,000
iv.	Student's Identity Card	10,000	10,000	10,000
v.	Medical Contribution (NHIF)	50,400	50,400	50,400
vi.	Capitation fee	10,000	10,000	10,000
vii.	Prospectus	-	-	-
viii.	Quality Assurance fee (TCU)	20,000	20,000	20,000
ix.	<b>Sub-total; Other Expenses</b>	<b>427,500</b>	<b>367,500</b>	<b>367,500</b>
	<b>Total fees</b>	<b>1,227,500</b>	<b>1,167,500</b>	<b>1,167,500</b>

**Table 12:** University's Fees and Other Expenses for Bachelor students in Agribusiness in (TZS)

S/N	Description	UQF 8 (1stYear)	UQF 8 (2nd Year)	UQF 8 (3rd Year)
<b>1.0</b>	<b>Cost Sharing Fee</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>
<b>2.0</b>	<b>Other Expenses</b>			
i.	Caution Money (Non refundable)	20,000	-	-
ii.	Accommodation Fee	107,100	107,100	107,100

iii.	Library Membership	30,000	30,000	30,000
iv.	Examination Fee	120,000	120,000	120,000
v.	Certification	40,000	-	-
vi.	Students' Organization	10,000	10,000	10,000
vii.	Registration	10,000	10,000	10,000
viii.	<b>Student's Identity Card</b>	10,000	10,000	10,000
ix.	Medical Contribution(NHIF)	50,400	50,400	50,400
x.	Capitation fee	10,000	10,000	10,000
xi.	Prospectus	-	-	-
xii.	Quality Assurance fee (TCU)	20,000	20,000	20,000
	<b>Sub-total; Other Expenses</b>	<b>427,500</b>	<b>407,500</b>	<b>407,500</b>
	<b>Total fees (TZS)</b>	<b>1,427,500</b>	<b>1,407,500</b>	<b>1,000,000</b>

### 5.2.3 COSTS PAYABLE DIRECTLY TO THE STUDENTS BY SPONSORS

**Table 13:** Costs payable direct to the students by sponsors for Bachelor in Sciences, Education and ICT (3 Years Programmes) in TZS

S/N	Description	UQF 8 (1stYear)	UQF 8 (2nd Year)	UQF 8 (3rd Year)
1	Industrial Practical Training (IPT)	700,000	700,000	-
2	Book / Stationery costs	200,000	200,000	200,000
3	Final project Printing	0	0	120,000
4	Special faculty requirements	300,000	300,000	120,000
5	Accommodation and Meals Allowance	1,837,500	1,785,000	1,785,000
6	Transport fare to attend IPT	Variable	Variable	
	<b>TOTAL</b>	<b>3,037,500</b>	<b>2,985,000</b>	<b>2,225,000</b>

**Table 14:** Costs payable direct to the students by sponsors for Bachelor in Engineering and Technology in Architecture 4 Years Programmes in (TZS)

S/N	DESCRIPTION	UQF 8 (1 <sup>ST</sup> YEAR)	UQF 8 (2 <sup>RD</sup> YEAR)	UQF 8 (3 <sup>RD</sup> YEAR)	UQF 8 (4 <sup>TH</sup> YEAR)
1	Industrial Practical Training	700,000	700,000	700,000	-
2	Book / Stationery costs	200,000	200,000	200,000	200,000
3	Final project Printing	-	-	-	120,000
4	Special faculty requirements	300,000	300,000	300,000	120,000
5	Accommodation and Meals costs	1,837,500	1,785,000	1,785,000	1,785,000
6	Transport fare to attend IPT	Variable	Variable	Variable	
	<b>TOTAL</b>	<b>3,037,500/=</b>	<b>2,985,000/=</b>	<b>2,985,000/=</b>	<b>2,225,000/=</b>

**Table 15:** Costs Payable Direct to the Student by Sponsors for Bachelor of Science in Biotechnology Programme (3 Years In TZS)

S/N	Description	UQF 8 (1 <sup>st</sup> Year)	UQF 8 (2 <sup>nd</sup> Year)	UQF 8 (3 <sup>rd</sup> Year)
1	Industrial Practical Training (IPT)	700,000	700,000	-
2	Book / Stationery costs	200,000	200,000	200,000
3	Final Project Printing	-	-	
4	Special Faculty Requirements	300,000	300,000	300,000
5	Accommodation and Meals costs	2,400,000	2,400,000	2,400,000
6	Transport fare to attend IPT	Variable	Variable	-
	<b>TOTAL</b>	<b>3,600,000</b>	<b>3,600,000</b>	<b>2,900,000</b>

**Table 16: Costs Payable Direct to the Student by Sponsors for Bachelor of Science in Chemistry Programme (3 Years**

**In TZS)**

S/N	Cost item	UQF8(1 <sup>st</sup> Year)	UQF8(2 <sup>nd</sup> Year)	UQF 8 (3 <sup>rd</sup> Year)
1	Book & stationary Allowance*	200,000	200,000	200,000
2	Special Faculty Allowance	300,000	300,000	300,000
3	Field Practical Training	700,000	700,000	
4	Meals and Accommodations	1,200,000	1,200,000	1,200,000
	<b>Total</b>	<b>2,400,000</b>	<b>2,400,000</b>	<b>1,700,000</b>

**Table 17: Costs Payable Direct to the Student by Sponsors for Bachelor in Environmental Science and Technology**

**Programme (3 Years In TZS)**

S/N	Description	UQF8(1 <sup>st</sup> Year)	UQF8(2 <sup>rd</sup> Year)	UQF8(3 <sup>rd</sup> Year)
1	Industrial Practical Training (IPT)	700,000	700,000	-
2	Book/Stationery costs	200,000	200,000	200,000
3	Final Project Printing	-	-	
4	Special Faculty Requirements	300,000	300,000	300,000
5	Accommodation and Meals costs	2,400,000	2,400,000	2,400,000
6	Transport fare to attend IPT	Variable	Variable	-
	<b>TOTAL</b>	<b>3,600,000</b>	<b>3,600,000</b>	<b>2,900,000</b>

\*Amounts stated in Table 10 and 11 reflect the minimum requirements. Sponsors are free to pay their students according to their ability.

#### 5.2.4 UNIVERSITY FEE STRUCTURE FOR FOREIGN STUDENTS FOR ACADEMIC YEAR 2023/2024

(FEES AND OTHER DIRECT COSTS PAYABLE TO THE UNIVERSITY)

		Diploma Programmes			Bachelor Programmes			
		1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year
S/N	ITEM	USD						
	Tuition fee (per year)	1,840	1,840	1,840	2,000	2,000	2,000	2,000
	Application fee	30	-	-	30	-	-	-

	<b>Other direct University fee – per year:</b> <i>(Caution money, Library membership fees, Examinations fee, Certification, Students’ Organization fee, Registration fee, Student’s Identity Card, Medical Contribution (NHIF), Student’s Relief Fund, Prospectus, NACTE Registration)</i>	500	450	450	500	450	450	450
<b>TOTAL</b>		<b>2,370</b>	<b>2,290</b>	<b>2,290</b>	<b>2,530</b>	<b>2,450</b>	<b>2,450</b>	<b>2,450</b>

#### 5.2.4.1 INDICATIVE STIPEND AND OTHER ALLOWANCES PAYABLE TO FOREIGN STUDENTS

S/N	ITEM	Diploma Programmes	Bachelor Programmes UQF 8
		USD	USD
1	Accommodation (Annually)	300	300
2	Meals (Annually)	1,500	1,500
3	Books and stationery allowance (Annually)	500	8,00
<b>GRAND TOTAL</b>		<b>2,300</b>	<b>2,600</b>

#### 5.3 INSTALLMENTS PAYABLE

The tuition fee may be paid in FOUR Instalments; TWO Instalments in each Semester, while all **Other Expenses / Direct Cost** must be paid in full at the beginning of each academic year. All payments are made directly to the University Bank Account before student registration.

### 6.0 GENERAL ADMISSION REQUIREMENTS

#### 6.1 GENERAL PROVISIONS

- i. Admission to the University is open to bona fide students or persons meeting the entry requirements. Such persons shall be required to go through registration formalities to confirm their status as bona fide students.
- ii. To be admitted in the first year of study at Mbeya University of Science and Technology you must have relevant certificates entitling him/her to go for the course he/she has applied for and duly approved by the relevant authority or have other qualifications considered equivalent by the University.
- iii. A student from a similar institution wishing to be admitted into the second year of study at MUST, must have passed all examinations in the relevant programmes in the preceding year of study.
- iv. No student from another institution shall be admitted to the final year of study at Mbeya University of Science and Technology.

- v. A student, who has been admitted and does not report for registration in a particular year, may re-apply for admission during the coming Academic year provided the admission requirements remain the same.
- vi. A student who postponed studies for more than two consecutive academic years shall be deemed to have terminated studies. Therefore, a student interested to continue with studies at University shall be required to apply for re-admission in the first year of study.

## **6.2 APPLICATION FEES**

Applicants must pay an application fee to be determined by the Council from time to time. All Application fees shall be payable to the University Bank Account directly or by using mobile phone after generating **Control Number** as it will be directed in the application procedures of a particular academic year.

The filled Online Application Information must be submitted before the deadline set for Application submission of the specific round in the online system

## **6.3 PAYMENT OF FEES**

Students will only be registered upon payment of prescribed fees whose amount shall be determined from time to time.

## **6.4 GUARANTEE OF SPONSORSHIP**

Applications can only be considered once the University receives satisfactory evidence that the student will be adequately financed during his or her course at the University. Applicants who are in need of assistance to meet the University fees and expenses should seek bursaries from funding organizations.

## **6.5 MBEYA UNIVERSITY OF SCIENCE AND TECHNOLOGY ACADEMIC YEAR**

The academic year for Certificate, Diploma and Bachelor Degree Programmes will begin in October every year, otherwise stated differently, and shall end as indicated by the University Academic Almanac.

## **6.6 REGISTRATION DEADLINE**

Deadline of registration for all beginners shall be **two weeks** after the first day of Orientation Week. The deadline of registration for continuing students shall be **two weeks** after the University opens. All beginners shall have to submit original certificates on the registration day and must attend orientation week without missing.

## **6.7 CHANGE OF COURSES**

Except in exceptional circumstances, no student will be allowed to change programme later than **two weeks** after the beginning of the first semester for the undergraduate students but it will be determined by the **capacity** of specific course

For Bachelor degree students, change of programmes shall only be accepted after receiving approval from TCU.

## **6.8 STUDENTS' NAMES**

No change of names by students will be permitted during the course of study at the University and students will be allowed to use names appearing on certificates only which qualified them for admission.

## **6.9 POSTPONEMENT OF STUDIES**

No student is allowed to postpone studies after commencement of academic year, except under special circumstances. Permission to postpone studies will be considered after producing satisfactory evidence for the reasons of postponement and producing a written approval from one's sponsor.

A student who has postponed studies shall be allowed to be away from studies for a **maximum of two academic years only** if she/he is to be allowed for registration to the same year of study. Otherwise, the student will be required to apply afresh for re-admission.

## 6.10 ADMISSION REQUIREMENTS

### 6.10.1 ENTRY REQUIREMENTS

Applicants may join Certificate, Diploma and Bachelor Programmes through direct entry scheme.

### 6.10.2 ADMISSION REQUIREMENTS FOR CERTIFICATE PROGRAMMES FOR THE ACADEMIC YEAR 2022/2023

The following are the minimum entry requirements for Certificate Programmes:

S/N	Programme Name	Code	Entry requirements	Programme Duration (YRS)
1	Certificate in Agribusiness with Technology (CABT)	MBC01	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non- Religious subjects of which two must be science subjects including Biology or Geography or Agriculture.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least three (3) non-Religious subjects, two must be among the following subjects: Biology, Geography and Agriculture with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	1Year
2	Certificate in Business Administration	MBC02	Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non- Religious subjects	1Year

## 6.10.3 ADMISSION REQUIREMENTS FOR DIPLOMA PROGRAMMES FOR THE ACADEMIC YEAR 2022/2023

The following are the minimum entry requirements for Diploma Programmes:

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
1	Diploma in Architecture	MBD01	<p>Possession of Certificate of Secondary Education Examination(CSEE )with a pass in at least four (4)non-Religious subjects ,three of which must be Mathematics, Physics, Chemistry/Geography</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two of which must be among the following subjects: Mathematics, Physics, Chemistry/Geography with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
2	Diploma in Biomedical Equipment Engineering	MBD02	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects in Mathematics, Physics, Chemistry and Biology.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, Mathematics, Engineering Science, Chemistry and Biology.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Mathematics, Physics, Chemistry, Biology with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
3	Diploma in Business Administration	MBD03	<p>Possession of Certificate in business Administration and other related qualifications including Certificate in agriculture, Community Development.</p> <p><b>OR</b></p> <p>Possession of a Advanced Certificates for Secondary Education with at least 1 principal pass and 1 subsidiary</p> <p><b>OR</b></p> <p>Possession of Certificate of NVA level 3, ATEC I (NBAA) Foundation stage I (PSPTB/NBMM).</p>	2Years
4	Diploma in Civil Engineering	MBD04	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
5	Diploma in Computer Engineering	MBD05	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry <b>OR</b> Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with</p>	3Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
			possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	
6	Diploma in Computer Science	MBD06	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two of which must be Mathematics and English</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, two of which must be Mathematics and English and any two of the following subjects: Engineering Science/Chemistry, Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Mathematics ,Physics, Chemistry, English with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
7	Diploma in Electrical and Electronic Engineering	MBD07	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
8	Diploma in Automotive and Auto electrical Engineering	MBD08	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) Nonreligious subjects, three of which must Mathematics, Physics, Chemistry</p> <p style="text-align: center;"><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non- Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p style="text-align: center;"><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
9	Diploma in Food Science and Technology	MBD09	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least Four (4) non-Religious subjects three of which must be Mathematics, Physics/Chemistry and Biology.</p> <p style="text-align: center;"><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, , three of which must be Mathematics, Engineering Science/Chemistry and Biology and any one of the following subjects: Architectural Drafting/Building, Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p style="text-align: center;"><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Mathematics, Physics, Chemistry, Biology with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
10	Diploma in Highway Engineering	MBD10	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
11	Diploma in Information and Communication Technology	MBD11	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two of which must be Mathematics and English</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, two of which must be Mathematics and English and any two of the following subjects: Engineering Science/Chemistry, Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Mathematics, Physics, Chemistry, English with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
12	Diploma in Laboratory Science and Technology	MBD12	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects in Mathematics, Physics, Chemistry and Biology.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, Mathematics, Engineering Science, Chemistry and Biology.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Mathematics, Physics, Chemistry, Biology with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
13	Diploma in Mechanical Engineering	MBD13	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
14	Diploma in Mechatronics Engineering	MBD14	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science,</p>	3Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
			<p>Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	
15	Diploma in Mining Engineering	MBD15	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
16	Diploma in Agribusiness with Technology (DABT)	MBD16	<p>Possession of a certificate (NQF 6) or NTA 4 in agribusiness, agriculture, professional technician level II certificate.</p> <p><b>OR</b></p> <p>Possession of a Advanced Certificate of Secondary Education Examination (ACSEE) with two principal passes in science subjects, or Geography.</p>	2Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
17	Diploma in Electronics and Telecommunication Engineering	MBD17	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
18	Diploma of Technical Education in Architectural Technology (DTEA)	MBD18	Possession of Certificate of Secondary Education (CSEE) with a pass in at least four (4) Non-religious subjects, three of which must be Mathematics, Physics and Chemistry/Geography.	3Years
19	Diploma of Business Administration in Accounting and Finance	MBD19	<p>Possession of Certificate in business Administration and other related qualifications including Certificate in agriculture, Community Development.</p> <p><b>OR</b></p> <p>Possession of a Advanced Certificates for Secondary Education with at least 1 principal pass and 1 subsidiary</p> <p><b>OR</b></p> <p>Possession of Certificate of NVA level 3, ATEC I (NBAA) Foundation stage I (PSPTB/NBMM).</p>	2Year
20	Diploma of Technical Education in Civil Engineering	MBD20	<p>Possession of a Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry.</p> <p><b>OR</b></p> <p>Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science and Chemistry.</p> <p><b>OR</b></p> <p>A Certificate of Secondary Education with a Trade Test</p>	3Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
			Certificate of at least Grade I or NVA Level 3 offered by VETA.	
21	Diploma in Business Computing	MBD21	<p>Possession of Certificate of Secondary Education Examination (CSEE) and with four principal passes including English and Mathematics.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, two of which must be Mathematics and English and any two of the following subjects: Engineering Science/Chemistry, Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: English and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
22	Diploma of Technical Education in Electrical and Electronics Engineering	MBD22	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, and Chemistry.</p> <p><b>OR</b></p> <p>Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a minimum D pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, and Chemistry.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
23	Diploma of Technical Education in Mechanical Engineering	MBD23	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) Non-religious subjects, three of which must be Mathematics, Physics and Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
24	Diploma in Mechanical Engineering with Industrial Safety and Occupational Health	MBD24	<p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Physics, Chemistry</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) from Technical Secondary Schools with a pass in at least four (4) non-Religious subjects, three of which must be Mathematics, Engineering Science, Chemistry and any one of the following subjects: Architectural Drafting/Building Construction, Electrical Engineering Science/Electrical Drafting, Workshop Technology/Mechanical Drafting.</p> <p><b>OR</b></p> <p>Possession of Certificate of Secondary Education Examination (CSEE) with a pass in at least four (4) non-Religious subjects, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.</p>	3Years
25	Diploma of Business Administration in Marketing and Entrepreneurship	MBD25	<p>Possession of Certificate in business Administration and other related qualifications including Certificate in agriculture, Community Development.</p> <p><b>OR</b></p>	2Years

S/N	Programme Name	Code	Entry requirements	Programme Duration(YRS)
			Possession of a Advanced Certificates for Secondary Education with at least 1 principal pass and 1 subsidiary <b>OR</b> Possession of Certificate of NVA level 3, ATEC I (NBAA) Foundation stage I (PSPTB/NBMM).	
26	Diploma in Biotechnology		Possession of Advanced Certificate of Secondary Education Examination (ACSEE) with at least two (2) principal passes (D and above) of a maximum of 4.0 points in Biology, Chemistry, Physics/Mathematics/Nutrition, or possess a Certificate of Secondary Education Examination (CSEE) with a minimum “D” pass in at least four (4) non-religious subjects which must be Biology, Chemistry, Physics, Mathematics /Nutrition.	3Years

**6.10.4 ADMISSION REQUIREMENTS FOR BACHELOR PROGRAMMES FOR ACADEMIC YEAR 2023/2024 (For Holders of Form Six Qualifications)**

S/N	Programme	Code	Admission Requirements	Minimum Institutional Admission points	Admission Capacity	Programmes Duration (YRS)
1.	Bachelor of Business Administration	MB001	Two principal passes in the following subjects: History, Geography, Kiswahili, English Language, French, Arabic, Fine Art, Economics, Commerce, Accountancy, Physics, Chemistry, Biology, Advanced Mathematics, Agriculture, Computer Science or Nutrition. <b>OR</b> Two principal passes of E in History, Geography, Kiswahili, English Language, French, Arabic, Fine Art, Economics, Commerce, Accountancy, Physics, Chemistry, Biology, Advanced Mathematics, Agriculture, Computer Science or Nutrition with Foundation course of out with minimum GPA of 3.0	4.0	300	3

S/N	Programme	Code	Admission Requirements	Minimum Institutional Admission points	Admission Capacity	Programmes Duration (YRS)
2.	Bachelor of Civil Engineering	MB002	Two principal passes of at least “D” grade in Mathematics and Physics; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	200	4
3.	Bachelor of Electrical Engineering	MB003	Two principal passes of at least “D” grade in Advanced Mathematics and Physics; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	200	4
4.	Bachelor of Technology in Architecture	MB004	Two principal passes at least” D” grade in Advanced Mathematics and Physics or Chemistry or Geography; in addition an applicant must have minimum pass of D in Mathematics, Physics, and Chemistry/Geography at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics/Chemistry/Geography with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	80	4
5.	Bachelor of Mechanical Engineering	MB005	Two principal passes of at least “D” grade in Mathematics and Physics; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	150	4

S/N	Programme	Code	Admission Requirements	Minimum Institutional Admission points	Admission Capacity	Programmes Duration (YRS)
6.	Bachelor of Computer Engineering	MB006	Two principal passes of at least “D” grade in Advanced Mathematics and Physics; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	50	4
7.	Bachelor of Science with Education	MB007	Two principal passes of at least “D” grade in Physics and Mathematics or Physics and Chemistry or Chemistry and Biology or Mathematics and Chemistry. In addition an applicant must have a pass in Mathematics, Physics, Chemistry and Biology at O-Level. OR Possession of two principal passes of E in Physics and Mathematics or Physics and Chemistry or Chemistry and Biology or Mathematics and Chemistry with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	160	3
8.	Bachelor of Laboratory Sciences and Technology	MB008	Two principal passes of at least “D” grade in Biology and Chemistry or Physics; In addition an applicant must have a pass in Mathematics, Physics, Chemistry and Biology at O-Level. OR Possession of two principal passes of E in Biology and Chemistry or Physics with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	160	3
9.	Bachelor of Engineering in Telecommunication Systems	MB009	Two principal passes in Advanced Mathematics and Physics at a minimum of “D” grade; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	50	4
10.	Bachelor of Computer Science	MB010	Two principal passes of Advanced Mathematics and Physics or Chemistry at a minimum of “D” grade. In addition an applicant must have a	4.0	50	3

S/N	Programme	Code	Admission Requirements	Minimum Institutional Admission points	Admission Capacity	Programmes Duration (YRS)
			minimum pass of “D” Basic Applied Mathematics and English at O- level.			
11.	Bachelor of Science in Information and Communication Technology	MB011	Two Principal passes at a minimum of “D” grade in the following subjects; Advanced Mathematics, Physics, Geography, Biology, Chemistry and Economics. In addition an applicant must have a minimum pass of “D” in Basic Applied Mathematics and English at O- level	4.0	50	3
12.	Bachelor of Technical Education in Electrical and Electronics Engineering	MB012	Two principal passes in Advanced Mathematics and Physics at a minimum of “D” grade. If one of the principal passes is not either Advanced Mathematics or Physics an applicant must have a principal pass in one of the following subjects: Chemistry or Geography or Biology; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics, if one of the principal passes is not either Advanced Mathematics or Physics an applicant must have a principal pass in one of the following: Chemistry or Geography or Biology, with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	150	4
13.	Bachelor of Technical Education in Mechanical Engineering	MB013	Two principal passes in Advanced Mathematics and Physics at a minimum of “D” grade. If one of the principal passes is not either Advanced Mathematics or Physics an applicant must have a principal pass in one of the following subjects: Chemistry or Geography or Biology; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics, if one of the principal passes is not either Advanced Mathematics or Physics an applicant must have a principal pass in one of the following subjects: Chemistry or Geography or Biology, with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	150	4

S/N	Programme	Code	Admission Requirements	Minimum Institutional Admission points	Admission Capacity	Programmes Duration (YRS)
14.	Bachelor of Technical Education in Civil Engineering	MB014	<p>Two principal passes in Advanced Mathematics and Physics at a minimum of “D” grade. If one of the principal passes is not either Advanced Mathematics or Physics an applicant must have a principal pass in one of the following subjects: Chemistry or Geography or Biology; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry at O level.</p> <p>OR</p> <p>Possession of two principal passes of E in Advanced Mathematics and Physics, if one of the principal passes is not either Advanced Mathematics or Physics an applicant must have a principal pass in one of the following subjects: Chemistry or Geography or Biology, with Foundation Programme of the OUT with a minimum GPA of 3.0.</p>	4.0	150	4
15.	Bachelor of Technical Education in Architectural Technology	MB015	<p>Two principal passes in Advanced Mathematics and Physics at a minimum of “D” grade. If one of the principal passes is not either Advanced Mathematics or Physics an applicant must have a principal pass in one of the following subjects: Chemistry or Geography or Biology; In addition an applicant must have minimum pass of D in Mathematics, Physics and Chemistry/Geography at O level.</p> <p>OR</p> <p>Possession of two principal passes of E in Advanced Mathematics and Physics, If one of the principal passes is not either Advanced Mathematics or Physics an applicant must have a principal pass in one of the following subjects: Chemistry or Geography or Biology, with Foundation Programme of the OUT with a minimum GPA of 3.0.</p>	4.0	150	4
16.	Bachelor of Technology in Landscape Architecture	MB016	Two principal passes at least” D” grade at Advanced Level in Biology and Physics or Chemistry or Geography at A-Level and in addition an applicant must have a minimum pass of D in Mathematics, Physics, Biology and Chemistry/Geography at O-level	4.0	60	4

S/N	Programme	Code	Admission Requirements	Minimum Institutional Admission points	Admission Capacity	Programmes Duration (YRS)
17.	Bachelor of Engineering in Data Science	MB017	Two principal passes of at least “D” grade at Advanced Level in Mathematics and Physics; In addition an applicant must have a minimum pass of D in Mathematics, Physics and Chemistry at O level. OR Possession of two principal passes of E in Advanced Mathematics and Physics with Foundation Programme of the OUT with a minimum GPA of 3.0.	4.0	70	4
18.	Bachelor of Science in Food Science and Technology	MB018	Two principal passes of at least “D” grade in Chemistry and one subject among the following; Biology, Physics, Nutrition, Agriculture, Advanced Mathematics or Geography. In addition an applicant must have minimum pass of D in Physics/Chemistry, Biology and Mathematics at O-level	4.0	120	3
19.	Bachelor of Science in Natural Resources Conservation	MB019	Two principal passes of at least “D” grade at Advanced Level in Biology, and Chemistry/Geography/Agriculture/Nutrition; In addition an applicant must have minimum pass of D grade in Biology and Chemistry/Geography/Agriculture and Nutrition At O-Level	4.0	130	3
20.	Bachelor of Agribusiness Management and Technology	MB020	Two Principal Passes in the following subjects; Biology, Geography, Agriculture and Physics, Chemistry, Advanced mathematics, Economics, History, Food and Nutrition, Commerce, Accountancy. In Addition an applicant must have a pass in (4) non- Religious subjects of which one must be among the following; Biology, Commerce, Geography or Agriculture.	4.0	300	3
21.	Bachelor of Sciences in Biotechnology	MB021	Two principal passes of at least „D” grade at Advanced Level in Mathematics, Biology and Chemistry or Physics.	4.0	40	
22.	Bachelor of Science in Chemistry	MB022	Two principal passes in Chemistry and in one of the following subjects: Physics, Mathematics, Biology, Geography or Nutrition. In addition, an applicant MUST have passes in chemistry, physics and mathematics at O’ Level.	4.0	40	

S/N	Programme	Code	Admission Requirements	Minimum Institutional Admission points	Admission Capacity	Programmes Duration (YRS)
23.	Bachelor in Environmental Science and Technology	MB023	Two principal passes of at least 'D' grade at Advanced Level in Chemistry, Physics, Biology, Advanced Mathematics or Geography. In addition, an applicant must have a minimum pass of "D" in Biology and Mathematics at O-Level.	4.0	80	

**6.10.5 ADMISSION REQUIREMENTS FOR BACHELOR PROGRAMMES FOR ACADEMIC YEAR 2023/2024 (For Holders of Diploma or Equivalent Qualifications)**

S/N	Programme	Code	Admission Requirements	Admission Capacity	Programme Duration (YRS)
1.	Bachelor of Business Administration	MB001	Diploma in Business Administration, Education, Marketing Social Studies, Industrial Relations, Economic Studies, Public Sector Finance Management, Information Technology with Accounting or Human Resource Management, Financial Administration, Business Administration, Local Government Accounting and Finance, Insurance and Risk Management, Customs and Tax Management, Freight Clearing and Forwarding, Statistics, Business Management, Procurement and Logistic Management or Banking and Finance with an average of "B" or a minimum GPA of 3.0.	100	3
2.	Bachelor of Civil Engineering	MB002	Diploma or Full Technician Certificate (FTC) in Civil, Architecture, Mining, Water Resources, Highway, Transportation, Civil and Irrigation Engineering, Water Supply and Sanitation, Civil and Transportation, Civil and Community Development, Hydrogeology and water well drilling, Hydrology and Meteorology or Water Laboratory Technology, Technical Education in Civil with an average of "B" grade or a minimum GPA of 3.0 or an average of "C" grade for FTC holders. In addition, an applicant must have a minimum of "D" grade in Mathematics, Physics and Chemistry at O-Level. OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	100	4
3.	Bachelor of Electrical Engineering	MB003	Diploma or Full Technician Certificate (FTC) in Electrical, Electrical and Electronics, Biomedical Equipment Engineering, Renewable Energy, Electrical and Biomedical, Electronics and Telecommunication or Mechatronics Engineering, Technical Education in Electrical with an average of "B" grade or a minimum GPA of 3.0 or an average of "C" grade for FTC holders. In addition, an applicant must have a minimum of "D" grade in Mathematics, Physics and Chemistry at O-Level.	100	4

S/N	Programme	Code	Admission Requirements	Admission Capacity	Programme Duration (YRS)
			OR In addition an applicant must have at least four (4) passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.		
4.	Bachelor of Technology in Architecture	MB004	Diploma or Full Technician Certificate (FTC) in Architecture, Architectural Technology, Technical Education in Architectural Technology with an average of "B" grade or a minimum GPA of 3.0 or an average of "C" grade for FTC holders. In addition, an applicant must have a minimum of "D" grade in Mathematics, Physics and Chemistry/ Geography at O-Level. OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Mathematics and Chemistry/ Geography with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	80	3
5.	Bachelor of Mechanical Engineering	MB005	Diploma or Full Technician Certificate (FTC) in Mechanical, Automotive, Automobile or Mechatronics Engineering Technical Education in Mechanical, Agro mechanics with an average of "B" grade or a minimum GPA of 3.0 or an average of "C" grade for FTC holders In addition, an applicant must have a minimum of "D" grade in Mathematics, Physics and Chemistry at O-Level. OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA	100	4
6.	Bachelor of Computer Engineering	MB006	Diploma or Full Technician Certificate (FTC) in Computer Engineering, Computer Science, Software Engineering, Telecommunication Engineering, Information and Communication Technology (ICT), Electrical and Electronics or Mechatronics Engineering with an average of "B" grade or a minimum GPA of 3.0 or an average of "C" grade for FTC holders. In addition, an applicant must have a minimum of "D" grade in Mathematics, Physics and Chemistry at O-Level. OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	50	4
7.	Bachelor of Science in Education	MB007	Diploma in Education, Diploma in Laboratory Science and Technology, Diploma in Technical Education with an average of "B" or a minimum GPA of 3.0.	50	3
8.	Bachelor of Laboratory Sciences and Technology	MB008	Diploma or Full Technician Certificate (FTC) in Laboratory Science and Technology with an average of "B" grade or a minimum GPA of 3.0 or an average of "C" grade for FTC holders In addition, an applicant must have a minimum of "D" grade in Mathematics, Physics, Chemistry and Biology at O-Level. OR In addition an applicant must have at least four (4) Passes at O-Level,	50	3

S/N	Programme	Code	Admission Requirements	Admission Capacity	Programme Duration (YRS)
			two must be among the following subjects: Physics, Chemistry, Biology and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.		
9.	Bachelor of Engineering in Telecommunication Systems	MB009	Diploma or Full Technician Certificate (FTC) in Electronics and Telecommunication or Electrical and Electronic or Electrical Engineering with an average of “B” grade or a minimum GPA of 3.0 or an average of “C” grade for FTC holders In addition, an applicant must have a minimum of “D” grade in Mathematics, Physics and Chemistry at O-Level. OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	20	4
10.	Bachelor of Computer Science	MB010	Diploma or Full Technician Certificate (FTC) in Computer Engineering, Computer Science, Software Engineering, Telecommunication Engineering, Information and Communication Technology (ICT) with an average of “B” or a minimum GPA of 3.0. In addition, an applicant must have four passes at O-Level, among them two must be Basic Mathematics and English.	20	3
11.	Bachelor of Science in Information and Communication Technology	MB011	Diploma or Full Technician Certificate (FTC) in Computer Engineering, Computer Science, Electrical and Electronics, Information and Communication Technology (ICT), or Mechatronics Engineering with an average of “B” or a minimum GPA of 3.0. In addition, an applicant must have four passes at O-Level; among them two must be Basic Mathematics and English.	20	3
12.	Bachelor of Technical Education in Electrical and Electronics Engineering	MB012	Diploma or Full Technician Certificate (FTC) in Technical Education, Electrical or Electrical and Electronics with an average of “B” grade or a minimum GPA of 3.0 or an average of “C” grade for FTC holders OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	30	4
13.	Bachelor of Technical Education in Mechanical Engineering	MB013	Diploma or Full Technician Certificate (FTC) in Technical Education, Mechanical, Automotive, Automobile or Mechatronics Engineering with an average of “B” grade or a minimum GPA of 3.0 or an average of “C” grade for FTC holders OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	30	4
14.	Bachelor of Technical Education in Civil Engineering	MB014	Diploma or Full Technician Certificate (FTC) in Technical Education, Civil Engineering, Civil and Irrigation Engineering, Civil and Transportation or Civil and Community Development with an average of “B” grade or a minimum GPA of 3.0 or an average of “C” grade for FTC holders OR	30	4

S/N	Programme	Code	Admission Requirements	Admission Capacity	Programme Duration (YRS)
			In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.		
15.	Bachelor of Technical Education in Architectural Technology	MB015	Diploma or Full Technician Certificate (FTC) in Architecture with an average of “B” grade or a minimum GPA of 3.0 or an average of “C” grade for FTC holders OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Mathematics and Chemistry/ Geography with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	30	4
16.	Bachelor of Technology in Landscape Architecture	MB016	Diploma or Full Technician Certificate (FTC) in Landscape Architecture or Architecture or Civil engineering with an average of “B” grade or a minimum GPA of 3.0 or an average of “C” grade for FTC holders OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Biology, Physics, Mathematics and Chemistry/ Geography with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	20	4
17.	Bachelor of Engineering in Data Science	MB017	Diploma or Full Technician Certificate (FTC) in Computer Engineering, Computer Science, Software Engineering, Telecommunication Engineering, Information and Communication Technology (ICT) with an average of “B” grade or a minimum GPA of 3.0 or an average of “C” grade for FTC holders. OR In addition an applicant must have at least four (4) Passes at O-Level, two must be among the following subjects: Physics, Chemistry and Mathematics with possession of TRADE TEST GRADE I / NVA LEVEL III issued by VETA.	20	4
18.	Bachelor of Science in Food Science and Technology	MB018	Diploma in Food Sciences and Technology, Laboratory Science and Technology or Food Science and Nutrition with an average of “B” or a minimum GPA of 3.0. In addition an applicant must have a pass in at least Four (4) passes at O-level, three of which must be Mathematics, Physics/Chemistry and Biology.	20	3
19.	Bachelor of Science in Natural Resources Conservation	MB019	Diploma in Wildlife Management, Wildlife Conservation, Forestry, Fisheries, Beekeeping, with an average of “B” or a minimum GPA of 3.0. In addition an applicant must have four passes at O-Level; among them two must be Biology and Geography, Chemistry, Nutrition or Agriculture.	30	3
20.	Bachelor of Agribusiness Management and Technology	MB020	Diploma in Agribusiness, Agriculture, Agro mechanics and Irrigation with an average of “B” or a minimum GPA of 3.0. In addition, an applicant must have a minimum of “D” grade in one of the following subjects Agriculture or Commerce, Biology or Geography at O-Level.	100	3
21.	Bachelor of Sciences in Biotechnology	MB021	Diploma in Food Sciences and Technology, Laboratory Science and Technology or Food Science and Nutrition with an average of B or GPA not less than 3.0. In addition, an applicant must have a minimum of “D” grade in one of the following subjects: Physics, Geography, Nutrition or	20	3

S/N	Programme	Code	Admission Requirements	Admission Capacity	Programme Duration (YRS)
			Agriculture at O-Level.		
22.	Bachelor of Science in Chemistry	MB022	Diploma in education or other diploma in sciences with an average of B or GPA not less than 3.0. In addition, an applicant MUST have passes in chemistry, physics and mathematics at O' Level.	20	3
23.	Bachelor in Environmental Science and Technology	MB023	Diploma in Laboratory Science and Technology, Food Science and Technology, Environmental Health Sciences, Water Supply and Sanitation Engineering, Civil Engineering, Mining Engineering, Water Resources Engineering, Irrigation Engineering, Geology, Aquaculture/Marine Sciences, Agriculture, Forestry and Botany, Energy, Biology/Microbiology, Chemistry/Biochemistry and Physics OR Diploma in Secondary Education with any of the following teaching subjects; Biology, Chemistry, Physics and Mathematics with an average of B or GPA not less than 3.0. OR Foundation Programme of The OUT with a minimum GPA of 3.0. In addition, an applicant must have a minimum pass of "D" in Biology and Mathematics at O-Level	40	3

## 7.0 UNIVERSITY GENERAL REGULATIONS

Upon admission all first-year students must obtain and thoroughly read the following:

- i. Students' By-laws.
- ii. Conditions for Government Sponsorship
- iii. Examination Regulations.
- iv. Library Regulations
- v. Industrial Practical Training Regulations
- vi. Constitution of MUSTSO
- vii. Any Other Relevant Rules, Guidelines and Regulations of the University

Any of these regulations can be obtained from the Director of Undergraduate Studies, Directorate of St, or Heads of respective Departments and University Library. Students can also access these Regulations directly from MUST website: [www.must.ac.tz](http://www.must.ac.tz)

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## 8.0 COURSES OFFERED IN VARIOUS PROGRAMMES

### 8.1 COLLEGE OF ENGINEERING AND TECHNOLOGY (CET)

#### 8.1.1 DEPARTMENT OF CIVIL ENGINEERING

##### Programmes

The Department offers the following Programmes:

- a) Diploma in Civil Engineering
- b) Diploma in Highway Engineering
- c) Bachelor of Civil Engineering

#### 8.1.1.1 LABORATORIES AND WORKSHOPS

- i. Pneumatic and Hydraulics Laboratory
- ii. Soil and Materials Testing Laboratory
- iii. Land Surveying Laboratory

#### 8.1.1.2 LIST OF STAFF

##### (Head of Department)

Dr. Partice Nyangi Mkono      Ph.D. in Structural Engineering (HUST, China), MSc. Civil Eng. (USTHB, Algeria), BSc. Civil Eng. (USTHB, Algeria).

##### Professors:

Prof. Zacharia Katambara      PhD WRE (Witwatersrand-South Africa), MSc. WRE Engineering (UDSM), BSc Civil Engineering (UDSM)

##### Senior Lecturer:

Dr. Duwa H. Chengula      PhD Materials Science (Kassel University – Germany), MSc. Highway Eng. (UDSM) BSc. Civil Eng. (UDSM), FTC Civil Eng. (MTC)

Dr. Gislar Kifanyi      PhD WRE (Tshwane University of Technology – SA), MEM. (UDSM), PGD (UDSM), BSc Civil Eng. (UDSM)

##### Lecturers:

Dr. Mwajuma I. Lingwanda      PhD Geotechnical Eng. (UDSM), MSc. Highway Eng. (UDSM), PGD Civil Eng. (UDSM), ADE Civil Eng. (DIT). FTC Archt. (MTC)

Dr. Hieromin Mboya\*\*      PhD Material Science and Eng. (Structural Material), MSc. Structural Eng. (UDSM), PGD Structural Eng. (UDSM), ADE Civil Eng. (DIT), FTC Civil Eng. (MTC).

Dr. Partice Nyangi Mkono      Ph.D. in Structural Engineering (HUST, China), MSc. Civil Eng. (USTHB, Algeria), BSc. Civil Eng. (USTHB, Algeria).

Mr. Joseph K. Mnkeni      MSc. Highway Eng. (UDSM), PGD Highway. Eng. (UDSM), ADE Civil Eng. (DIT) FTC Civil Eng. (TCA)

**Assistant Lecturers**

*Mr. Asson S. Malisa	MSc. Materials Science Engineering, (NMAIST); BSc. Civil Engineering. (UDSM)
*Mr. George Lupakisyo	MSc. WRE (UDSM), BSc Civil Engineering. (UDSM).
*Mr. Martin Swila	MSc. Structural Engineering. (UDSM), BSc. Civil Engineering, (UDSM)
Mr. Ivor J. Ndimbo	Master of Technology Water Resources Development. (IIT-Roorkee INDIA); BSc. Civil Engineering (UDSM).
Mr. Mathew A. Gwao	MSc. Geographical Information Systems (UDSM) BSc. Land Survey (UDSM)
*Mr. Daudi J. Makelelo	MSc. Construction Economics and Management (ARU), BSc. Civil Engineering (ARU).
*Mr. Richard M Mkindo	MTech. Structural Eng. (NITK – India), Bachelor Civil Engineering (MUST)
Mr. Asifiwe Z. Swalo	MTech. Transportation Eng. (NITK – India), Bachelor Civil Engineering (MIST), Ordinary Diploma Civil Engineering (DIT)
*Mr. Adam Shaaban Mgana	MSc. Environmental Engineering (Cyprus International University- Cyprus), BSc. Environmental Engineering (Cyprus International University- Cyprus), Diploma in Water Supply and Sanitation Engineering (Water Institute)
Mr. Kizito Patrick Mwilongo	MSc. Materials Science and Engineering (Structural Materials) (Nelson Mandela African Institution of Science and Technology, Arusha – Tanzania), BSc. Civil Engineering (St. Augustine University of Tanzania, Mwanza – Tanzania).

**Tutorial Assistants**

Mr. Venance R. Mwandupe	Beng. Civil (MIST), FTC Civil Eng. (MTC),
Mr. Baraka Mosses	BSc in Civil Engineering (Arusha Technical College)
*Ms Shamsa M. Nassibu	Bachelor Engineering Civil (MUST), FTC Civil Eng. (TCA).
Mr. Cyriacus J. Rugakingira	BSc. Civil (UDSM); FTC. Civil (Dar es Salaam Technical College)
Mr. George C. Lyimo	BSc. Civil and Structural Engineering (UDSM); FTC. Civil (ATC)
Mr. Godfrey Mbungula	Bachelor Civil Engineering (MUST), FTC (DIT)
Mr. Herfrid J. Mgeni	ADE. Civil (MIST); FTC. Civil (MTC)
Mr. Mussa G. Magaka	Bachelor Civil Engineering (MIST)
Mr. Lameck Owiti	Bachelor Civil Engineering (MUST)
Mr. Alfred B. Nyingi	Bachelor Civil Engineering (MUST), OD. Civil (ATC)
Mr. Lameck Simon Kongo	BSc. in Geoinformatics (Ardhi University)
Ms. Margaret S. Kironde	BSc. in Environmental Science and Management
Mr. Tony Mbugi	Bachelor of Civil Engineering (MUST), Diploma in Civil Engineering (MUST)
Mr. Isaac Sagamiko	Bachelor of Civil Engineering (MUST).

**Instructors**

Mr. Valentino A. Chaffu	MSc. in Civil Engineering (Maintenance Management) (DIT); Bachelor Civil Engineering (MIST), FTC in Civil Engineering (MTC);
Mr. Crodiwick W. Ruvunduka	Bachelor Civil Engineering (DIT), Ordinary Diploma Transportation Engineering (TCA)
*Mr. Kizito A. Ngowi	MSc in Geographical Information System (UDSM), Bsc. Urban & Reg. Planning (ARU); Ord. Diploma in Cartography (Ardhi Inst.-Tabora)
Mr. Stephano S. Maduka	Bachelor Civil Engineering (MUST, Ord. Diploma in Transportation Engineering (ATC)*
*Mr. Goodluck M. Masige	MSc. Water and Sanitation Utility Management (AgroParis-France), Bsc in Civil Engineering (MUST)
Mr. Mohamed J. Mohamed	MSc Highway Eng. (UDSM), PGD Transportation Eng. (UDSM), ADE Civil Eng. (DIT), FTC Civil Eng. (DTC)
Mr. Edson B. Rogasian	Bachelor Civil Engineering (MUST), OD. Civil (MIST)

#### **Technicians**

Mr. Samwel J. Kihogo	Bachelor Degree in Civil Engineering. (MUST), Ordinary Diploma in Civil Engineering (MIST)
Mr. Aaron J. Maganga	Bachelor Degree in Civil Engineering. (MUST), FTC in Water Laboratory Technology (Water Resource Institute)
Mr. Nehemia Matabalo	Bachelor Degree in Civil Engineering. (MUST), OD. Civil Eng. (MUST)

#### **Artisans**

Mr. Joseph Gesu	Senior Artisan I
Mr. Anselim B. Raphael	Artisan I
Mr. Lukonde Ng'andu	Senior Artisan I

#### **Office Secretary**

Ms. Naja Elia Nyambo	Bachelor of Business Administration in Human Resource Management
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*\*On study leave*

*\*\*Secondment*

## 8.1.1.3 PROGRAMME COURSES

## DIPLOMA IN CIVIL ENGINEERING

A. Diploma in Civil Engineering (1<sup>st</sup> Year)

## Semester I

Code	Name	Core or Elective	Credits
MS 6128	Advanced Mathematics I	Core	5
NS 6141	Advanced Physics I	Core	5
HS 6117	Communication skills	Core	5
IT 6116	Basic Computer Applications	Core	5
HS 6116	Elements of Development Studies	Core	5
CE 6101	Building Construction I	Core	5
CE 6102	Building Workshop Practice I	Core	10
CE 6103	Civil Engineering Materials I	Core	9
CE 6104	Introduction to Engineering Drawing	Core	8
CE 6105	Road Construction I	Core	6
<b>TOTAL</b>			<b>63</b>

## Semester II

Code	Name	Core or Elective	Credits
MS 6129	Advanced Mathematics II	Core	5
NS 6142	Advanced Physics II	Core	5
IT 6117	Computer Applications	Core	5
BM 6122	Entrepreneurship	Core	5
CE 6106	Building Maintenance I	Core	6
CE 6107	Building Workshop Practice II	Core	12
CE 6108	Land Surveying I	Core	6
CE 6109	Road Maintenance I	Core	6
CE 6110	Soil Mechanics I	Core	6
CE 6111	Structural Mechanics I	Core	6
<b>TOTAL</b>			<b>62</b>

**B. Diploma in Civil Engineering (2<sup>nd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Core or Elective</b>	<b>Credits</b>
MS 6221	Advanced Mathematics III	Core	5
NS 6221	Advanced Physics III	Core	5
CE 6201	Building construction II	Core	6
CE 6202	Building Design and Drawing	Core	8
CE 6203	Building Workshop Practice III	Core	8
CE 6204	Civil Engineering Materials II	Core	6
CE 6205	Pavement Design and Construction	Core	6
CE 6206	Soil Mechanics II	Core	6
CE 6207	Structural Mechanics II	Core	6
CE 6208	Industrial Practical Training	Core	10
<b>TOTAL</b>			<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Core or Elective</b>	<b>Credits</b>
MS 6225	Advanced Mathematics IV	Core	5
NS 6223	Advanced Physics IV	Core	5
CE 6209	Basics of Technical Report Writing	Core	5
CE 6210	Building Maintenance II	Core	5
CE 6211	Construction Management I	Core	5
CE 6212	Land Surveying II	Core	8
CE 6213	Quantity Surveying I	Core	5
CE 6214	Reinforced Cement Concrete Design III	Core	6
CE 6215	Road Maintenance II	Core	5
CE 6216	Soil Mechanics III	Core	5
CE 6217	Water Supply	Core	8
<b>TOTAL</b>			<b>62</b>

C. Diploma in Civil Engineering (3<sup>rd</sup> Year) Semester I

Code	Name	Core or Elective	Credits
CE 6301	Building Construction III	Core	7
CE 6302	Construction management II	Core	7
CE 6303	Fluid Mechanics and Hydraulics	Core	8
CE 6304	Quantity Surveying II	Core	7
CE 6305	Reinforced Cement Concrete Design II	Core	7
CE 6306	Structural Timber Design	Core	8
CE 6307	Project I	Core	8
CE 6308	Industrial Practical Training	Core	10
<b>TOTAL</b>			<b>62</b>

## Semester II

Code	Name	Core or Elective	Credits
CE 6313	Building Construction IV	Core	7
CE 6312	Civil Engineering Materials III	Core	7
CE 6311	Construction Management III	Core	7
CE 6309	Foundation Engineering	Core	8
CE 6310	Reinforced Cement Concrete Design II	Core	7
CE 6315	Structural Steel Design	Core	8
CE 6314	Wastes Management	Core	8
CE 6316	Project II	Core	10
<b>TOTAL</b>			<b>62</b>

## DIPLOMA IN HIGHWAY ENGINEERING

A. Diploma in Highway Engineering (1<sup>st</sup> Year)

## Semester I

Code	Name	Core or Elective	Credits
MS 6128	Advanced Mathematics I	Core	5
NS 6141	Advanced Physics I	Core	5
HS 6117	Communication skills	Core	5
IT 6116	Basic Computer Applications	Core	5
HS 6116	Elements of Development Studies	Core	5
CE 6101	Building Construction I	Core	5
CE 6102	Building Workshop Practice I	Core	10
CE 6103	Civil Engineering Materials I	Core	9
CE 6104	Introduction to Engineering Drawing	Core	8
CE 6105	Road Construction I	Core	6
<b>TOTAL</b>			<b>58</b>

## Semester II

Code	Name	Core or Elective	Credits
MS 6129	Advanced Mathematics II	Core	5
NS 6142	Advanced Physics II	Core	5
IT 6117	Computer Applications	Core	5
BM 6122	Entrepreneurship	Core	5
CE 6106	Building Maintenance, I	Core	6
CE 6107	Building Workshop Practice II	Core	12
CE 6108	Land Surveying I	Core	6
CE 6109	Road Maintenance I	Core	6
CE 6110	Soil Mechanics I	Core	6
CE 6111	Structural Mechanics I	Core	6
<b>TOTAL</b>			<b>62</b>

B. Diploma in Highway Engineering (2<sup>nd</sup> Year)

## Semester I

Code	Name	Core or Elective	Credits
MS 6221	Advanced Mathematics III	Core	5
NS 6221	Advanced Physics III	Core	5
CE 6201	Building construction II	Core	6
CE 6202	Building Design and Drawing	Core	8
CE 6203	Building Workshop Practice III	Core	8
CE 6204	Civil Engineering Materials II	Core	6
CE 6205	Pavement Design and Construction	Core	6
CE 6206	Soil Mechanics II	Core	6
CE 6207	Structural Mechanics II	Core	6
CE 6208	Industrial practical training	Core	10
<b>TOTAL</b>			<b>66</b>

## Semester II

Code	Name	Core or Elective	Credits
MS 6225	Advanced Mathematics IV	Core	5
NS 6223	Advanced Physics IV	Core	5
CE 6209	Basics of Technical Report Writing	Core	5
CE 6210	Building Maintenance II	Core	5
CE 6211	Construction Management I	Core	5
CE 6212	Land Surveying II	Core	8
CE 6213	Quantity Surveying I	Core	5
CE 6214	Reinforced Cement Concrete Design III	Core	6
CE 6215	Road Maintenance II	Core	5
CE 6216	Soil Mechanics III	Core	5
CE 6217	Water Supply	Core	8
<b>TOTAL</b>			<b>62</b>

C. Diploma in Highway Engineering (3<sup>rd</sup> Year)

## Semester I

Code	Name	Core or Elective	Credits
CE 6321	Coordinate Geometry and Differential Equations	Core	7
CE 6322	Correspondence, and Report Writing	Core	7
CE 6323	Route design	Core	8
CE 6324	Pavement Materials	Core	7
CE 6325	Traffic and Transportation Engineering	Core	7
CE 6320	Soil Mechanics and foundations	Core	8
CE 6306	Structural Timber Design	Core	8
CE 6308	Industrial Practical Training	Core	10
<b>TOTAL</b>			<b>62</b>

## Semester II

Code	Name	Core or Elective	Credits
CE 6329	Social and Environmental Management	Core	7
CE 6328	Hydraulics and fluid mechanics	Core	7
CE 6311	Construction Management III	Core	7
CE6227	Pavement Engineering	Core	8
CE 6314	Structural Steel Design	Core	7
CE 6327	Basic Bridge Construction and maintenance	Core	6
CE 6316	Project II	Core	8
<b>TOTAL</b>			<b>64</b>

## BACHELOR OF CIVIL ENGINEERING

A. Bachelor of Civil Engineering (1<sup>st</sup> Year)

## Semester I

Code	Name	Core or Elective	Credits
MS 8101	Linear Algebra and Calculus	Core	6
HS 8101	Communication Skills	Core	9
CS 8104	Programming Concepts	Core	9
DS 8101	Development Studies	Core	6
BM 8108	Entrepreneurship Education	Core	6
CE 8101	Engineering Drawing I	Core	9
CE 8102	Construction Technology I	Core	9
CE 8103	Workshop practice	Core	8
CE 8104	Structural Mechanics I	Core	8
<b>TOTAL</b>			<b>70</b>

## Semester II

Code	Name	Core or Elective	Credits
MS 8102	Advanced Calculus	Core	6
DS 8108	Development Perspectives	Core	6
CS 8110	Advanced C Programming	Core	6
CE 8105	Engineering Drawing II	Core	9
CE 8106	Construction Technology II	Core	9
CE 8107	Building Construction	Core	7
CE 8108	Mechanics of Structures	Core	8
CE 8109	Land Survey	Core	6
<b>TOTAL</b>			<b>60</b>

B. Bachelor of Civil Engineering (2<sup>nd</sup> Year)

## Semester I

Code	Name	Core or Elective	Credits
MS 8201	Differential Equations	Core	6
CE 8201	Soil Mechanics I	Core	6
CE 8102	Civil Engineering Materials.-I	Core	6
CE 8203	Fluid Mechanics	Core	6
CE 8204	Engineering Survey I	Core	9
CE 8205	Road Construction and Maintenance	Core	9
CE 8206	Concrete Technology	Core	6
CE 8207	Structural Analysis I	Core	6
CE 8116	Industrial Practical Training	Core	10
<b>TOTAL</b>			<b>64</b>

## Semester II

Code	Name	Core or Elective	Credits
MS 8303	Statistics and Numeric Analysis	Core	6
CE 8208	Engineering Survey II	Core	9.5
CE 8209	Fluid Mechanics and Hydraulics	Core	9.5
CE 8210	Engineering Geology	Core	6
CE 8211	Civil Engineering Materials.-II	Core	9
CE 8212	Soil Mechanics II	Core	6
CE 8213	Structural Analysis II	Core	8
CE 8214	Building Planning and Drawing	Core	6
<b>TOTAL</b>			<b>60</b>

**C. Bachelor of Civil Engineering (3<sup>rd</sup> Year)**

**Semester I**

<b>Code</b>	<b>Name</b>	<b>Core or Elective</b>	<b>Credits</b>
CE 8301	Quantity Survey I	Core	7
CE 8302	Geometric Design and Traffic Engineering	Core	9
CE 8303	Reinforced Concrete Design and Detailing I	Core	10
CE 8304	Foundation Engineering	Core	10
CE 8305	Highway Engineering Materials	Core	6
CE 8306	Construction Management	Core	8
CE 8307	Engineering Hydrology	Core	6
CE 8216	Industrial Practical Training II	Core	10
<b>TOTAL</b>			<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Core or Elective</b>	<b>Credits</b>
CE 8308	Building Services	Core	6
CE 8309	Quantity Surveying II	Core	8
CE 8310	Reinforced Concrete Design and Detailing II	Core	9
CE 8311	Water Supply Engineering	Core	6
CE 8312	Contract Planning and Administration	Core	9
CE 8313	Pavement Design and Construction	Core	7
CE 8314	Research Methodology	Core	7
CE 8315	Construction of Multi-Storey Structures	Core	8
<b>TOTAL</b>			<b>60</b>

**Bachelor of Civil Engineering (4<sup>th</sup> Year)**

**Semester I**

<b>Code</b>	<b>Name</b>	<b>Core or Elective</b>	<b>Credits</b>
CE 8401	Engineering Economics	Core	6
CE 8402	Structural Steel Design	Core	6
CE 8403	Waste Water Management	Core	6
CE 8404	Pavement Maintenance	Core	6
CE 8405	Bridge Design and Construction	Core	6
CE 8406	Pre-Stressed Concrete Design	Elective	6
CE 8407	Irrigation Engineering	Elective	6
CE 8408	Project I	Core	18
CE 8316	Industrial Practical Training III	Core	10
<b>TOTAL</b>			<b>70</b>

## Semester II

Code	Name	Core or Elective	Credits
CE 8409	Design of Masonry and Retaining Structures	Core	6
CE 8410	Structural Timber Design	Core	6
CE 8411	Solid Waste Management	Core	6
CE 8412	Industrial Building Construction	Core	6
CE 8413	Hydraulic Structures	Core	6
CE 8414	Transportation Engineering	Elective	6
CE 8415	Water Resources Management	Elective	6
CE 8416	Project II	Core	18
<b>TOTAL</b>			<b>60</b>

## 8.1.2 DEPARTMENT OF GEOSCIENCE AND MINING TECHNOLOGY

### Programmes

The Department currently offers one (1) Programme:

- A. Diploma in Mining Engineering

### 8.1.2.1 LABORATORIES AND WORKSHOPS

- i. Mining Laboratory

### 8.1.2.2 LIST OF STAFF

#### (Head of Department)

Dr. Alex W. Mwang'ande      PhD. Oil & Gas Wells Eng. (China University of Petroleum, East China); MSc. Petroleum Eng. (Norwegian University of Science and Technology); BSc. Mech. Eng. (UDSM)

#### Lecturers:

Dr. Muya Somo Mgaza      PhD. Geotechnical Eng. (HUST); MSc. Geotechnical Eng. (HUST); BSc. Geology (UDSM).

Dr. Raphael Iddphonc Mkini      PhD. Oil and Natural Gas Eng. (China University of Geosciences, Wuhan); MSc. Renewable Energy. Eng (UDSM); BSc. Mech. Eng. (UDSM)

#### Assistant lecturers

Mr. Alvin K. Mulashani\*      MSc. Oil and Gas Dev. Eng. (Xi'an Shiyou, China); BSc. Mech. Eng. (MIST).

Mr. MelckzedekMgimba\*      MSc. Petroleum Eng. (Norwegian University of Science and Technology); BSc. Mining Eng. (UDSM)

Mr. Wilson L. Ngole      MSc. Petroleum Eng. (Norwegian University of Science and Technology); BSc. Mining Eng. (UDSM)

Mr. Nickson N. Lushasi\*      MSc. Oil and Natural Gas Eng. (China University of Geosciences, Wuhan); BSc. Mining Eng. (UDSM)

Mr. Osmund E. Mwangupili\*      MSc. Oil and Natural Gas Eng. (China University of Petroleum, East China); BSc. Mining Eng. (UDSM)

Mr. Salehe R. Mayange      MSc. Hydrogeology (University of Badji Mokhtar Annaba [UBMA] – Algeria); BSc. Applied Geology (UBMA).

Mr. Oltingey T. Lindi\*      MSc. Petroleum Eng. (Norwegian University of Science and Technology); BSc. Mining Eng. (UDSM)

Mr. Deus A. Msumange\*      MSc. Mining Eng. (Karadeniz Technical University, Turkey); BSc. Geology (Badji Mokhtar Annaba University [UBMA], Algeria)

#### Instructors

Mr. Adamu Musa      MSc. Oil and Natural Gas Eng. (China University of Geosciences, Wuhan); BSc. Mining Eng. (UDSM)

Mr. Frank A. Mwakymbe\*      BSc. Mining Eng. (UDSM)

Mr. Abasi A. Hawaii BSc. Mining Eng. (UDSM)

**Technicians**

Ms. Asha Thobias Chiwanga\* Ordinary Diploma in Mining Eng. (MRI-Dodoma)

**8.1.2.3 PROGRAMME COURSES**

**DIPLOMA IN MINING ENGINEERING**

**A. Diploma in Mining Engineering (1<sup>st</sup> Year)**

**Semester-I**

Code	Name	Core or Elective	Credits
GM 6101	Introduction to Mining	Core	6
GM 6102	Introduction to Physical Geology	Core	6
CE 6118	Introduction to Engineering Drawing	Core	8
CE 6120	Building Workshop Practice – I	Core	10
CE 6208	Land Surveying - I	Core	6
MS 6128	Advanced Mathematics - I	Core	6
NS 6141	Advance Physics - I	Core	6
HS 6116	Elements of Development Studies	Core	6
HS 6117	Communication Skills	Core	6
IT 6116	Introduction to Computer	Core	6
<b>TOTAL</b>			<b>66</b>

**Semester-II**

Code	Name	Core or Elective	Credits
GM 6103	Introduction to Basics of Surface Mining	Core	9
GM 6104	Basic Mineralogy, Petrology and Ore Geology	Core	6
GM 6105	Introduction to Safety and Risk Assessment in Mining	Core	9
CE 6122	Building Workshop Practice – II	Core	12
CE 6215	Land Surveying- II	Core	6
MS 6129	Advanced Mathematics - II	Core	6
NS 6140	Advanced Physics - II	Core	6
BM 6122	Entrepreneurship	Core	6
IT 6117	Computer Application	Core	6
<b>TOTAL</b>			<b>66</b>

**B. Diploma in Mining Engineering (2<sup>nd</sup> Year)**

**Semester I**

Code	Name	Core or Elective	Credits
GM 6201	Drilling and Blasting- I	Core	12
GM 6202	Mine Equipment and Maintenance Management	Core	12
GM 6203	Introduction to Mine Environment	Core	9
GM 6204	Field Practical Training-I	Core	10
CE 6307	Fluid Mechanics and Hydraulics	Core	9
MS 6221	Calculus	Core	6
NS 6221	Advanced Physics - III	Core	6

<b>TOTAL</b>	<b>64</b>
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**Semester II**

<b>Code</b>	<b>Name</b>	<b>Core or Elective</b>	<b>Credits</b>
GM 6205	Drilling and Blasting-II	Core	12
GM 6206	Introduction to Rock Mechanics	Core	12
GM 6207	Introduction to Mineral Economics and Mining Regulatory Framework	Core	12
GM 6208	Basics of Ore Dilution and Production Control	Core	6
GM 6209	Basics of Technical Report Writing	Core	6
GM 6210	Small Scale Mining Techniques	Core	6
MS 6225	Advanced Mathematics - III	Core	6
NS 6223	Advanced Physics - IV	Core	6
<b>TOTAL</b>			<b>66</b>

**C. Diploma in Mining Engineering (3<sup>rd</sup> Year)**

**Semester I**

<b>Code</b>	<b>Name</b>	<b>Core or Elective</b>	<b>Credits</b>
GM 6301	Underground Mining	Core	12
GM 6302	Introduction to Tailing Storage Facilities	Core	9
GM 6303	Introduction to Mine Surveying	Core	9
GM 6304	Mining Laboratory - I	Core	6
GM 6305	Introduction to Hydrogeology	Core	9
GM 6306	Project – I	Core	9
GM 6307	Field Practical Training- II	Core	10
<b>TOTAL</b>			<b>64</b>

**Semester - II**

<b>Code</b>	<b>Name</b>	<b>Core or Elective</b>	<b>Credits</b>
GM 6308	Underground Mine Support Systems	Core	9
GM 6309	Mine Ventilation	Core	12
GM 6310	Material Handling System	Core	9
GM 6311	Mining Laboratory – II	Core	6
GM 6312	Introduction to Management in Mining	Core	9
GM 6313	Introduction to Mineral Processing Techniques	Core	12
GM 6314	Project – II	Core	9
<b>TOTAL</b>			<b>66</b>

### 8.1.3 DEPARTMENT OF ELECTRICAL AND POWER ENGINEERING

#### Programmes

Currently, the Department offers two (2) Programmes:

- i. Diploma in Electrical and Electronics Engineering
- ii. Bachelor of Electrical and Electronics Engineering

#### 8.1.3.1 LIST OF STAFF

##### (Head of Department)

Dr. Isaka J. Mwakitalima, PhD. Electrical Eng. (Delhi Technological University, India), MSc. Sustainable Energy (NM-AIST), Bachelor Electrical and Electronics (SJCET), Dip.Ed. Electrical (Klerruu TTC), FTC Electrical (ATC)

##### Senior Lecturers

Dr. John P. John, PhD. Energy Eng. (Berlin Tech. University-Germany), MSc. Elect. Eng. (UDSM), B. Eng. Elect. (DIT), FTC. (ATC)

Dr. Arthur Mngoma Omari, PhD Energy Eng. (NM-AIST), MSc Elec. Eng. (Kharkov State Technical University of Agriculture- Ukraine), Tech. Ed. (Morogoro)

##### Lecturers

Dr. Isaka J. Mwakitalima, PhD. Electrical Eng. (Delhi Technological University, India), MSc. Sustainable Energy (NM-AIST), Bachelor Electrical and Electronics (SJCET), Dip.Ed. Electrical (Klerruu TTC), FTC Electrical (ATC).

##### Assistant Lecturers

Mr. Watson E. Yotham, MSc. Elect. Eng. (UDSM), BSc. Elect. Eng. (UDSM), Tech. Ed. (Morogoro)

\*Mr. Owdean M. Suwi, Msc. Elect. Eng. (UDSM), BSc. Elect Eng., (UDSM). Tech. Ed. (Morogoro)

\*Mr. Sospeter I. Gabriel, MSc. Elect. Eng. (UDSM), B. Eng. Elect. (DIT), FTC Elect.Eng. (DIT)

Mr. Vincet V. Massawe, MSc Elect.Eng. (St. Petersburg State Polytechnical University-Russia); BSc Elect. Eng. (Russia); FTC in Mech. Eng. (ATC)

\*Mr. Godwin E Mnkeni, MSc. Elect. Eng. (UDSM), ADE Elect. Eng. (DIT), Dip. Elect. Eng. (Kidatu), Tech. Ed. (Morogoro)

\*Mr. Exaud S. Tweve, MSc. Elect. Eng. (UDSM), ADE Elect.Eng. (DIT), FTC Elect. Eng. (MTC)

\*Mr. Nicholas G. Moyo, MSc. Elect. Eng. (UDSM), PGD Elect. Eng. (UDSM), ADE (Elect. Eng. (DIT), FTC (ATC)

\*Mr. Wilbert Ruta MSc. Elect. Eng (JKUo A), BEng. Electrical and Electronics (MUST), Diploma Electrical and Electronics (MIST)

Mr. Joshua J. Mlay MEng. Power Engineering and Engineering Thermophysics (HUST)-CHINA, BEng. Electrical and Electronics (MUST), DEng. Electrical and Electronics (MUST)

*Mr. Emmanuel G Swetala	MTech Electrical Power Systems (JNTUA)-INDIA, BSc. Electrical Engineering (UDSM)
*Mr. Salehe S. Malamla	Masters of Electrical Eng. Shandong University, China, BSc-Electrical (SAUT)
Mr. Stuart Brown	M. Eng. (Power Systems), BEng. Electrical and Electronics (SAUT)

#### **Tutorial Assistants**

Mr. Makunja O. Bwire	BEng. Electrical Engineering (MUST), DEng Electrical and Electronics (MIST)
Mr. Romanus P. Lyanda	BSc. Electrical Engineering (UDSM)
Mr. Fredy F. Loita	BSc. Electrical Engineering (UDSM)
*Mr. Gwamaka Mwasomola	BEng. Electrical and Electronics (MUST)
Mr. Mnaka philipo Ndyanido	BEng. Electrical and Electronics (MUST)
Mr. Mussa Salanya Petro	BEng. Electrical and Electronics (MUST)

#### **Instructors**

*Mr. Raphael J. Mwasoni	BEng. Electrical Engineering (DIT), DTE (KLERRUU TTC), FTC Electrical (MTC)
*Mr. Novatus Kimenyuka	BEng. Electrical and Electronics (MUST), Deng. Electrical and Electronics (MIST)
*Mr. Andrew S. Mwampulo	BEng. in Electrical and Electronics (MUST), DSE (Butimba Teachers College)
*Mr. Furahini I Shelukindo	BEng. Electrical and Electronics (MUST), Deng. Electrical and Electronics (MUST)

#### **Technicians**

Mr. Mateso Stephano Ntinyako	Dip. Eng. (St. Joseph University in Tanzania)
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#### **Artisans**

Mr. Joseph Nsembele	Trade Test Grade One (Mbeya VTC)
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*\*On study leave*

## 8.1.3.2 PROGRAMME COURSES

## DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

A. Diploma in Electrical and Electronic Engineering (1<sup>st</sup> Year)

## Semester I

Fundamental Courses		
Code	Name	Credits
MS 6121	Advanced Mathematics I	6
NS 6139	Physical Science I	6
HS 6117	Communication Skills	6
IT 6116	Introduction to Computer	6
HS 6116	Element of Development Studies	6
Core Courses		
EE 6116	Basics of Electrical engineering I	6
EE 6117	Basics of Electrical Installation and Maintenance	6
EE 6118	Fundamental of Electrical Materials	6
EE 6119	Electrical Workshop Technology I	8
EE 6120	Technical Drawing I	6
ET 6116	Basic of Electronics	6
<b>TOTAL</b>		<b>68</b>

## Semester II

Fundamental Courses		
Code	Name	Credits
MS 6122	Advanced Mathematics I I	6
NS 6145	Physical Science II	6
BM6122	Entrepreneurship	6
IT 6117	Computer Applications	6
Core Courses		
ET 6117	Analogue Electronics	6
ET 6118	Analogue Electronics Lab	8
EE 6121	Basic of Electrical Engineering II	6
EE 6122	Electrical Measurements	6
EE 6123	Technical Drawing II	6
EE 6124	Electrical Workshop Technology II	8
<b>TOTAL</b>		<b>64</b>

**B. Diploma in Electrical and Electronic Engineering (2<sup>nd</sup> Year)****Semester I**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
MS 6221	Advanced Mathematics III	6
CS 6224	Computer Programming Basics	7
<b>Core Courses</b>		
EE 6201	Industrial Practical Training I	10
ET 6201	Digital Electronics I	6
EE 6202	DC Machines	7
EE 6203	Domestic Installation Testing and Commissioning	6
EE 6204	Electrical Equipments	6
EE 6205	Fundamental of automations I	6
EE 6206	Electrical Measurement Lab	6
EE 6207	Power Plant	6
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ST 6221	Advanced Mathematics IV	6
CS 6202	Object Orient Programming	7
<b>Core Courses</b>		
EE 6208	AutoCAD	7
EE 6209	Electrical power Transmission and Distribution	7
ET 6206	Digital Electronics II	8
EE 6210	Fundamental of Automation II	6
EE 6211	Introduction to Engineering Software	8
EE 6212	Statics AC Machines	7
EE 6213	Static and Dynamic Machines Control	9
<b>TOTAL</b>		<b>66</b>

**C. Diploma in Electrical and Electronic Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
EE 6301	Industrial Practical Training II	10
EE 6302	Basic of Control System Engineering	6
EE 6303	Basics of Power Protection	7
EE 6304	Electrical Drives I	6
ET 6302	Microprocessor and Microcontrollers	8
EE 6305	Motor and Transformer Rewinding	8
EE 6306	Power System Operations and Control	7
EE 6307	Power Electronics	6
EE 6308	Project 1	8
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
EE 6317	Basic Telecommunication Engineering	6
EE 6309	Control Engineering	7
EE 6310	Electrical Drives II	6
EE 6311	Electrical Installations	6
EE 6312	Induction Motors	6
EE 6313	Power Protection	6
EE 6314	Programmable Logic Controller	7
EE 6315	Synchronous Machines	6
EE 6316	Renewable Energy	6
EE 6317	Project II	10
<b>TOTAL</b>		<b>66</b>

**BACHELOR OF ELECTRICAL AND ELECTRONIC ENGINEERING****A. Bachelor of Electrical and Electronic Engineering (1<sup>st</sup> Year)****Semester I**

<b>Code</b>	<b>Title</b>	<b>Credit</b>
EE 8101	Fundamentals of Electrical Measurement	4
EE 8102	Fundamentals of Electronics	4
EE 8103	Basics of Workshop Technology and Practice	9
EE 8104	Basics of Electrical Engineering	6
EE 8105	Electrical Installation and Safety	4
IT 8116	Computer Application	6
ME 8176	Fundamental of Technical Drawings I	5
MS 8121	Linear Algebra and Calculus	6
HS8101	Communication Skills	9
DS8101	Development Studies	6
BM 8108	Entrepreneurship	9
<b>TOTAL</b>		<b>68</b>

**Semester II**

<b>Code</b>	<b>Title</b>	<b>Credit</b>
EE 8106	Fundamental of Electronics Devices	6
EE 8107	Fundamentals of Electrical Power Systems	6
EE 8108	Fundamentals of Electrical Machines	9
EE 8109	Workshop Technology & Practice	9
EE 8110	Electrical Maintenance	6
EE 8111	Basics of Control Engineering	6
IT 8117	Computer Networking	7
ME8177	Technical Drawing	5
MS 8122	Advanced Calculus	6
DS 8108	Development Perspective	6
<b>TOTAL</b>		<b>66</b>

**B. Bachelor of Electrical and Electronic Engineering (2<sup>nd</sup> Year)****Semester I**

<b>Core courses</b>		
<b>Code</b>	<b>Title</b>	<b>Credit</b>
EE 8201	Industrial Practical Training I	<b>10</b>
EE 8202	Electrical Network Analysis	6
EE 8203	Electrical Measurement and Instrumentation.	6
EE 8204	Fundamentals of Analogue Electronics	6
EE 8205	Basics of Engineering Electromagnetic	6
ME 8277	Fundamental of Engineering Mechanics	5
EE 8206	Power Plant	6
EE 8207	Engineering software	5
MS 8221	Differential Equations	6
ME 8276	Engineering drawing I	6
<b>TOTAL</b>		<b>62</b>

**Semester II**

<b>Core courses</b>		
<b>Code</b>	<b>Title</b>	<b>Credit</b>
MS 8222	Numerical Analysis and Statistics	6
EE 8208	Electrical Circuits Analysis	6
ME 8278	Computer Aided Drafting	6
EE 8210	Basic of Power Systems	7
EE 8212	Analogue electronics	6
EE 8213	Engineering electromagnetic	6
ME 8279	Engineering Thermodynamics	6
EE 8215	Electrical Engineering Materials	6
EE 8216	Basics of Computer systems engineering	6
CS 8204	Computer Programming	5
<b>TOTAL</b>		<b>60</b>

**C. Bachelor of Electrical and Electronic Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Title</b>	<b>Credit</b>
EE 8301	Industrial Practical Training II	10
EE 8302	DC Electrical Machines	8
EE 8303	Modelling in Control Systems Engineering	8
EE 8211	Electrical Power Transmission and Distribution	8
EE 8305	Basics of Power Electronics	8
EE 8306	Fundamental of Digital Electronics	7
IT 8317	Object Oriented Programming	6
EE 8308	Basics of Analogue Telecommunication	5
<b>TOTAL</b>		<b>60</b>

**Semester II**

<b>Core Courses</b>
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Code	Title	Credit
EE 8309	Environmental Engineering Management	6
EE 8310	3 – Phase AC Machines	7
EE 8304	Electrical power systems Analysis	7
EE 8311	Control System Engineering Analysis	7
EE 8312	Microprocessor	6
EE 8314	Power Electronics Circuits	7
EE 8315	Digital electronics	7
EE 8316	Basics of Digital Telecommunication	5
EE 8317	Electrical Safety and Maintenance	6
EE 8318	Research Methodology	6
<b>TOTAL</b>		<b>64</b>

#### D. Bachelor in Electrical and Electronic Engineering (4<sup>th</sup> Year)

##### Semester I

Core Courses		
Code	Title	Credit
EE 8401	Industrial Practical Training III	10
EE 8402	3 – Phase AC Synchronous Machines	8
EE 8403	Digital Control System Engineering	9
EE 8404	Programmable Logic Controller	6
EE 8315	Electrical Power Systems Dynamics	9
EE 8406	Power Electronics Converters	6
EE 8407	Engineering Operation Management	6
EE 8408	Project I	12
<b>TOTAL</b>		<b>66</b>

##### Semester II

Core Courses		
Code	Title	Credit
EE 8409	Laws for Engineers	6
EE 8410	Electrical Drives	9
EE 8411	Digital systems engineering	6
EE 8412	High voltage Engineering	8
EE 8413	Engineering Economic	6
EE 8414	Switchgear and Protection Engineering	8
EE 8415	Renewable Energy Technologies (RE)	6
EE 8416	Project II	12
<b>TOTAL</b>		<b>61</b>



Mr. BalloMwendapole*	MSc Energy Eng. (UDSM), PGDE Mech. (UDSM), ADE Mech. (MIST), FTC Mech. Eng. (MTC).
Mr. Silla W. Livifile*	MSc. Prod Eng. (UDSM), PGDE Mech. (UDSM), ADE Mech. (MIST), FTC. Mech. Eng. (TCA).
Mr. Yasini S. Nalinga*.	MSc. Energy Eng. (NM-AIST), B. Eng. Mechanical (MIST), FTC Mechanical Eng. (MTC).
Mr. Philemon X. Mutabilwa*	MSc Mech. Eng. (UB-Botswana), B. Eng. Mechanical (DIT), FTC Mech. (DIT) *

### Tutorial Assistants

Mr. Israel Komba	MSc. Prod Eng. (UDSM), PGDE Mech. (UDSM), ADE Mech. (DIT), DTE Mech. (Kleruu), FTC Mech. Eng. (DIT).
Mr. Jonathan Lunyungu	PGDE-Mechanical (UDSM), ADE Mech. (MTC), FTC Mech. (MTC).
Mr. Yeremia D. Gwau	B.Eng. Mechanical (MUST), DTE (Kleruu), FTC. Mech. Eng. (TCA).
Mr. Erasto S. Hebuka.	B.Eng. Mechanical. (DIT), DTE (Kleruu), FTC Mechanical (DTC).
Mr. Paulo S. Zebedayo*	B.Eng. Mechanical (MUST), Diploma in Mech. Eng. (MUST).
Mr. Sikudhan L. Mpuhus*	B.Eng. Mechanical. (MUST), Diploma in Mech. Eng. (MIST).
Mr. Shanel B. Mbawala	B. Auto. Eng. (NIT).
Mr. Paulo K. Shayo*	BEng Mechanical (MUST).
Mr. Gabriel Leonard Swilla	BEng Mechanical (MUST).
Mr. Ramadhan Swai	BEng Mechanical (MUST).

### Instructors

Mr. Evans N. Tweve	MSc. Mech.Eng. (UDSM), PGDE-Mechanical. (UDSM), ADE.Mechanical. (MIST), FTC. Mechanical. Eng. (MTC)
Mr. Seuri S. Kilakoi*	MSc Energy (CIMA V, Mexico), B.Eng. Mechanical (DIT), FTC Mechanical Eng. (MTC).
Mr. Samwel E. Mwasanjobe	B. Eng. Mechanical (MUST), Dip. Marine. Eng. (Mbegani).
Mr. Michael T. Mwakyonya	Master in Sustainable Energy (DIT), ADAE-Automotive Engineering (NIT), DAE-Automotive Eng. (NIT).
Mr. Emmanuel S. Sakalani	B.Eng. Mechanical (MUST) Diploma in Mechanical Eng. (ATC).
Mr. Kassim S. Fakhi	B.Eng. Mechanical (MUST) Diploma (Edu)-(Morogoro TTC).
Mr. Petro D Ndalila*	MSc Renewable Energy (UDSM), BSc Chemical and Process Eng. (UDSM).

### Technicians

Mr. Hamisi M. Egari	BEng Mechanical (MUST), Diploma in Automotive Eng. (ATC).
Mr. Nsajigwa L. Mbamba	BEng Mechanical (MUST), Diploma in Mechanical Eng. (MUST).

### Artisans

Ms. PalestinaNdelwa	Trade Test Grade II in welding and Metal Fabrication (NVTD -Dar).
Mr. Nelson Tawete	Motor Vehicle Mechanics Level III-VETA –Morogoro.

### Office Secretary

Magreth Mwakapala	Diploma in Secretary
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\*On study leave

**8.1.4.3 PROGRAMMES COURSES****DIPOMA IN MECHANICAL ENGINEERING****A. Diploma in Mechanical Engineering (1<sup>st</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6116	Engineering Drawing I	8
ME 6117	Engineering Materials I	7
ME 6118	Automotive Technology I	8
ME 6119	Manufacturing Engineering I	9
IT 6117	Fundamental Computer Application	6
HS 6116	Elements of Development Studies	6
HS 6117	Communication Skills I	6
NS 6139	Applied Physics I	6
MS 6123	Applied Mathematics I	6
<b>TOTAL</b>		<b>62</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6120	Engineering Drawing II	9
ME 6121	Engineering Materials II	7
ME 6122	Automotive Technology II	9
ME 6123	Manufacturing Engineering II	9
ME 6124	Mechanical Engineering Science I	6
CS 6124	Computer programming	6
BM 6122	Entrepreneurship	6
NS 6144	Applied Physics II	6
MS 6124	Applied Mathematics II	6
<b>TOTAL</b>		<b>64</b>

**B. Diploma in Mechanical Engineering (2<sup>nd</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6201	Computer Aided Drafting I	8
ME 6202	Strength of Materials	6
ME 6203	Automotive Technology III	9
ME 6204	Manufacturing Engineering III	9
ME 6205	Thermodynamics	6
ME 6206	Mechanical Engineering Science II	6
ME 6207	Engineering Measurement and Control	6
MS 6222	Applied Mathematics III	6
ME 6208	Industrial Practical Training I	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6209	Computer Aided Drafting II	9
ME 6210	Auto Electrical Systems	9
ME 6211	Manufacturing Engineering IV	9
ME 6212	Machine Elements and Design I	6
ME 6213	Fluids Mechanics	6
ME 6214	Fundamental of Programmable Logic Controllers	7
EE 6270	Electrical Engineering Science	6
EE 6271	Basic Electronics	6
MS 6223	Applied Mathematics IV	6
<b>TOTAL</b>		<b>64</b>

**C. Diploma in Mechanical Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6301	Machine Elements and Design II	6
ME 6302	Power plant I	6
ME 6303	Refrigeration	9
ME 6304	Environment Management	6
ME 6305	Mechatronics Technology	7
ME 6306	Fundamental of Research Methodology	6
MS 6322	Boolean Algebra and Statistics	6
ME 6307	Mechanical Project I	10
ME 6308	Industrial Practical Training II	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6309	Machine Elements and Design III	6
ME 6310	Power plant II	6
ME 6311	Air Conditioning	9
ME 6312	Computer Based Manufacturing	9
ME 6313	Workshop Management	6
ME 6314	Industrial Safety and Maintenance	6
ME 6315	Hydraulic and Pneumatic systems	7
ME 6316	Quality Control and Costing Management	7
ME 6317	Mechanical Project II	10
<b>TOTAL</b>		<b>66</b>

**DIPLOMA IN MECHANICAL ENGINEERING WITH INDUSTRIAL SAFETY AND OCCUPATIONAL HEALTH****A. Diploma in Mechanical Engineering with Industrial Safety and Occupational Health (1<sup>st</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6116	Engineering Drawing I	8
ME 6117	Engineering Materials I	7
ME 6118	Automotive Technology I	8
ME 6119	Manufacturing Engineering I	9
IT 6117	Fundamental Computer Application	6
HS 6116	Elements of Development Studies	6
HS 6117	Communication Skills I	6
NS 6139	Applied Physics I	6
MS 6123	Applied Mathematics I	6
<b>TOTAL</b>		<b>62</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6120	Engineering Drawing II	9
ME 6121	Engineering Materials II	7
ME 6122	Automotive Technology II	9
ME 6123	Manufacturing Engineering II	9
ME 6124	Mechanical Engineering Science I	6
CS 6124	Computer programming	6
BM 6122	Entrepreneurship	6
NS 6144	Applied Physics II	6
MS 6124	Applied Mathematics II	6
<b>TOTAL</b>		<b>64</b>

**B. Diploma in Mechanical Engineering with Industrial Safety and Occupational Health (2<sup>nd</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6201	Computer Aided Drafting I	8
ME 6202	Strength of Materials	6
ME 6203	Automotive Technology III	9
ME 6204	Manufacturing Engineering III	9
ME 6205	Thermodynamics	6
ME 6206	Mechanical Engineering Science II	6
ME 6207	Engineering Measurement and Control	6
MS 6222	Applied Mathematics III	6
ME 6208	Industrial Practical Training I	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6209	Computer Aided Drafting II	9
ME 6210	Auto Electrical Systems	9
ME 6211	Manufacturing Engineering IV	9
ME 6212	Machine Elements and Design I	6
ME 6213	Fluids Mechanics	6
ME 6214	Fundamental of Programmable Logic Controllers	7
EE 6270	Electrical Engineering Science	6
EE 6271	Basic Electronics	6
MS 6223	Applied Mathematics IV	6
<b>TOTAL</b>		<b>64</b>

**C. Diploma in Mechanical Engineering with Industrial Safety and Occupational Health (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6301	Machine Elements and Design II	6
ME 6326	Occupational Health and Industrial Hygiene	6
ME 6303	Refrigeration	9
ME 6327	Fire Engineering and Explosion Control	7
ME 6304	Environment Management	6
ME 6328	Industrial Safety and Occupational Health act	6
MS 6322	Boolean Algebra and Statistics	6
ME 6329	Safety Engineering Project I	10
ME 6308	Industrial Practical Training II	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6309	Machine Elements and Design III	6
ME 6330	Safety at Workplace	6
ME 6311	Air Conditioning	9
ME 6331	Accident Prevention Techniques	6
ME 6313	Workshop Management	6
ME 6332	Safety in Material Handling	6
ME 6333	Plant Design and House Keeping	6
ME 6334	Safety in Mines	6
MS 6335	Safety Engineering Project II	10
<b>TOTAL</b>		<b>61</b>

**DIPLOMA IN MECHATRONICS ENGINEERING****A. Diploma in Mechatronics Engineering (1<sup>st</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6116	Engineering Drawing I	8
ME 6125	Fundamentals of Engineering Materials	6
ME 6126	Fundamentals of Engineering Mechanics	6
ME 6118	Automotive Technology I	8
ME 6127	Workshop Practice I	8
EE 6170	Fundamentals of Electrical Engineering	6
IT 6117	Fundamental of computer application	6
HS 6117	Communication skills	6
NS 6139	Applied Physics I	6
MS 6123	Applied Mathematics I	6
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6120	Engineering Drawing II	9
ME 6122	Automotive Technology II	9
ME 6128	Workshop Practice II	10
EE 6171	Fundamentals of Electronics	6
BM 6122	Entrepreneurship	6
EE 6172	Analogy Electronics	6
CS 6124	Computer Programming I	7
NS 6144	Applied Physics II	6
MS 6124	Applied Mathematics II	6
<b>TOTAL</b>		<b>65</b>

**B. Diploma in Mechatronics Engineering (2<sup>nd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6202	Strength of Materials	6
ME 6205	Thermodynamics	6
ME 6224	Engineering Measurement and instrumentation	6
EE 6273	Digital electronics	7
ME 6201	Computer Aided Design I	8
ME 6203	Automotive Technology III	9
CS 6225	Computer Programming II	7
MS 6222	Applied Mathematics III	6
ME 6208	Industrial Practical Training I	10
<b>TOTAL</b>		<b>65</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6212	Machine elements and design I	6
ME 6213	Fluid mechanics	6
ME 6215	Programmable Logical Controller I	7
ME 6216	Electro-Pneumatic	6
ME 6210	Auto Electrical System	9
ME 6209	Computer Aided Design II	8
ME 6217	Transducers and Actuator Technology	6
EE 6274	Electrical Circuit Analysis	6
EE 6275	Industrial Electronics	6
MS 6263	Applied Mathematics IV	6
<b>TOTAL</b>		<b>66</b>

**C. Diploma in Mechatronics Engineering (3<sup>rd</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6304	Environmental Management	6
ME 6306	Fundamental of Research Methodology	6
ME 6319	Electro-Hydraulic Systems	6
ME 6303	Refrigeration	9
ME 6320	Automation and Robotics Technology	6
MS 6322	Boolean Algebra and Statistics	6
ME 6321	Programmable Logical Controller II	6
ME 6322	Mechatronics Project I	10
ME 6308	Industrial Practical Training II	10
<b>TOTAL</b>		<b>65</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6316	Quality Control and Costing Management	7
EE 6370	Power Electronics and Electrical Drives	7
ME 6312	Computer Based Manufacturing	9
EE 6371	Electrical Machines	6
ME 6311	Air Conditioning	9
ME 6313	Workshop Management	6
ME 6323	Maintenance of Mechatronics Systems	6
ME 6324	Control Systems	6
ME 6325	Mechatronics Project II	10
<b>TOTAL</b>		<b>66</b>

**DIPOMA IN AUTOMOTIVE AND AUTOELECTRICAL ENGINEERING****A. Diploma in Automotive and Autoelectrical Engineering (1<sup>st</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6116	Engineering Drawing I	8
ME 6117	Engineering Materials I	7
ME 6118	Automotive Technology I	8
ME 6119	Manufacturing Engineering I	9
IT 6117	Fundamental Computer Application	6
HS 6116	Elements of Development Studies	6
HS 6117	Communication Skills I	6
NS 6139	Applied Physics I	6
MS 6123	Applied Mathematics I	6
<b>TOTAL</b>		<b>62</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6120	Engineering Drawing II	9
ME 6121	Engineering Materials II	7
ME 6122	Automotive Technology II	9
ME 6129	Workshop Practice	9
ME 6124	Mechanical Engineering Science I	6
CS 6124	Computer programming	6
BM 6122	Entrepreneurship	6
NS 6144	Applied Physics II	6
MS 6124	Applied Mathematics II	6
<b>TOTAL</b>		<b>64</b>

**B. Diploma in Automotive and Autoelectrical Engineering (2<sup>nd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6201	Computer Aided Drafting I	8
ME 6202	Strength of Materials	6
ME 6206	Mechanical Engineering Science II	6
ME 6203	Automotive Technology III	9
ME 6218	Welding Technology	9
ME 6205	Thermodynamics	6
ME 6207	Engineering Measurement and Control	6
MS 6222	Applied Mathematics III	6
ME 6208	Industrial Practical Training 1	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6209	Computer Aided Drafting II I	9
ME 6210	Auto Electrical Systems	9
ME 6212	Machine Elements and Design I	6
ME 6213	Fluid Mechanics	6
ME 6219	Engine management	9
ME 6214	Fundamentals of Programmable Logical Controllers	7
EE 6270	Electrical Engineering Science	6
EE 6271	Basic Electronics	6
MS 6223	Applied Mathematics IV	6
<b>TOTAL</b>		<b>64</b>

**C. Diploma in Automotive and Autoelectrical Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6301	Machine Elements and Design II	6
ME 6336	Automotive Auxiliary Systems	7
ME 6337	Automotive Body Works	8
ME 6345	Automotive Environmental Management	6
ME 6338	Vehicle Inspection and Maintenance	7
ME 6306	Fundamentals of Research Methodology	6
MS 6322	Boolean Algebra and Statistics	6
ME 6339	Automotive Project I	10
ME 6208	Industrial Practical Training II	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
ME 6309	Machine Elements and Design III	6
ME 6340	Road Transport Operations	6
ME 6341	Heavy Duty Vehicles	7
ME 6342	Auto-electrical Systems Diagnosis	8
ME 6343	Automotive Heating Ventilation and Air Conditioning Systems	7
ME 6313	Workshop Management	6
ME 6314	Industrial Safety and Maintenance	6
ME 6315	Hydraulic and Pneumatic systems	7
MS 6344	Automotive Project II	10
<b>TOTAL</b>		<b>63</b>

**BACHELOR OF MECHANICAL ENGINEERING****A. Bachelor of Mechanical Engineering (1<sup>st</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME8101	Engineering Drawing I	7
ME8102	Engineering Materials	6
ME 8103	Strength of Materials I	6
ME8104	Manufacturing Engineering I	8
ME 8105	Automotive Engineering I	8
BM 8108	Entrepreneurship	6
IT 8116	Computer Applications	7
MS 8117	Engineering Mathematics I	6
HS 8101	Communication Skills	6
DS 8101	Development Studies	6
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME8107	Engineering Drawing II	9
ME8108	Machine Elements and Design I	6
ME8109	Manufacturing Engineering II	10
ME8110	Strength of Materials II	6
ME 8111	Automotive Engineering II	10
ME 8112	Power Production	6
DS 8108	Development Perspectives	6
ME 8106	Environmental Engineering	6
MS 8102	Engineering Mathematics II	6
<b>TOTAL</b>		<b>65</b>

**B. Bachelor of Mechanical Engineering (2<sup>nd</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME8201	Computer Aided Drafting I	9
ME8202	Mechanics of Machines	6
ME8203	Engineering Thermodynamics	7
ME8204	Machine Elements and Design II	6
ME 8209	Strength of Materials III	6
ME8205	Manufacturing Engineering III	10
EE 8240	Fundamental of Electrical Engineering	6
MS8203	Engineering Mathematics III	6
ME8206	Industrial Practical Training I	10
<b>TOTAL</b>		<b>66</b>

## Semester II

Code	Name	Credits
ME 8207	Computer Aided Drafting II	9
ME 8208	Machine Elements and Design III	6
ME 8210	Materials Technology	7
ME 8211	Fluid Mechanics	6
ME 8212	Mechatronics	6
ME 8213	Industrial Management	6
EE 8241	Electrical Machines I	7
CS 8200	Computer Programming	7
IT 8217	Computer Networking	6
MS 8217	Statistics and Numerical analysis	6
<b>TOTAL</b>		<b>66</b>

C. Bachelor of Mechanical Engineering (3<sup>rd</sup> Year)

## Semester I

Code	Name	Credits
ME 8301	Systems Reliability and Plant Maintenance	6
ME 8302	Dynamics of Mechanical Structures	6
ME 8303	Engineering Design	6
ME 8304	Industrial Energy Management	6
ME 8305	Metal cutting and Machines Processes	8
ME 8306	Research Methodology	7
EE 8340	Electrical Machines II	7
ME 8307	Mini Project I	10
ME 8308	Industrial Practical Training II	10
<b>TOTAL</b>		<b>66</b>

## Semester II

Code	Name	Credits
ME 8309	Renewable Energy Technologies	6
ME 8310	Industrial Automation	7
ME 8311	Engineering Economics	8
ME 8312	Control Systems Engineering	6
ME 8313	Computer Aided Engineering (CAE)	8
ME 8314	Engineering Operations Management	6
ME 8315	Heat Transfer	6
CS 8315	Data Structure and Algorithms	6
ME 8316	Mini Project II	10
<b>TOTAL</b>		<b>63</b>

**D. Bachelor of Mechanical Engineering (4<sup>th</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME 8401	Fluid Power and Control	6
ME 8402	Power Plants	6
ME 8403	Material Handling Design	6
ME 8404	Turbo Machinery	6
ME 8405	Production Engineering	7
ME 8406	Refrigeration System	8
CS 8406	Object Oriented Programming	7
ME 8407	Senior Project I	10
ME 8408	Industrial Practical Training III	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME 8409	Quality Assurance and Control	6
ME 8410	Engineering Ethics and Professional Conduct	6
ME 8411	Automation and Robotics	7
ME 8412	Engine Design Technology	6
ME 8413	Foundry Technology	9
ME 8414	Air Conditioning System	8
ME 8415	Computer Aided Manufacturing (CAM)	7
ME 8416	Industrial Supervisor Skill and leadership	6
ME 8417	Senior Project II	10
<b>TOTAL</b>		<b>65</b>

**8.1.5 DEPARTMENT OF CHEMICAL PROCESSING AND ENVIRONMENTAL ENGINEERING****Programme**

The Department is in the process of offering Bachelor degree programmes.

**8.1.5.1 LIST OF STAFF***(Head of Department)*

\*\*\*

**Lecturers:**

Mr. Omari Shegwando*	MSc. Water Resources Management (ARU), BSc. Civil Eng. (UDSM)
Mr. Emmanuel Mwangomo	MSc Renewable Energy. Eng (UDSM), BSc Energy Eng., (UDSM), Dipl Ed. (Kleruu)

**Instructor**

Mr. Dickson P. Ndalila	MSc. Energy Eng. (UDSM), BSc. Chemical Proc. Eng. (UDSM).
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## 8.2 COLLEGE OF ARCHITECTURE AND CONSTRUCTION TECHNOLOGY (CoACT)

### 8.2.1 DEPARTMENT OF ARCHITECTURE AND ART DESIGN

#### Programmes

The department offers three (3) programmes:

- i. Diploma in Architecture
- ii. Bachelor of Technology in Architecture
- iii. Bachelor of Technology in Landscape Architecture

#### 8.2.1.1 LIST OF STAFF

##### *(Head of Department)*

Justine M. Katabaro M. Eng. In Arch. (Chong Qing University. – China), B. Arch. (Tianjin University. – China),

##### Lecturers

Dr. Buberwa M. Tibesigwa PhD Eng. In Architecture (Chongqing University, China), M.Arch. (HIT China), B. Arch (University of Dar es Salaam)

##### Assistant lecturers

Mr. Kassim A. Choga M. Arch. (Ardhi Univ.), PGD Arch (Ardhi Univ.) AD Arch. (ArdhiInst).

Mr. Emmanuel J. Liombo, M.Arch. (Univ. of Nairobi – Kenya), B.Arch. (UDSM).

Mr. Israel J. Mayage Msc. Housing (ARU), B. Arch (UDSM)

\*Mr. Mbasa Segelela Msc. Housing (ARU), B. Arch (UDSM)

Mr. Justine Katabaro M. Eng. In Arch. (Chong Qing Univ. – China), B. Arch. (Tianjin Univ. – China)

\*Rosemary E. Kavishe MSc. Hydrology and Water Resources Engineering (Nelson Mandela African Institute of Science and Technology, BSc. Civil (ST. JOSEPH UNIVERSITY),

Mr. Oscar J. Shiganza\* MSc. Civil Engineering (MUST), BSc. Civil (ST. JOSEPH UNIVERSITY)

\*Mr. Juma N. Julius MBA in Marketing (UoI), B. Arch (UDSM), Dip. Ed (KLERRUU)

\*Mr. Benjamin M. John MSc. Housing (Ardhi University), B. Arch (UDSM)

\*Mr. Arnold K. Kashula - MSc. Housing (Ardhi University), B. Arch (UDSM)

\*Mr. Benson V. Karumuna M. Eng. Arch. (Chongqing University), B. Arch (ARU)

\*Mr. Kamugisha J. Kajumulo MSc. Construction Management (UDSM), B. Arch (UDSM)

Mr. Shija P. Ng'wandu MSc. Eng. In Architecture (Chongqing University), B. Tech-Arch (MUST)

Mr. Ibrahim M. Charles B. Arch (UDSM), MSc. Construction Management (ARU)

Mr. Blasius K. Venance M. Arch in Urban Design (Jadavpur University, India) B. Tech-Arch (MUST), Dip. Arch (MIST)

#### **Tutorial Assistants**

Mr. Lameck G. Mollel B. Arch. (ARU)

\*Mr. Gasper Massawe B. Tech. Arch. (MIST), Dipl. Arch. (MIST).

\*Mr. Marco D. Nassary B. Tech-Arch (MIST)

\*Mr. Moses L. Kivuyo B. Tech-Arch (MUST), Dip. Arch (MIST)

\*Mr. Godfrey B. Sosthenes B. Tech-Arch (MUST), Dip. Civil (MIST)

Ms. Emmayana Calist Auguli BSc. In Landscape Architecture

Mr. Samwel Gidion Mnazi BSc. In Landscape Architecture

Ms. Jaqualine Tarimo B.Tech-Arch (MUST), Dip. In Architecture

Nelson Boniphace Maseswa B.Tech-Arch (MUST),

\*Mr. Yakobo Rehani B.Tech-Arch (MUST), FTC-Arch. Engineering (MTC)

#### **Principal Instructors**

Dr. Juma H. Nzige PhD. In Management Science and Engineering (Chongqing University, China), M.Arch. (HIT China), B. Arch (University of Dar es Salaam)

#### **Instructors**

Mr. Gabriel N. Nicomedi MS. Eng. In Landscape Architecture Engineering (Chongqing University, China), BSc. Landscape Arch (ARU)

\*Mr. Elvis F. Lyimo BSc. Landscape Arch (ARU)

Mr. Jonas.E. Mwamasage BTA (MUST), Dip-Arch (MUST)

#### **Technicians**

Mr. Christopher J. Almasi FTC-Arch (MTC)

*\*On study leave*

## 8.2.1.2 DIPLOMA COURSES

## DIPLOMA IN ARCHITECTURE

A. Diploma in Architecture (1<sup>st</sup> Year)

## Semester I

Core Courses		
Code	Name	Credit
AA 6101	Architectural Draughting I	12
AA 6102	Structural Mechanics	6
AA 6103	Building Construction & Technology I	6
AA 6105	Building Services I	6
AA 6106	Building Materials I	6
HS 6116	Elements of Development studies	10
MS 6126	Advanced Mathematics I	6
CS 6102	Basic Computer Application I	6
HS 6117	Communication Skills	6
NS 6138	Advanced Physics I	6
<b>TOTAL</b>		<b>64</b>

## Semester II

Core Courses		
Code	Name	Credit
AA 6107	Architectural Draughting II	12
AA 6108	Basics of Structural Design I	6
AA 6109	Building Construction and Technology II	6
AA 6110	History & Theory of Architecture I	8
AA 6104	AutoCAD	6
MS 6221	Advanced Mathematics II	6
CS 6202	Basic Computer Application II	6
NS 6143	Advanced Physics II	6
AA 6111	IPT I	10
<b>TOTAL</b>		<b>66</b>

B. Diploma in Architecture (2<sup>nd</sup> Year)

## Semester I

Core Courses		
Code	Name	Credits
AA 6201	Architectural Design I	12
AA 6202	Basics of Structural Design II	8
AA 6203	Building construction & Technology III	8
AA 6204	Building Services II	6
AA 6205	Geometrics I	6
AA 6206	Building Materials II	6

AA 6207	ArchiCAD	6
ST 6223	Advanced Mathematics III	6
NS 6222	Advanced Physics III	6
<b>TOTAL</b>		<b>64</b>

### Semester II

Fundamental Courses		
Code	Name	Credits
AA 6208	Architectural Design II	14
AA 6209	Basics of Structural Design III	8
AA 6210	History & Theory of Architecture II	8
AA 6211	Geometrics II	8
NS 6224	Advanced Physics IV	6
MS 6228	Advanced Mathematics IV	6
AA 6212	IPT II	10
<b>TOTAL</b>		<b>60</b>

### C. Diploma in Architecture (3<sup>rd</sup> Year)

#### Semester I

Core Courses		
Code	Name	Credits
AA 6301	Basics of Structural Design III	8
AA 6302	Building Construction & Technology IV	8
AA 6303	Cost Estimates & Tendering	8
AA 6304	Project I	12
AA 6305	Professional Practice I	6
AA 6306	Climatic Design	8
AA 6307	Building services III	8
BM 6122	Entrepreneurship	8
<b>TOTAL</b>		<b>66</b>

#### Semester II

Fundamental Courses		
Code	Name	Credits
AA 6308	Project II	14
AA 6309	Thermal Design & Sonic Environment	10
AA 6310	Professional Practice II	8
AA 6311	Architectural Conservation	10
AA 6312	Building Information Modelling	10
AA 6313	Urban & Housing Development	8
<b>TOTAL</b>		<b>60</b>

**BACHELOR OF TECHNOLOGY IN ARCHITECTURE****A. Bachelor of Technology in Architecture (1<sup>st</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
HS 8101	Communication Skills	6
BM 8108	Development Studies	6
MS 8125	Calculus, Statistics and Coordinate geometry	6
BM 8108	Entrepreneurship	6
AA 8101	Architectural Draughting I	10
AA 8102	Building Construction I	6
AA 8103	Basics of Architectural Design	6
AA 8104	History of Architecture I	6
AA 8105	Building Materials I	6
AA 8106	Mini- Industrial Practical Training I	2
<b>TOTAL</b>		<b>60</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
DS 8108	Development perspective	6
CS8107	Computer Application	6
AA 8107	Structural Mechanics	6
AA 8108	Architectural Draughting II	8
AA 8109	Building Construction II	8
AA 8110	Principles of Architectural Design	6
AA 8111	History of Architecture II	6
AA 8112	Building material II	6
AA 8113	Construction Surveying	6
AA 8114	Industrial Practical Training (IPT)	10
<b>TOTAL</b>		<b>68</b>

**B. Bachelor of Technology in Architecture (2<sup>nd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>

AA 8201	Design Studio I	12
AA 8202	Building construction and technology I	8
AA 8203	Material Science	6
AA 8204	Design Theories I	8
AA 8205	History of Architecture III	6
AA 8206	Services and Installations I	6
AA 8207	Building Structures I	6
AA 8208	Urban Design	6
AA 8209	Mini- Industrial Practical Training II	2
<b>TOTAL</b>		<b>60</b>

**Semester II**

Core Courses		
Code	Name	Credits
AA 8210	Design Studio II	10
AA 8211	Building Construction and Technology II	6
AA 8212	Product Manufacture Technology I	6
AA 8213	Design Theories II	6
AA 8214	Building Renovation and Maintenance I	6
AA 8215	Services and Installation II	6
AA 8216	Building Structures II	6
AA 8217	Advanced CAD	6
AA 8218	Industrial Practical Training (IPT) II	10
<b>TOTAL</b>		<b>62</b>

**C. Bachelor of Technology in Architecture (3<sup>rd</sup> Year)**

**Semester I**

Core Courses		
Code	Name	Credits
AA 8301	Project I	12
AA 8302	Professional Practice and Management I	6
AA 8303	Building Construction and Technology III	8
AA 8304	Simulation Technology I	8
AA 8305	Product Manufacture Technology II	6
AA 8306	Alternative Energy Design	6
AA 8307	Environmental control and sustainability I	6
AA 8308	Building Renovation and Maintenance II	6
AA 8309	Mini- Industrial Practical Training III	2
<b>TOTAL</b>		<b>60</b>

**Semester II**

Core Courses		
Code	Name	Credits

AA 8310	Project II	10
AA 8311	Construction Economics I	6
AA 8312	Professional Practice and Management II	6
AA 8313	Structural Analysis and Design I	6
AA 8314	Product Manufacture Technology III	6
AA 8315	Simulation technology II	6
AA 8316	Research Methods	6
AA 8317	Environmental control and sustainability II	6
AA 8318	Industrial Practical Training (IPT) III	10
<b>Elective courses</b>		
AA 8319	Landscape technology	6
AA 8320	Conservation technology	
AA 8321	Interior design	
<b>TOTAL</b>		<b>68</b>

#### D. Bachelor of Technology in Architecture (4<sup>th</sup> Year)

##### Semester I

Core Courses		
Code	Name	Credits
AA 8401	Pre-Design Research	28
AA 8402	Structural Analysis and Design II	8
AA 8403	Disaster Management	8
AA 8404	Services and Installations III	8
AA 8405	Professional Practice and Management III	8
<b>TOTAL</b>		<b>60</b>

##### Semester II

Core Courses		
Code	Name	Credits
AA 8407	Comprehensive Design Project	60
<b>TOTAL</b>		<b>60</b>

#### BACHELOR OF TECHNOLOGY IN LANDSCAPE ARCHITECTURE

##### A. Bachelor of Technology in Landscape Architecture (1<sup>st</sup> Year 1)

##### Semester 1

Code	Name	Credits
HS 8101	Communication Skills	9
BM 8108	Development Studies	6
MS 8125	Calculus, Statistics and Coordinate geometry	6
CS 884	Entrepreneurship	6
AA 8120	History of landscape Architecture I	6

AA8121	Landscape architectural draughting and Graphics I	15
AA8122	Landscape Materials I	6
AA8123	Landscape Construction I	8
AA8124	Mini Industrial Practical training I	2
<b>TOTAL</b>		<b>64</b>

### Semester II

Code	Name	Credits
DS 8108	Development Perspective	6
AA 8125	Landscape construction surveying	8
AA 8126	Basics of Landscape Architectural Design	6
AA 8127	History of landscape ArchitectureII	6
AA 8128	Landscape Structural Design	6
AA 8129	Landscape Materials II	6
AA 8130	Landscape Architectural Draughting and Graphics II	12
AA 8131	Landscape ConstructionI	8
AA 8132	Industrial Training, I	10
<b>TOTAL</b>		<b>68</b>

## B. Bachelor of Technology in Landscape Architecture (2<sup>nd</sup> Year)

### Semester I

Core Courses		
Code	Name	Credits
AA 8220	Landscape Studio Design I	12
AA 8221	Landscape Construction III	8
AA 8222	History of Landscape Architecture	6
AA 8223	Landscape Materials III	8
AA 8224	Environmental Science	6
AA 8225	Botany and Plant Ecology, I	6
AA 8226	Lighting Design I	6
AA 8227	Sustainable Urban Landscape Infrastructure	6
AA 8228	Mini Industrial Practical Training II	2
<b>TOTAL</b>		<b>60</b>

### Semester II

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
AA8229	Landscape Studio Design II	12
AA 8230	Landscape Construction IV	8
AA 8231	History and Theory of Landscape Architecture. I	6
AA8232	Lighting Design II	6
AA 8233	Settlement Planning	6
AA8234	Botany and Plant Ecology II	6
AA8235	Landscape Services and Installations	6
AA8236	Introduction to Planting Design	6
AA8237	Industrial Training II	10
<b>TOTAL</b>		<b>66</b>

**C. Bachelor of Technology in Landscape Architecture (3<sup>rd</sup> Year)**

**Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
AA 8320	Landscape Studio Design III	12
AA 8321	Planting Design I	8
AA 8322	Contemporary Landscape Architecture	6
AA8323	Principles of Landscape Architectural Design I	8
AA8324	Simulation and Visualization Technology	8
AA 8325	History and Theory of Landscape Architecture. II	6
AA8326	Urban Landscape Design	6
AA 8327	Housing and Settlement Planning.	6
AA 8328	Mini Industrial Practical Training III	2
<b>TOTAL</b>		<b>62</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
AA 8329	Landscape Studio Design IV	12
AA 8330	Planting Design II	6
AA 8331	Site Grading	8
AA 8332	Principles of Landscape Architectural Design II	8
AA 8333	Landscape Conservation and Management, I	6
AA 8334	Landscape Professional Practice and Management I	6
AA 8335	Landscape Construction Economics	6
AA 8336	Research Methodology	6
AA 8337	Industrial Training III	10
<b>TOTAL</b>		<b>68</b>

**D. Bachelor of Technology in Landscape Architecture (4<sup>th</sup> Year)**

**Semester I**

Core Courses		
Code	Name	Credits
AA8410	Pre-design Research	46
AA8411	Disaster Management	6
AA 8412	Landscape Conservation and Management II	6
AA 8413	Landscape Professional Practice and Management II	6
<b>TOTAL</b>		<b>64</b>

**Semester II**

Core Courses		
Code	Name	Credits
AA8414	Comprehensive Design Project	60
<b>TOTAL</b>		<b>60</b>

**8.2.2 DEPARTMENT OF CONSTRUCTION MANAGEMENT AND TECHNOLOGY(CMT)****Programmes**

The department is currently preparing the curricula for offering Diploma, Bachelor and Master's degree programmes.

**8.2.2.1 LIST OF STAFF****(Head of Department)**

Dr. Ramadhani S. Tekka

PhD in Management Science and Engineering (Chongqing University), MEM (UDSM), BSc. in Geomatics (UDSM)

**Lecturers**

Dr. Yazidi H. Mwishwa,

PhD (UDSM), MEM (UDSM), PGD (UDSM), ADE Civil Eng. (DIT), FTC Civil Eng. (TCA)

Dr. Juma A. Mpangule

PhD in Civil Engineering and Construction Management (Technical University Dortmund, Germany), MSc. Const. mgt (ARU), BSC (BE) – UDSM

Mr. Japhary Shengeza\*

MSc. Construction Economics & Management (Ardhi University), Bsc, Building Economics (UDSM)

**Assistant Lecturers**

Mr. Moses Moyo\*

MSc. Mat. Sc. & Eng. Nelson Mandela (NMAIST), B. Sc. Civil (UDSM)

Mr. Ally A. Ally\*

Msc. Const. Mangt (Ardhi University), BSc. BE (UDSM), Dip-Ed (ALHARAMAIN)

Mr. Baraka N. Budogo

Msc. Urban Planning Management (Ardhi University), Bachelor Degree in Urban Development and Environmental Management - DUDEM (IRDP)

Mr. David A. Mwipopo

Msc. Urban Planning Management (Ardhi University), BSc.  
Urban and Regional Planning URP (Ardhi University)

**Tutorial Assistants**

Mr. Hubert Bazil Kimboi\*

BSc. Building Economics (Ardhi University)

Mr. Melchior Vitalis Shukuru

BSc. in Geoinformatics (Ardhi University)

Ms. Adelina Kalinga

BSc. Building Economics (Ardhi University)

Ms. Edna William Machumu

BSc. in Geomatics (Ardhi University)

Mr. Hokins E. Moshi

BSc. Civil Engineering (MUST), Ordinary Diploma in Civil  
Engineering (MUST)

Mr. Elius P. Tibesigwa

BSc. Building Economics (Ardhi University)

Mr. Aboubakary S. Kimiro

BSc. Urban and Regional Planning-URP (Ardhi University)

*\*On study leave*

*\*\*Secondment*



Mr. Tumain Mbinda*	BSc. Computer Science (St. Joseph)
Mr. Award Magemo*	BSc. Computer Science & Eng. (St. Joseph)
Ms. Beatrice Mayowela	BSc. Computer Science&Eng (St. Joseph)
*On study leave	

### 8.3.1.3 PROGRAMME COURSES

#### DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY

##### A. Diploma in Information and Communication Technology (1<sup>st</sup> Year)

###### Semester 1

Code	Name	Credits (Hrs)
MIS 6125	Business Mathematics	6
HS 6117	Communication Skills	6
Core Courses		
Code	Name	Credits (Hrs)
IT 6116	Programming concept	9
CS 6117	Computer Systems Maintenance and Repair	9
IT 6117	Fundamental of ICT	6
IT 6118	Computer Networks	9
IT 6119	Basic Electronics	6
IT 6120	Multimedia Technologies	9
<b>TOTAL</b>		<b>60</b>

###### Semester II

Fundamental Courses		
Code	Name	Credits (Hrs)
MIS 6126	Advanced Business Mathematics	6
BM 6122	Entrepreneurship	10
BM 6117	Basics of Management Principles	6
Core Courses		
Code	Name	Credits (Hrs)
IT 6121	Introduction to Operating System	6
IT 6125	Computerized Accounting	6
IT 6122	Management Information Systems	6
IT 6123	Computer Networks Design and Management	10
IT 6124	Introduction to Database	10
<b>TOTAL</b>		<b>60</b>

**B. Diploma in Information and Communication Technology (2<sup>nd</sup> Year)****Semester 1**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits (Hrs)</b>
IT 6218	Introduction to Software Engineering	6
IT 6220	Data Structure and File Handling	9
IT 6221	Object-Oriented Programming JAVA	9
IT 6222	Multimedia Application Production	9
IT 6223	Microprocessor Technologies	6
IT 6224	E-commerce	6
IT 6225	Computer Architecture	6
IT 6219	Web Application Development	9
<b>TOTAL</b>		<b>60</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits (Hrs)</b>
IT 6226	Business start-up and Management	6
IT 6212	Website Design and Hosting	9
IT 6213	Digital Electronics	6
IT 6214	Object Oriented Programming C++	9
IT 6215	Management of Technology and Innovation	6
IT 6216	Systems Analysis and Design	6
IT 6217	Database Systems Design and Management	9
IT 6211	Industrial Practical Training I	10
<b>TOTAL</b>		<b>61</b>

C.

**Diploma in Information and Communication Technology (3<sup>rd</sup>Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits (Hrs)</b>
IT 6311	E-marketing	6
IT 6315	Industrial Practical Training II	10
IT 6312	Mobile Application Development	9
IT 6317	Project I	12
IT 6313	IT Project Management	9
IT 6314	Open Source Software Development	9
IT 6316	Cyber Security	9
<b>TOTAL</b>		<b>64</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits (Hrs)</b>
IT 6324	Business Management	6
<b>Core Courses</b>		
IT 6318	Human Computer Interactions	9
IT 6319	Cloud Computing	9
IT 6320	Artificial Intelligence	9
IT 6321	Project II	12
IT 6322	Mobile Networks and Computing	9
IT 6323	Ethics and Laws of IT	6
<b>TOTAL</b>		<b>60</b>

**BACHELOR OF INFORMATION AND COMMUNICATION TECHNOLOGY****A. Bachelor of Information and Communication Technology (1<sup>st</sup> Year)****Semester 1**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credit (Hrs)</b>
HS 8101	Communication Skills	6
DS 8101	Development Studies	6
MS 8121	Business Mathematics	6
<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits (Hrs)</b>
IT 8101	Fundamentals of ICT	9
IT 8102	Management of Information System	9
IT 8103	Multimedia Technologies	9
IT 8104	Programming Concepts	9
CS 8106	Computer Maintenance and Repair	9
<b>TOTAL</b>		<b>63</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits (Hrs)</b>
IT 8106	Industrial Management	8
IT 8107	Python Programming	6
IT 8108	Database Design and Implementation	8
IT 8109	Professional Practice and IT laws	6
IT 8110	Computer Networks	8
IT 8111	Operating Systems	7
IT 8112	IT Technical Support	6
IT 8113	Object-Orientated Programming	8
IT 8114	Industrial Practical Training (IPT) I	10
<b>TOTAL</b>		<b>67</b>

**B. Bachelor of Information and Communication Technology (2<sup>nd</sup> Year)**

**Semester 1**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credit (Hrs)</b>
IT 8214	Financial Management	6
<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits (Hrs)</b>
IT 8201	Computer System Administration and Network Management	9
IT 8202	Problem Solving	8
IT 8203	Mobile Application Development	9
IT 8204	Software Engineering	8
IT 8205	Applied Networks	8
IT 8206	System Analysis and Design	9
IT 8207	Management of Technology and Innovation	6
<b>TOTAL</b>		<b>63</b>

**Semester II**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credit (Hrs)</b>
T 8215	Technical and Business Writing	6
BPP 845	Research Methodology	6
BM 8108	Entrepreneurship	6
<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credit (Hrs)</b>
IT 8208	Human Computer Interaction	8
IT 8209	System Integration and Deployment	8
IT 8210	Data Mining and Warehousing	8
IT 8211	IT Project Management	8
IT 8212	Animation Development	9
IT 8213	Industrial Practical Training (IPT) II	10
<b>TOTAL</b>		<b>69</b>

**C. Bachelor of Information and Communication Technology (3<sup>rd</sup> Year)**

**Semester 1**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits (Hrs)</b>
IT 8301	Cyber Security and Network Management	10
IT 8302	Web Development	10
IT 8303	Open-Source Software Development	10
IT 8304	JAVA Programming	10
IT 8305	Artificial Intelligence	10
IT 8306	Final Year Project 1	12
<b>TOTAL</b>		<b>62</b>

## Semester II

Core Courses		
Code	Name	Credits (Hrs)
IT 8307	Mobile Networks and Computing	10
IT 8308	Cloud Computing	10
IT 8309	E-Commerce	10
IT 8310	Business Intelligence and Analytics	10
IT 8311	Internet of Things (IoT)	10
IT 8312	Final Year Project 2	12
<b>TOTAL</b>		<b>62</b>

### 8.3.2 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### Programmes

The Department offers five (5) Programmes:

- i. Diploma in Computer Science
- ii. Diploma in Computer Engineering
- iii. Bachelor of Computer Engineering
- iv. Bachelor of Computer Science
- v. Bachelor of Engineering in Data Science

#### 8.3.2.1 LABORATORIES AND WORKSHOPS

- i. Computer Maintenance and Repair Laboratory
- ii. Computer Network laboratory
- iii. Two Computer Software Application Laboratories

#### 8.3.2.2 LIST OF STAFF

##### *(Head of Department)*

Dr. Mrindoko R Nicholaus	Ph.D ICT (OUT), MSc. EEIT (UDSM), B. Eng (DIT), FTC (MIST)
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##### **Lecturers**

Dr. Mrindoko R Nicholaus	Ph.D ICT (OUT), MSc. EEIT (UDSM), B. Eng (DIT), FTC (MIST)
Mr. Stanley Leonard	MSc. TE (UDOM), BSc Comp. Eng. (DIT)
Dr. Sadiki L. Kusyama	PhD in ICSE (NM-AIST), MSc.ICSE (NM-AIST), B.Eng (DIT)

##### **Assistant Lecturers**

Mr. Godfrey Kayombo	MSc. TE (UDOM), BSc Comp. Eng. (DIT)
Mr. Aziz Singa	MSc (UDOM), BSc Comp. Eng. (SJUIT)
Mr. Bestone Lufyagila	MSc (NM-AIST, Tanzania), BSc. Eng (UDSM)
Mr. Ibrahim Frank	M.Eng Comp S.c & Tech (Hubei University of Sc &Tech)
Mr. Bally S. Omary	MSc IT (UDOM), B.Eng (DIT), FTC (DIT)
Ms. Betty J. Singano	MSc. Comp Sc (Kerala University), B. Tech IT (St Joseph)

**Tutorial Assistants**

Mr. Richard C. Rajabu	BSc. (UDSM)*
Mr. Lusungu P. Wangiliasi	BSc.Eng (UDSM)*
Ms. Rahel A Mtali	B. Eng (MUST) *
Mr. Emmanuel Nimrod Malissa	BSc. in Computer Engineering (MUST)
Ms. Namsemba Rabieli Mzava	BSc. in Multimedia Technology (UDOM)
Mr. Robert Joseph Mtowe	BSc. in Multimedia Technology (UDOM)
Mr. David Mwakifuna	BSc. in Multimedia Technology (UDOM)

**Senior Instructors**

Mr. Noel Y. Chintelele	MSc. TE (UDOM), B. Eng (DIT)*
Mr. Pascal J. Yamakil	MSc. EEIT (UDSM), Advanced Diploma (IAA)
Mr. Shadrack D. Njugunya	MSc. Comp (UDOM), B. Eng (DIT), FTC (DIT)

**Instructors**

Mr. Liberatus M. Sago	B.Sc. Eng (UDSM)
Mr. Enlai N. Watson	B. Eng (DIT), FTC (DIT)
Mr. Riziki Pangahela	BSc IT (OUT)

**Technician**

Mr. George R. Kitula	B..Eng (MUST)
Mr. Anthony L. Chaula	Diploma. ICT (MUST)

*\*On study leave*

## 8.3.2.3 PROGRAMME COURSES

## DIPLOMA IN COMPUTER SCIENCE

A. Diploma in Computer Science (1<sup>st</sup> year)

## Semester I

Code	Name	Credit
<b>Core Courses</b>		
HS 6117	Communication Skills	6
CS 6132	Elementary Mathematics	10
CS 6133	Computer Fundamentals	10
CS 6134	Computer Application	10
CS 6135	Programming Concept	12
CS 6136	Basic Electronics	10
<b>TOTAL</b>		<b>58</b>

## Semester II

<b>Core Courses</b>		
Code	Name	Credit
CS 6137	Basics of Computer Maintenance and Troubleshooting	12
CS 6138	Web application	10
CS 6139	Computer Networks Fundamentals.	12
CS 6140	Basics of Mobile Application	08
CS 6141	Multimedia Technologies	08
CS 6142	Industrial practical Training	12
<b>TOTAL</b>		<b>62</b>

B. Diploma in Computer Science (2<sup>nd</sup> year)

## Semester I

Code	Name	Credit
<b>Core Courses</b>		
CS 6215	Management of Technology and Innovation	06
CS 6252	Operating System	10
CS 6253	Computer Networks	12
CS 6254	Computer Maintenance and Troubleshooting	12
CS 6255	Object Oriented Programming	12
CS 6256	Web Technology	10
<b>TOTAL</b>		<b>62</b>

## Semester II

<b>Core Courses</b>		
Code	Name	Credit
CS 6257	Java Programming	10
CS 6258	Computer Architecture	10
CS 6259	Software Engineering	08
CS 6260	Introduction to Machine Learning	08
CS 6261	Database Management System	10
CS 6262	Industrial Practical Training	12

<b>TOTAL</b>	<b>58</b>
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**C. Diploma in Computer Science (3<sup>rd</sup> Year)**

**Semester I**

Code	Name	Credit
<b>Core Courses</b>		
CS 6371	Analysis and Design Algorithms	12
CS 6372	Research Methodology	10
CS 6373	Information System Management	10
CS 6374	Entrepreneurship and Development	10
CS 6375	IT Security	10
CS 6376	Project I	12
<b>TOTAL</b>		<b>64</b>

**Semester II**

Code	Name	Credit
<b>Core Courses</b>		
BM 6117	Basic of Management Principles	08
CS 6378	E-Commerce	12
CS 6379	Data Structure	12
CS 6380	Bioinformatics	12
CS 6381	Project II	12
<b>TOTAL</b>		<b>56</b>

**DIPLOMA IN COMPUTER ENGINEERING**

**A. Diploma in Computer Engineering (1<sup>st</sup> Year)**

**Semester 1**

Code	Name	Credit
MS 6132	Trigonometry	06
CS 6116	Ethics in Computer Engineering	06
NS 6141	Engineering Mechanics	06
HS 6117	Communication Skills	06
EE 6116	Fundamental of Electrical Engineering	06
ME 6170	Workshop Technology	06
CS 6117	Computer Systems Maintenance and repair	06
CS 618	Computer Application Software	06
CS 6119	Computer Networks	06
CS 6120	Basics Electronics	06
CS 6121	Computer Architecture	06
<b>TOTAL</b>		<b>66</b>

## Semester II

Code	Name	Credit
MS 6131	Calculus	06
EE 6120	Fundamental of Electrical Technology	06
NS 6137	Thermodynamics and Electromagnetism	06
ME 6270	Technical Drawing	06
CS 6122	Mobile Computing	06
CS 6123	Field Practical Training I	10
CS 6124	Computer Programming	06
CS 6125	Computer Network Design and Management	06
CS 6126	Computer Peripheral Maintenance and Repair	08
CS 6127	Introduction to Database	06
<b>TOTAL</b>		<b>66</b>

B. Diploma in Computer Engineering (2<sup>nd</sup> Year)

## Semester I

Code	Name	Credit
MS 6226	Polynomials, Matrices and Algorithm	06
CS 6201	System Software	09
CS 6209	Measurements and Instrumentation	06
CS 6202	Object Oriented Programming	09
CS 6203	Data Communication	06
CS 6204	Advanced Electronics	06
CS 6205	Digital Electronics	06
CS 6206	System Analysis and Design	06
CS 6207	Database System Design and Management	06
CS 6208	Introduction to Software Engineering	06
<b>TOTAL</b>		<b>66</b>

## Semester II

Code	Name	Credit
<b>Core Courses</b>		
MS 6227	Discrete Mathematics and Complex Numbers	06
CS 6209	Field Practical Training II	10
CS 6210	Data Structure and File Handling	09
CS 6211	Basics of Telecommunication	06
CS 6212	Website Design and Hosting	09
CS 6213	Sequential Circuits	06
CS 6214	Microprocessor Technology	06
CS 6215	Information Management	06
CS 6216	Introduction to Embedded Systems	06
<b>TOTAL</b>		<b>64</b>

**C. Diploma in Computer Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credit</b>
MS 6321	Coordinate Geometry and Vectors	06
CS 6301	Introduction to Fiber Optics Technology	09
CS 6302	Project I	12
CS 6303	Automation and Control Systems	09
CS 6304	Multimedia Production	09
CS 6305	Signal and Data Processing Circuits	09
CS 6306	Information and Cyber Security	09
<b>TOTAL</b>		<b>63</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credit</b>
ST 6323	Probability and Statistics	06
BM 6122	Entrepreneurship	06
CS 6307	Introduction to Image, Video and Speech Processing	09
CS 6308	Project II	12
CS 6309	Digital Forensic	09
CS 6310	Introduction to Distributed Systems	09
CS 6311	Innovation and Creativity	09
<b>TOTAL</b>		<b>60</b>

**BACHELOR OF COMPUTER ENGINEERING****A. Bachelor of Computer Engineering (1<sup>st</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8135	Basic Electronics	07
EE 8104	Basic of Electrical Engineering	06
ME 8170	Workshop Technology	06
ME 8171	Engineering drawing	06
CS 8136	Computer Systems Maintenance and Repair	07
CS 8137	Computer Network I	07
CS 8138	Computer Programming and Algorithms	07
CS 8139	Microprocessor Technology I	07
CS 8140	Operating System	07
<b>TOTAL</b>		<b>60</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8141	Data Communication	5
CS 8142	Sequential Circuit	5
CS 8143	Industrial Automation and control	8
CS 8144	Software Engineering I	6
CS 8145	Multimedia Application and Production	6
CS 8146	Networks Design and Implementation	8
CS 8147	System Analysis and Design I	8
CS 8148	Web design and Hosting	6
CS 8149	Industrial Practical Training I	10
<b>TOTAL</b>		<b>66</b>

**A. Bachelor of Computer Engineering (2<sup>nd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8235	Digital Systems	07
CS 8236	Communication Systems I	07
CS 8237	Electronic Devices	07
CS 8238	Data Structure and Computer Programming	07
CS 8290	Electrical Fundamentals	06
CS 8272	Calculus	06
MS 8270	Engineering Mechanics	06
HS 8101	Communication Skills	06
<b>TOTAL</b>		<b>52</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8239	Communication Systems II	07
CS 8240	Analogue Electronics	07
CS 8241	Computer Networks Management	07
CS 8242	Microprocessor Technology II	07
CS 8243	Computer System Engineering	07
CS 8244	Industrial Practical Training (IPT) II	10
EE 8302	Measurements and Instrumentation	07
ME 8271	Industrial Management	06
ME 8272	Mechanics of Machines	06
MS 8128	Advanced Calculus	06
<b>TOTAL</b>		<b>70</b>

**C. Bachelor of Computer Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8335	Electronic Circuits	07
CS 8336	Electronic Fabrication	07
CS 8337	Data base Systems	08
CS 8338	Control System Design I	07
CS 8339	Computer System Design	07
CS 8340	Operating Systems	07
BM 8341	Finance and Human Resource Management	06
MS 8221	Differential Equations	06
<b>TOTAL</b>		<b>55</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8341	Signal Processing	07
CS 8342	Object Oriented Programming	08
CS 8343	Control System Design II	07
CS 8344	Interactive Multimedia	07
CS 8345	Industrial Automation II	07
CS 8346	System Analysis and Design II	07
CS 8347	Industrial Practical Training (IPT) III	10
CS 8348	Engineering Operations Management	06
MS 8222	Statistics and Numerical Analysis	06
<b>TOTAL</b>		<b>65</b>

**D. Bachelor of Computer Engineering (4<sup>th</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8416	Internet Technologies	07
CS 8417	Computer Graphics	07
CS 8418	Robotics Intelligent System	07
CS 8419	Real Time System Design	07
CS 8420	Expert Systems	07
CS 8421	Software Engineering II	07
CS 8422	Law of Engineers	06
CS 8423	Senior Project I	10
<b>TOTAL</b>		<b>58</b>

## Semester II

Code	Name	
CS 8424	User Interface Design	12
CS 8425	Computer Networks and Telegraphic Engineering	12
CS 8426	Design Embedded Processor Systems	12
CS 8427	Industrial Robotics	12
BM 8108	Entrepreneurship for Engineers	6
CS 8428	Senior Project II	10
<b>TOTAL</b>		<b>66</b>

## BACHELOR OF COMPUTER SCIENCE

A. Bachelor of Computer Science (1<sup>st</sup> Year)

## Semester I

Code	Name	Credits
<b>Core Courses</b>		
MS 8121	Linear Algebra	06
CS 8101	Theory of Computation	08
HS 8101	Communication Skills	06
CS 8102	Introduction to Informatics and Microcomputers	09
CS 8103	Operating Systems	08
CS 8104	Programming Concepts	09
CS 8105	Basics in Digital Circuit	09
CS 8106	Computer Maintenance and Repair	09
<b>TOTAL</b>		<b>64</b>

## Semester II

Code	Name	Credits
<b>Fundamental Courses</b>		
CS 8107	Electrical Fundamentals	09
CS 8108	Logical Foundations	06
CS 8109	Analytical Methods of Computing	06
MS 8125	Calculus	06
CS 8110	Data Structure and Algorithms	09
CS 8111	Introduction to Computer Systems Architecture	06
CS 8112	Computer Networks	09
CS 8113	Computer Systems Design	09
CS 8114	Industrial Practical Training I	10
<b>TOTAL</b>		<b>70</b>

**B. Bachelor of Computer Science (2<sup>nd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
BM 8108	Entrepreneurship	06
BPP 845	Research Methodology	06
MS 8125	Discrete Mathematics	06
CS 8201	Introduction to GIS	06
CS 8202	Software Engineering	06
CS 8203	Organisation and Project Management	06
CS 8204	Object Oriented Programming	09
CS 8205	Computer Graphics	09
CS 8206	Expert Systems	06
CS 8207	Website Development and Hosting	06
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
DS 8101	Development Studies	06
CS 8208	Mathematical Logic and Formal Semantics	06
CS 8209	Introduction to Formal Methods	06
CS 8210	Advanced C Programming	09
CS 8211	Multimedia Systems	09
CS 8212	Software Development and Management	08
CS 8213	Database Design Concepts	09
CS 8214	Computer Algorithms and Modelling	06
CS 8215	Industrial Practical Training II	10
<b>TOTAL</b>		<b>69</b>

**C. Bachelor of Computer Science (3<sup>rd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8301	Principles of Counting	06
ST 8122	Statistics and Numerical Analysis.	06
CS 8302	Professional Issues in Information Systems Practice	06
CS 8303	Distributed Systems	06
CS 8304	Network Design and Administration	09
CS 8305	Advanced OO Programming	09
CS 8306	Application Development for Mobile Devices.	09
CS 8307	Final Year Project 1	15
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ST 8121	Queuing Theory and Inventory Models	06
CS 8308	E-Commerce	06
CS 8309	Trends in Changing Information Technology	06
CS 8310	Implementation of Databases	09
CS 8311	Visual Application Development	09
CS 8312	Management Information System	10
CS 8313	Final Year Project 2	15
<b>TOTAL</b>		<b>96</b>

**BACHELOR OF ENGINEERING IN DATA SCIENCE****A. Bachelor of Engineering in Data Science (1<sup>st</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
HS 8101	Communication Skills	09
CS 8116	Principles of Programming	09
MS 8225	Discrete Mathematics for ICT	08
MS 8126	Linear Algebra	09
DS 8101	Development Studies	08
CS 8117	Introduction to Computer and Artificial Intelligence	06
ST 8124	Basic Statistics and Probability	09
<b>TOTAL</b>		<b>58</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8118	Industrial Practical Training I	10
CS 8119	Introduction to High Level Language	09
CS 8123	Mathematical Analysis I	09
CS 8120	Introduction to Database Systems	09
CS 8121	Introduction to Computer Networking	09
CS 8122	Security and Privacy	09
CS 8123	Introduction to Software Engineering	09
<b>TOTAL</b>		<b>64</b>

**B. Bachelor of Engineering in Data Science (2<sup>nd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8216	Programming I-Object Oriented Programming	09
MS 8225	Calculus	09
ST 8225	Statistical Inferences	09
CS 8217	System Analysis and Design	07
CS 8218	Data Structures and Algorithms Analysis	09
CS 8219	Computer Organization and Architecture I	09
CS 8220	Introduction to Machine Learning	<b>09</b>
<b>TOTAL</b>		<b>61</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8221	Operating Systems	09
CS 8222	Internet Programming and Application	08
CS 8223	Cloud Computing	09
ST 8224	Regression Analysis and Forecasting	09
CS 8245	Database Management Systems	08
CS 8225	Industrial Practical Training II	10
CS 8226	Project Planning Monitoring and Evaluations	12
<b>TOTAL</b>		<b>65</b>

**C. Bachelor of Engineering in Data Science (3<sup>rd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ST 8321	Multivariate Analysis and Stochastic Process	11
CS 8316	Big Data Programming	08
CS 8317	Categorical Data Analysis and Statistical Packages	08
CS 8318	System Integration Programming using Python	09
CS 8319	Data Science in Research, Business and Society	09
CS 8320	Network Analysis	08
	Elective	08
<b>TOTAL</b>		<b>62</b>
<b>Electives</b>		
CS 8326	Parallel Computing	07
CS 8327	Marketing Analytics and Big Data	07
ST 82251	Elements of Data Science	07

## Semester II

Core Courses		
Code	Name	Credits
ST 8322	Regression Analysis	09
CS 8321	Data Security	09
CS 8322	Data Science Research Methods	08
CS 8323	Data Warehousing Design and Implementation	09
CS 8324	Web Data Compression and Search	09
CS 8325	Industrial Practical Training III	09
	Elective	09
<b>TOTAL</b>		<b>62</b>
Electives		
CS 8329	Knowledge Representation and Reasoning	09
ST 82250	R Programming	09
CS 8328	Big Data Management	09

C. Bachelor of Engineering in Data Science (4<sup>th</sup> Year)

## Semester I

Core Courses		
Code	Name	Credits
CS 8400	Professional Ethics and Conduct	07
CS 8401	Data Science & Engineering Project I	12
CS 8402	Data Mining Design and Implementation	09
CS 8403	Business Process Intelligence and Analytic	09
CS 8404	Law and Data Science	09
CS 8405	Cognitive Science	08
	Elective	09
<b>TOTAL</b>		<b>63</b>
Electives		
CS 8411	Bioinformatics	09
CS 8412	Applied Deep Learning	09

## Semester II

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 8406	Data Visualization and Data Driven Decision Making	09
CS 8407	Data Science and Engineering Project II	12
CS 8408	Applied Machine Learning	08
BM 8108	Entrepreneurship	09
CS 8409	Advanced Artificial Intelligence	09
DS 4226	Data Challenge	09
	Elective	08
<b>TOTAL</b>		<b>64</b>
<b>Electives</b>		
CS 8413	Actuarial Data and Analysis	08
CS 8414	Information Retrieval and Web Search	08

### 8.3.3 DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

#### Programmes

The Department offers Two (2) Programmes:

- a) Diploma in Electronics and Telecommunication Engineering
- b) Bachelor of Engineering in Telecommunication Systems

#### 8.3.3.1 LABORATORIES AND WORKSHOPS

- i. Measurements Laboratory
- ii. Electronics Laboratory
- iii. Electrical Installation workshop

#### 8.3.3.2 LIST OF STAFF

##### *(Head of Department)*

Mr. Sospeter S. Joseph

PhD (On progress) in Electrical Engineering (Telecommunication Option) (PAUSTI– KENYA), MSc. Information Communication Science and Engineering (Electronics and Telecommunications Engineering) (NM-AIST), BSc. Telecommunication Engineering (UDSM)\*

##### **Professors**

Prof. Aloys Mvuma

PhD. in Systems Engineering (Hiroshima University, Japan), MSc. in Information Science (Shimane University, Japan), BSc.in Electrical Engineering (UDSM)

##### **Lecturers**

Dr. Juma S. Ally

PhD. in Information and Communication Engineering (University of Science and Technology of China), MSc. in Communication and Information Systems (Huazhong University of Science and Technology) B.Eng. in Telecommunication Engineering (Huazhong University of Science and Technology – CHINA)

##### **Assistant Lecturers**

Mr. Charles O. Nyatega

ME. Signal and Info. Processing (TUTE– CHINA). B.Eng in Telecommunication Engineering (Huazhong University of Science and Technology - CHINA).

Mr. Justine G. Mbilinyi\*

MSc. Electronics Eng. & IT (UDSM), BSc. Electrical Eng. (UDSM)

Mr. Bonaventura Matuntera Siko

MSc Electronics Eng. (Varma High Institute of Mechanical and Electrical Engineering - Bulgaria; FTC in Electronics & Telecommunication (DTC)

Mr. Emmanuel S. Mahenge\*

MSc. Telecom Eng. (UDOM), B.Eng. Electronics and Telecom (DIT)

Mr. Daniel A. Sinkonde	MSc. ICSE (NM-AIST, TZ). B.Eng. ECE (St. JCET); FTC in Mech. Eng. (MTC)
Mr. Geoffrey Katema*	ME Signal & Info. Processing (TUTE– CHINA), B. Eng. ECE (St. JCET)
Mr. Zacharia B. Mzurikwao	ME Signal & Info. Processing (TUTE– CHINA), B. Eng. EEE (St. JCET)
Ms. Lilian Kawala*	ME Signal & Info. Processing (TUTE– CHINA), BSc in Electrical and Electronics (MUST), Dip in Electrical and Electronics (MIST)
Mr. Exaud Tarimo*	MSc. Electronics & Comm. (Beijing Jiaotong Univ - CHINA) BSc. Telecommunication Engineering (UDSM)
Mr. Cuthbert John Karawa	ME. Information and Communication Engineering (Huazhong University of Science and Technology – CHINA), BSc. Telecommunication Engineering (UDOM)
Mr. Emmanuel Anania Mwangosi	ME. Information and Communication Engineering (Harbin Engineering University-CHINA), BSc. Computer Science (Ruaha Catholic University).
Ms. Catherine Protas*	MSc. Electronics Eng. & IT (UDSM) B.Eng. Electronics and Communication (SJCET)
<b>Tutorial assistants</b>	
Ms. Candida Mwisomba	BSc. Electronics and Communication Engineering (St. Joseph University in Tanzania)
Mr. Avitus Uranus Rwehumbiza	BSc. Telecommunication Engineering (UDSM)
<b>Instructors I</b>	
Mr. Monte S. Kayoka*	MSc Comp & Communication (Waseda – Japan) B.Eng. Electrical Engineering (DIT), FTC Electrical (MTC)
Ms. Suzan M Misholi*	MSc. Information and Communication Science and Engineering (NM-AIST), B.Eng. Electronics and Telecom (DIT)
<b>Instructor II</b>	
Mr. Godwin B. Tunze*	M.Electronic Engineering (KIT–Korea), BSc. Telecommunication Engineering (UDSM)
Ms. Susan Mboje	MSc. Oil & Natural Gas Eng. (China Univ. of Geosciences). B.Eng. Electronics and Communication (SJCET)

*\*On study leave*

## 8.3.3.3 PROGRAMME COURSES

## DIPLOMA IN ELECTRONICS AND TELECOMMUNICATION ENGINEERING

A. Diploma in Electronics and Telecommunication Engineering (1<sup>st</sup> Year)

## Semester I

Fundamental Courses		
Code	Name	Credits
EE 6116	Basics of Electrical Engineering	6
EE 6119	Fundamentals of Electrical Materials	7
EE 6120	Electrical Workshop Technology I	8
ET 6116	Basic Electronics	6
EE 6127	Electrical and Electronics Measurements	7
EE 6121	Technical Drawing I	6
MS 6121	Advanced Mathematics I	6
NS 6140	Physical Science I	6
HS 6116	Elements of Development Studies	6
IT 6116	Introduction to Computer	6
<b>TOTAL</b>		<b>64</b>

## Semester II

Fundamental Courses		
Code	Name	Credits
EE 6122	Basic Electrical Engineering II	6
ET 6117	Analog Electronics	6
ET 6118	Analog Electronics Lab	8
ET 6119	Basics of Telecommunication	6
EE 6125	Electrical Workshop Technology II	8
MS 6122	Advanced Mathematics II	6
NS 6145	Physical Science II	6
HS 6117	Communication Skills	6
BM 6122	Entrepreneurship	6
IT 6117	Computer Applications	6
<b>TOTAL</b>		<b>64</b>

**B. Diploma in Electronics and Telecommunication Engineering (2<sup>nd</sup> Year)****Semester I**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ET 6201	Digital Electronics I	6
ET 6202	Power Amplifiers and Oscillators	7
ET 6203	Analog Communication Systems	7
EE 6205	Introduction to Engineering Software	8
ET 6204	Data Communication	7
ET 6205	Television Engineering	7
MS 6221	Advanced Mathematics III	7
CS 6224	Computer Programming Basics	7
ET 6206	Industrial Practical Training I	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ET 6207	Digital Electronics II	7
ET 6208	Digital Communication Systems	7
ET 6209	Cellular and Mobile Communications	7
ET 6210	Professional Practice	8
ET 6211	Instrumentation	7
EE 6214	Electric Machines	7
EE 6207	AutoCAD	7
ST 6221	Advanced Mathematics IV	6
CS 6202	Object Oriented programming	7
<b>TOTAL</b>		<b>63</b>

**C. Diploma in Electronics and Telecommunication Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ET 6301	Optical Fiber Communication	8
ET 6302	Microprocessor and Microcontrollers	8
ET 6303	Electronic Equipment Maintenance	8
EE 6316	Fundamentals of Control Systems	7
ET 6304	Project I	8
ET 6305	Industrial electronics	7
IT 6324	Database Fundamentals	7
ET 6306	Industrial Practical Training II	10
<b>TOTAL</b>		<b>63</b>

**Semester II**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ET 6307	Wireless Communication Technologies	6
ET 6308	Telecommunication Switching Principles	7
EE 6313	Programmable Logic Controllers	7
ET 6309	Satellite and Microwave Communication	8
ET 6310	Antenna and Radar	8
ET 6311	Transmission Lines and Wave Guides	8
ET 6312	Computer Networking	8
ET 6313	Project II	10
<b>TOTAL</b>		<b>62</b>

**BACHELOR OF ENGINEERING IN TELECOMMUNICATION SYSTEMS****A. Bachelor of Engineering in Telecommunication Systems (1<sup>st</sup> Year)****Semester I**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
HS 8101	Communication Skills	9
DS 8101	Development Studies	9
ET 8101	Information Technology	9
ET 8102	Fundamentals of engineering drawing	9
ET 8103	Principles of programming	9
ET 8104	Fundamental of electrical engineering	9
ET 8105	Television Systems	9
<b>TOTAL</b>		<b>63</b>

**Semester II**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
MS 8121	Linear algebra and calculus	7
ET 8106	Introduction to computer networking	9
ET 8107	Fundamentals of electronics	7
ET 8108	Introduction to high level programming	9
ET 8109	Basics of control engineering	7
ET 8110	Fundamental of Telecommunication switching	9
ET 8111	Antenna and propagation	9
ET 8112	Field Practical Training	10
<b>TOTAL</b>		<b>67</b>

**B. Bachelor of Engineering in Telecommunication Systems (2<sup>nd</sup> Year)****Semester I**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
MS 8227	Advanced calculus and probability	7
ET 8201	Database management systems and applications	7
ET 8202	Introduction to information systems Security	7
ET 8203	Circuit theory	7
ET 8204	Fundamental of analogue electronics	7
ET 8205	Instrumentation and measurements engineering	9
ET 8206	Computer networking protocols	7
ET 8207	Introduction to engineering application software	9
<b>TOTAL</b>		<b>60</b>

**Semester II**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
BM 8206	Research Methodology	7
MS 8221	Differential equations	7
ET 8208	Data structures and algorithms analysis	7
ET 8209	Object oriented programming	7
ET 8210	Introduction to operating systems	7
ET 8211	Signals and systems	7
ET 8212	Electromagnetic theory I	7
ET 8213	Fundamentals of electronics	7
ET 8214	Field Practical Training	10
<b>TOTAL</b>		<b>66</b>

**C. Bachelor of Engineering in Telecommunication Systems (3<sup>rd</sup> Year)****Semester I**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ET 8301	Digital electronics	7
ET 8302	Data communication and networks	7
ET 8303	Electromagnetic theory II	7
ET 8304	Microprocessor and interfacing	9
ET 8305	Intelligent Embedded systems	9
ET 8306	Optical communication Systems	7
ET 8307	Principles of communications systems	9
<b>Elective Courses</b>		
ET 8308	Cellular Communication System	7
ET 8309	Very Large-scale integrated circuits	7
<b>TOTAL</b>		<b>62</b>

## Semester II

Fundamental Courses		
Code	Name	Credits
ET 8309	Fuzzy logic and Expert Systems	9
ET 8310	Tele-traffic engineering	7
ET 8311	Digital telecommunications	9
ET 8312	Microcontroller systems	7
ET 8313	Microwave engineering	7
ET 8314	Introduction to 3D modeling and image acquisition	7
ET 8318	Field Practical Training	10
Elective Courses		
ET 8315	Networking Routers and Routing Protocols	7
ET 8316	Information systems security	7
ET 8317	LAN switches	7
<b>TOTAL</b>		<b>63</b>

D. Bachelor of Engineering in Telecommunication Systems (4<sup>th</sup> Year)

## Semester I

Fundamental Courses		
Code	Name	Credits
ET 8401	Engineering project management	7
ET 8402	Mobile communication	9
ET 8403	Information theory and coding	9
ET 8404	Professional ethics and conduct	7
ET 8405	Digital signal processing	9
ET 8409	Project I	12
Elective Courses		
ET 8406	Network forensics	7
ET 8408	Wan technologies	7
<b>TOTAL</b>		<b>60</b>

## Semester II

Fundamental Courses		
Code	Name	Credits
ET 8410	Engineering entrepreneurship	6
ET 8411	Telecommunication systems and networks	7
ET 8412	Satellite Communication Systems	7
ET 8413	System administration and management	8
ET 8414	Digital image processing	8
ET 8417	Project II	16
Elective Courses		
ET 8415	Legal aspects of Telecommunication Systems	8
ET 8416	Programmable logic controller	8
<b>TOTAL</b>		<b>60</b>

### 8.3.4 DEPARTMENT OF INFORMATICS

#### Programmes

The Department is in the process of developing the curricula for Diploma and Bachelor degree programmes.

The Department offers one (1) programme:

- a) Diploma in Business Computing

#### 8.3.4.1 LIST OF STAFF

##### *(Head of Department)*

Dr. Sadiki Lameck Kusyama	PhD in Information and Communication Science and Engineering (Nelson Mandela African Institution of Science and Engineering) MSc in Information and Communication Science and Engineering (Nelson Mandela African Institution of Science and Engineering), B.Eng. in Computer Engineering (Dar es Salaam Institute of Technology)
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##### Assistant Lecturers

Mr. Sospeter S. Joseph*	MSc. Electronic & Telecom Eng (NM-AIST), BSc. Telecommunication Engineering (UDSM)
Mr. Ayubu H. Mbaga*	ME Signal & Infor. Processing (TUTE– CHINA), B. Eng. ECE (St. JCET)
Ms Neema Rajabu	MSc. Software Engineering (Kampala International University-Uganda), Bsc. In Computer Science (Kampala International University-Tanzania)

##### Tutorial assistant

Mr. Godphrey G. Kyambile*	MSc. Comp (NM-AIST), BSc Computer Science (St. Joseph)
Mr. Ally S. Sikoro	MSc. Comp (UDOM), B. Eng (DIT), FTC (DIT)
Mr. Peter J. Madembwe	B.Sc Computer Science (St. Joseph)
Mr. Aman Sanga*	B. Eng. (DIT)

##### Instructor II

Mr. Ipyana Issa Mwisekwa	BSc. Information Technology and Systems (Mzumbe University)
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\*Study leave

## 8.4.1.2 PROGRAMME COURSES

## DIPLOMA IN BUSINESS COMPUTING

A. Diploma in Business Computing (1<sup>st</sup> Year)

## Semester I

Fundamental Courses		
Code	Name	Credits
HS 6117	Communication Skills	6
IF 6116	Business computing concepts and applications	6
BM 6117	Basics of Management Principles	6
IF 6117	Fundamentals of computer networks	6
BM 6108	Elements of Commerce	6
BM 6118	Basics of Financial Accounting	9
IF 6118	Computer Maintenance and Repair	6
MIS 6125	Business Mathematics	9
IF 6120	Computer Maintenance and Repair Lab works	6
<b>TOTAL</b>		<b>60</b>

## Semester II

Fundamental Courses		
Code	Name	Credits
BM 6122	Entrepreneurship	6
MIS 6126	Advanced Business Mathematics	9
BM 6133	Intermediate Accounting	6
IF 6121	Introduction to Operating System	6
BM 6126	Elementary of Economics	6
IF 6122	Computer Networks Design and Management	9
BM 6124	Basics of Business Law and Ethics	6
IF 6125	Computer Networks Design and Management Lab works	6
IF 6126	Introduction to Database	6
<b>TOTAL</b>		<b>60</b>

B. Diploma in Business Computing (2<sup>nd</sup> Year)

## Semester I

Code	Name	Credits
IF 6212	Industrial Practical Training	10
IF 6215	CyberSecurity	6
If 6213	Basics of Electronics	6
IF 6201	Business programming	6
IF 6202	Business Database Systems	9
IF 6203	System Analysis and Design	9
BM 6205	Basics of Research Methodology	6
IF 6214	Business Information Systems	6
IF 6204	Business Programming Lab works	6
IF 6205	Business Database Systems Lab works	6
<b>TOTAL</b>		<b>70</b>

**Semester II**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
IF 6211	Basics of Software Engineering	6
BM 6216	Basics of Taxation and Public Finance	6
BM 6217	Basics of Cost Accounting	6
IF 6206	Object-Oriented Business Design in C++	9
IF 6207	Business Statistical Packages	6
IF 6216	IT Auditing theory and practice	6
BM 6232	Basics of International Marketing	9
IF 6208	Object-Oriented Business Design in C++ Lab works	6
IF 6209	Business Statistical Packages Lab works	6
IF 6210	E-Commerce	6
<b>TOTAL</b>		<b>66</b>

**C. Diploma in Business Computing (3<sup>rd</sup> Year)****Semester I**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
IF 6316	Object-Oriented Business Design in Java	6
IF 6301	Mobile Apps Development	9
IF 6302	Project Management	6
IF 6303	Web Application Development	9
IF 6304	Web Application Development Lab Works	6
IF 6305	Industrial Practical Training	10
IF 6315	Business start-up and Management	6
IF 6306	Project I	10
<b>TOTAL</b>		<b>62</b>

**Semester II**

<b>Fundamental Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
IF 6307	Business Computing Ethics	6
IF 6308	Multimedia Application and Production	9
IF 6309	Multimedia Application and Production Lab works	6
IF 6310	Artificial Intelligence	6
IF 6311	Enterprise Information Management	6
IF 6312	Computerized Accounting	9
IF 6313	Computerized Accounting Lab works	6
IF 6314	Project II	6
<b>TOTAL</b>		<b>61</b>

## 8.4 COLLEGE OF SCIENCE AND TECHNICAL EDUCATION (CoSTE)

### 8.4.1 THE DEPARTMENT OF APPLIED SCIENCES

#### Programmes

The Department offers two (2) Programmes:

- a) Diploma in Laboratory Science and Technology
- b) Bachelor of Laboratory Science and Technology

#### 8.4.1.1 LABORATORIES

- i. Microbiology Laboratory
- ii. Biochemistry Laboratory
- iii. Molecular Biology Laboratory

#### 8.4.1.2 LIST OF STAFF

##### (Head of Department)

Dr. Hezron Mwakabona	PhD. Chemical Engineering (KU Leuven, Belgium); MSc. Environmental Science and Engineering (NM-AIST); BSc. Edu. Chemistry/Biology (UDSM)
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##### Lecturers

Dr. Gasparly Mwanyika*	PhD Molecular Biol. (SUA), MSc. Life Sci (Health & Biomedical Sciences (NM-AIST), BSc. Biotech & Lab Sci. (SUA)
Dr. Bernadether Rugumisa	PhD Molecular Sciences (UDSM), MSc. Life Sci (Health & Biomedical Sciences (NM-AIST), BSc. Biotech & Lab Sci. (SUA)

##### Assistant Lecturers

Ms. Paskalina Badi	MSc. Biochemistry (SUA), BSc. Biotech & Lab Sci (SUA)*
Mr. Baraka Ngingo	MSc One Health Molecular Biology (SUA), BSc Biotechnology & Lab Sciences (SUA)
Ms. Felista Magesa	MSc Life Sci (Health & Biomedical Sciences (NM-AIST), BSc Biotechnology & Lab Sciences (SUA)
Mr. Victor Sanga	MSc Environment & Ecotoxicology (UDSM), BSc Sci with Education (SUA)
Ms. Tumikia Sanga	MSc biochemistry (SUA), BSc with Education (SUA)

##### Tutorial Assistants

Mr. Frank Mahiki	BSc. Molecular Biology & Biotechnology (UDSM), Diploma in Laboratory Science & Technology (ATC),
Mr. Musa Mbotoni	BSc. Technology in Laboratory Science (DIT), Diploma in Lab Sci & Technology (MUST)

Mr. Ramadhani Shebughe

BSc. Medical Laboratory (MUHAS)

**Instructors**

Mr. Kalugula Junja

MSc. Agricultural Biotechnology (Szent Istav University, Hungary), BSc. Biotechnology. (SUA)

Mr. Nicolaus Mbugi

MSc. Life Sciences (Health and Biomedical Science) (NM-AIST), BSc. Biotech (SUA)\*

Ms. Grace Rugalema.

MSc. One Health Molecular Biology (SUA), BSc. Biotechnology & Laboratory Sci. (SUA).

**Laboratory Technicians**

Mr. Peter Barageti

BSc. Biotechnology (SUA), Diploma in Science and Lab. (DIT)\*

Mr. Joseph Kayange

BSc. Lab Tech. (SUA), Diploma in Science and Lab. (DIT)

Mr. Charles Chekecha

BSc. Lab Tech. (SUA), FTC Science and Lab. (DIT)

Ms. Imelda Ndetewale

Diploma in Lab Tech. MUST

*\*Study leaves*

## 8.4.1.3 PROGRAMME COURSES

## DIPLOMA IN LABORATORY SCIENCE AND TECHNOLOGY

A. Diploma in Laboratory Science and Technology (1<sup>st</sup> Year)

## Semester I

Code	Name	Credits
MS 6130	Algebra for Laboratory Science	8
NS 6116	Basics of Cell Biology	8
NS 6117	Atomic Theory and Radioactivity	8
BM 6122	Entrepreneurship	10
NS 6118	Mechanics	8
HS 6117	Communication Skills	10
CS 6118	Fundamentals of Computer Application	8
NS 6119	Physical Chemistry I	8
<b>TOTAL</b>		<b>68</b>

## Semester II

Code	Name	Credits
NS 6131	Basics of Calculus	8
NS 6120	Classification of Living Organisms	7
NS 6121	Laboratory Solutions and Bench Reagents	7
NS 6122	Mechanics of materials	6
HS 6116	Elements of Developmental Studies	10
NS 6123	Experimental Chemistry I	8
NS 6124	Experimental Physics I	7
NS 6125	Experimental Biology	7
NS 6126	Industrial Practical Training	10
<b>TOTAL</b>		<b>70</b>

B. Diploma in Laboratory Science and Technology (2<sup>nd</sup> Year)

## Semester I

Code	Name	Credits
NS 6201	Laboratory Instrumentation and maintenance	8
NS 6202	Laboratory Samples and Specimens	8
NS 6203	Physical Chemistry II	8
NS 6204	Essentials of Physiology	8
NS 6205	Heat	8
ST 6222	Applied Statistics	8
NS 6206	Laboratory Safety and Design	8
NS 6207	Preparation of Biological Reagents and Stains	8
<b>TOTAL</b>		<b>64</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
NS 6208	Laboratory Separation Techniques	8
NS 6209	Inorganic Chemistry	8
NS 6210	Fundamentals of Biochemistry	8
NS 6211	Research Techniques	6
NS 6212	Experimental Biology II	8
NS 6213	Experimental Chemistry II	8
NS 6214	Experimental Physics II	8
NS 6215	Industrial Practical Training	10
NS 6216	Electricity and Electromagnetism	8
<b>TOTAL</b>		<b>72</b>

**C. Diploma in Laboratory Science and Technology (3<sup>rd</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
NS 6301	Basics of Biotechnology	10
NS 6302	Waves and Light	10
NS 6303	Environmental Management and Industrial Hygiene	8
NS 6304	Industrial Chemistry	8
NS 6305	Analytical Chemistry	8
NS 6306	Experimental Chemistry III	8
NS 6307	Classification of living organism II	8
<b>TOTAL</b>		<b>60</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
NS 6308	Electronics and Nuclear Physics	10
NS 6309	Organic chemistry	10
NS 6310	Fundamentals of Microbiology	8
NS 6311	Laboratory Quality Assurance	8
NS 6312	Experimental Biology III	8
NS 6313	Experimental Physics III	8
NS 6314	Research Project	10
<b>TOTAL</b>		<b>62</b>

**DIPLOMA IN BIOTECHNOLOGY****A. Diploma in Biotechnology (1<sup>st</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 6118	Fundamental of Computer Application	8
HS 6117	Communication Skills	10
AS 6128	Fundamentals of Biotechnology	9
AS 6129	Cell Biology and Molecular Biology	9
AS 6130	Basics of Lab Equipment Maintenance and Servicing	9
AS 6131	Introduction to Human Anatomy and Physiology	12
AS 6132	Introduction to Biochemistry	9
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 6111	Laboratory Animal Science	9
AS 6112	Microbial Genetics	12
AS 6113	Practical Training	10
AS 6114	Introduction to Pharmacology	12
AS 6115	Analytical Chemistry	12
AS 6116	Mushroom farming technology	6
<b>TOTAL</b>		<b>61</b>

**B. Diploma in Biotechnology (2<sup>nd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 6233	Cell and Tissue Techniques	9
AS 6234	Fundamentals of Microbiology	12
AS 6235	Introduction to Parasitology and Entomology	12
AS 6236	Introduction to Plant Physiology	9
AS 6237	Introduction to Statistics	9
AS 6238	Human Pathology	10
<b>TOTAL</b>		<b>61</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 6216	Introduction Immunology and Vaccine	12
AS 6217	Practical Training	10
AS 6218	Research Methods and Applications	9
AS 6219	Diagnostic Parasitology	12
AS 6220	Fundamentals of Nutrition	9
AS 6221	Biosafety and Ethics	9
<b>TOTAL</b>		<b>60</b>

**C. Diploma in Biotechnology (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 6314	Medical Ethics	9
AS 6315	Cellology and Histology	12
AS 6316	Research Project I	12
AS 6317	Food Microbiology	9
AS 6318	Plant Pathology	9
AS 6319	Haematology	9
<b>TOTAL</b>		<b>60</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 6320	Research Project II	11
AS 6321	Bioentrepreneurship	9
AS 6322	Plant Breeding	12
AS 6323	Fermentation technology	9
AS 6324	Animal Breeding	12
AS 6325	Quality Control and Assurance	9
<b>TOTAL</b>		<b>63</b>

**BACHELOR OF SCIENCE IN BIOTECHNOLOGY****A. Bachelor of Science in Biotechnology (1<sup>st</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
CS 7116	Computer Skills	8
HS 7117	Communication Skills I	9
AS 8111	Fundamentals of Biotechnology	8
AS 8112	Cell Biology and Genetics	8
AS 8113	Laboratory Equipment and Management	6
AS 8114	Principles of Analytical Chemistry	8
AS 8115	Introduction to Biochemistry	8
AS 8116	Plant Physiology	8
AS 8125	Animal Physiology	8
<b>TOTAL</b>		<b>63</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 8117	Cell and Tissue Techniques	9
AS 8118	Fundamentals of Microbiology	10
AS 8119	Parasitology and Entomology	10
AS 8120	Introduction to Virology	8
AS 8121	Microbial Genetics	6
AS 8122	Practical Training	12
AS 8123	Plant Pathology	8
AS 8124	Human Pathology	8
<b>TOTAL</b>		<b>63</b>

**B. Bachelor of Science in Biotechnology (2<sup>nd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 8217	Laboratory Animal Science	9
AS 8218	Diagnostic Microbiology	9
AS 8219	Applied Biochemistry	9
AS 8220	Diagnostic Parasitology	9
AS 8221	Environmental Biotechnology	9
AS 8222	Introduction to Statistics	9
AS 8223	Food Microbiology	8
AS 8224	Medical Microbiology	8
<b>TOTAL</b>		<b>61</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 8225	Vaccine and Drug Development	10
AS 8226	Immunology and Immunodiagnostics	10
AS 8227	Research Methods and Application	9
AS 8228	Quality Control and Assurance	9
AS 8229	Biostatistics	9
AS 8230	Biosafety and Ethics	9
AS 8231	Practical Training	12
<b>TOTAL</b>		<b>68</b>

**C. Bachelor of Science in Biotechnology (3<sup>rd</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 8317	Fundamentals of Bioinformatics	9
AS 8318	Post-Harvesting Technology	9
AS 8319	Gene Technology	12
<b>TOTAL</b>		<b>30</b>

**Specialization Course in Semester I****Medical specialization**

AS 8320	Public Health and Risk assessment	9
AS 8321	Biomedical Technology	12
AS 8322	Cellogy and histology	9
<b>TOTAL</b>		<b>30</b>

**Industrial/Agricultural specialization**

AS 8323	Biocontrol of Crop Diseases	9
AS 8324	Plant Breeding	9
AS 8325	Bio Fertilizer Technology	12
<b>TOTAL</b>		<b>30</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
AS 8326	Research Project	12
AS 8327	Bio Entrepreneurship	6
AS 8328	Bioprocess Engineering and Design	12
AS 8329	Pharmacology and Pharmacokinetics	9
<b>TOTAL</b>		<b>39</b>

**Specialization Course in Semester II****Medical specialization**

AS 8330	Epidemiology	12
AS 8331	Haematology and Blood Transfusion	12
<b>TOTAL</b>		<b>24</b>

**Industrial/Agricultural specialization**

AS 8332	Food Biotechnology	12
AS 8333	Animal Biotechnology	12
<b>TOTAL</b>		<b>24</b>

**BACHELOR OF LABORATORY SCIENCE AND TECHNOLOGY****A. Bachelor of Laboratory Science and Technology (1<sup>st</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
NSLT 07101	Advanced Organic Chemistry	8
NSLT 07102	Cell Biology	8
NSLT 07103	Organic Spectroscopy	8
NSLT 07104	Applied Thermodynamics	8
NSLT 07105	Chromatographic Techniques	8
MLT 07101	Calculus	8
NSLT 07106	Technical Communication Skills	8
<b>TOTAL</b>		<b>56</b>

<b>Elective Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
ELT 07101	Analogue Electronics	8
<b>TOTAL</b>		<b>8</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
NSLT 07201	General Microbiology	8
NSLT 07202	Laboratory Management and Maintenance	8
NSLT 07203	Industrial Practical Training (IPT)	12
NSLT 07204	Fundamentals of Physics	8
NSLT07208	Experimental Methods of Physics	8
<b>TOTAL</b>		<b>44</b>
<b>Elective Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
NSLT 07206	Digital Electronics	8
NSLT 07205	Advanced Calculus	8
NSLT 07212	Industrial Management	8
NSLT 07111	Fluid Mechanics	8
<b>TOTAL</b>		<b>32</b>

**B. Bachelor of Laboratory Science and Technology (2<sup>nd</sup> Year)****Semester I**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
NSLT 07301	General Physical Chemistry	8
NSLT 07309	Chemistry Practical I	8
NSLT 07302	Molecular Biology	8
NSLT 07303	Applied Organic Chemistry	8
NSLT 07304	Advanced Laboratory Stores Management	8
NSLT 07305	Computational Physics and Electronics	8
NSLT 07306	Environmental Impact and Risk Assessments	8
NSLT 07308	Water Treatment and Wastewater Management	8
NSLT 07303	Differential Equations and Complex Variable	8
<b>TOTAL</b>		<b>72</b>

<b>Elective Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
COLT 07302	Microprocessor	8
ELT 07306	Digital Control System Engineering	8
NSLT07322	Finance and Human Resource Management	8
<b>TOTAL</b>		<b>24</b>

**Semester II**

<b>Core Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
NSLT 07401	Principles of Physics	8
NSLT 07402	Industrial Chemistry	8
NSLT 07403	Nuclear Chemistry	8
NSLT 07404	Biochemistry	8
NSLT 07406	Chemistry Practical II	8
NSLT 07405	Industrial Practical Training	12
NSLT 07307	Metal Technology	8
<b>TOTAL</b>		<b>60</b>

<b>Elective Courses</b>		
<b>Code</b>	<b>Name</b>	<b>Credits</b>
NSLT 07404	Probability and Statistics	8
NSLT 07407	Research Methods	8
NSLT 07111	Fluid Mechanics	8
<b>TOTAL</b>		<b>24</b>

C. Bachelor of Laboratory Science and Technology (3<sup>rd</sup> Year)

## Semester I

Core Courses		
Code	Name	Credits
NSLT0 8101	Thermal and Condensed Matter Physics	8
NSLT 08102	Ecology	8
NSLT 08103	Instrumental Analytical Chemistry, Quality Control and Assurance	8
NSLT 08104	Project Data Collection	12
NSLT 08105	Electronic Polymers and Polymer-Based Magnets	8
NSLT 08106	Applied Electromagnetism	8
NSLT 08107	Soil and Water Quality Testing	8
NSLT 08108	Automation in the Laboratory	8
<b>TOTAL</b>		<b>68</b>
Elective Course		
Code	Name	Credits
ELT 08106	Laws for Engineers	8
<b>TOTAL</b>		<b>8</b>

## Semester II

Core Courses		
Code	Name	Credits
NSLT 08201	Applied Biochemistry	8
NSLT 08202	Industrial Microbiology	8
NSLT 08203	Synthetic Organic Chemistry	8
NSLT 08204	Project	12
NSLT 08205	Explosives and Propellants	8
NSLT 08206	Lubricants Chemistry	8
NSLT 08207	Wave Mechanics	8
NSLT 08208	Environmental Pollution and Mitigations	8
BMLT08201	Basic Entrepreneurship	8
<b>TOTAL</b>		<b>76</b>
Elective Course		
Code	Name	Credits
NSLT 08209	Renewable Energy Technologies	8
<b>TOTAL</b>		<b>8</b>

#### 8.4.2 THE DEPARTMENT OF NATURAL SCIENCES

##### Programmes

The Department offers two (2) Programmes:

- i. Bachelor of Science with Education in the following combinations
  - o Chemistry and Biology
  - o Chemistry and Mathematics
  - o Chemistry and Physics
  - o Physics and Mathematics
- ii. Bachelor of Science in Chemistry

##### 8.4.2.1 LABORATORIES AND UNITS

- i. Chemistry Laboratory
- ii. Biology Laboratory
- iii. Physics Laboratory
- iv. Animal unit

##### 8.4.2.2 LIST OF STAFF

###### *(Head of Department)*

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Dr. Hudson Laizer	PhD. Life Science & Bioengineering (Biodiversity & Ecosystems Management) (NM AIST); MSc. Life Sciences & Bioengineering (NM AIST); BSc. Wildlife Management (SUA)
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###### **Lecturers**

Dr. Eliezer B. Mwakalapa	PhD. Veterinary Sciences (Norwegian University of Life Sciences, Norway); MSc. Marine Sciences (UDSM); BSc. Aquaculture (SUA)
Dr. Regan N. Kavishe	PhD. Aquaculture Science (Ningbo University, China); MSc. Aquaculture Science (Ningbo University, China); BSc. Aquaculture (SUA)
Dr. Khamis N. Ally	PhD. Chemistry (Zonguldak Bulent Ecevit University, Turkey); MSc. Chemistry (Sakarya University, Turkey); Bachelor of Chemistry (Sakarya University, Turkey)
Dr. Colletha Y. Mengo	PhD. Applied Zoology (UDSM); MSc. Zoology (UDSM); BSc. Ed. (UDSM); Dipl. Edu. Chemistry/Biology (Kleruu Teachers College) *

###### **Assistant Lecturers**

Mr. Salum S.M. Hassan	MSc. Natural Product and Value Addition (SUA); BSc. Ed. Chemistry and Biology (SUA); Dip. ED. Chemistry and Biology (Monduli Teachers College)*
Mr. Omega A. Vicent	MSc. Marine Sciences (UDSM); BSc. Aquatic Environmental Science and Conservation (UDSM)*

Mr. Kombo A. Kombo	MSc. Physics (Gadjah Mada University, Indonesia); BSc. Ed. Physics & Maths (Muslim University) *
Mr. Bugumba J. Majondo	MSc. Nuclear Physics (UDSM); BSc. Ed. Physics & Maths (UDSM)*
Mr. Amosi Makoye S	MSc. Material Science and Engineering (NM AIST); BSc. Chemistry (UDOM)*
Mr. Charles Johnstone	MSc. Physics (UDOM); BSc. Ed (UDSM) *
Mr. Phares M.D. Petro	MSc. Chemistry –(UDSM), BSc. Education (SUA)
Mr. Almachius R. Rweyemamu	MPhil. Chemistry (Kwame Nkrumah University, Ghana), BSc. Education. (UDSM)*
Mr. John P. Kachira	MSc. Physics (UDSM); BSc. Ed. (UDSM)*
Mr. Bahati Kyando	MSc. Chemistry (UDSM); BSc. Edu Chemistry/Biology (SUA)
Mr. Paul Mariba	MSc. Chemistry (UDSM); BSc. Education (UDSM)
Ms. Joyce Ndinadyo NdaliJane	MSc. Edu. Biology (UDSM); BSc. Edu Chemistry/Biology (UDSM); Dipl. Edu. Chemistry/Biology (Kleruu Teachers College)*
Mr. Abel Mwakuna	MSc. Physics (UDOM); BSc. Physics (UDOM)
Mr. Privatus Pius	MSc. Physics (UDOM); BSc. Education Physics/Mathematics (UDOM)
Mr. Mussa B Mbegeze	MSc. Biochemistry (UDSM); BSc. Ed Chemistry and Biology (UDSM)
<b>Tutorial Assistant</b>	
Mr. Ayub Mwera	BSc. Ed. Physics & Maths (UDSM)
Mr. Festo Kapinga	BSc. Ed. Physics & Maths (UDSM-MUCE)
Mr. Charles Kadala	BSc. Ed. Physics (UDSM-DUCE)
Ms. Rehema Thoiba	BSc. Edu. Chemistry (UDSM)
Mr. Sylvester R. Mnyawi	BSc. Ed. Chemistry and Biology (UDOM)
Mr. Aleni Rudovick Felix	BSc. Physics (UDOM)
Dr. Adili Assa Mbembela	Bachelor of Veterinary Medicine (SUA)*
<b>Laboratory Technicians</b>	
Ms. Eva Mwachese	Dip. Laboratory Sciences and Technology (MUST)
Ms. Syambutwa Magambo	Dip. Laboratory Sciences and Technology (MUST)
Mr. John Chagu	Bachelor of Technology in Laboratory Sciences (DIT); Dip. Laboratory Sciences and Technology (MUST)
Ms. Kokusima Kalugendo	Dip. Laboratory Sciences and Technology (MUST)
Mr. Emmanuel F. Mauris	Dip. Laboratory Sciences and Technology (MUST)
Ms. Paulina J. Mwita	BSc. Biotechnology and Laboratory Sciences (SUA); Dip. Laboratory Sciences and Technology (MUST)

*\*On study leave*

## 8.4.2.3 PROGRAMME COURSES

## BACHELOR OF SCIENCE WITH EDUCATION

## A. UQF Level 8 Bachelor (Physics Courses)

## Semester I

Code	Name	Credits
NSPH1101	Classical Mechanics	8
NSPH1102	Vibrations, Waves and Optics	8
<b>TOTAL</b>		<b>16</b>

## Semester II Year I

Code	Name	Credits
NSPH1203	Experimental Methods of Physics I	8
NSPH1204	Electromagnetism	8
<b>TOTAL</b>		<b>16</b>

## Semester III Year 2

Code	Name	Credits
NSPH2105	Earth Atmosphere System	12
NSPH2106	Experimental Methods of Physics II	8
NSPH2107	Mathematical Methods of Physics	12
NSPH2108*	Advanced Mechanics*	8
<b>TOTAL</b>		<b>40</b>

## Semester IV Year 2

Code	Name	Credits
NSPH2209	Quantum Physics	12
NSPH2210*	Fundamentals of Material Science*	8
NSPH2211	Fundamentals of Electrodynamics	8
<b>TOTAL</b>		<b>28</b>

## Semester V Year 3

Code	Name	Credits
NSPH3112	Electronics	8
NSPH3113	Fundamentals of Atmospheric Physics	8
NSPH3114*	Elementary Particles*	8
NSPH3115*	Energy in the Environment*	8
<b>TOTAL</b>		<b>32</b>

## Semester VI Year 3

Code	Name	Credits
NSPH3216	Physics of the Atom	8
NSPH3317	Solid State Physics	8
NSPH3218*	Physics Project*	12
NSPH3219*	Astrophysics*	8
NSPH3220*	The Basics of NMR Spectroscopy*	8
<b>TOTAL</b>		<b>44</b>

\* Elective Course

## B. UQF Level 8 Bachelor (Chemistry Courses)

## Semester I Year 1

Code	Name	Credits
NSCH1101	Basic Analytical and Physical Chemistry	8
NSCH1102*	Introduction to Electronic Structure*	8
NSCH1103	Chemistry Practical 1	8
<b>TOTAL</b>		<b>24</b>

## Semester II Year 1

Code	Name	Credits
NSCH1204	Organic Chemistry I	8
NSCH1205	Chemistry Practical II	8
NSCH1206	Basic Inorganic Chemistry	8
<b>TOTAL</b>		<b>24</b>

## Semester III Year 2

Code	Name	Credits
NSCH2107	Chemical Thermodynamics	8
NSCH2108	Chemistry Practical III	8
NSCH2109	Instrumental Methods in Analytical Chemistry	8
NSCH2110*	Organic Structures, Reactions and Mechanisms*	12
<b>TOTAL</b>		<b>36</b>

## Semester IV Year 2

Code	Name	Credits
NSCH2211	Organic Chemistry II	12
NSCH2212	Transition Element and Coordination Chemistry	12
NSCH2213	Chemical Kinetics and Catalysis	10
NSCH2214	Chemistry Practical IV	8
NSCH2215*	Environmental Analytical Chemistry*	8
<b>TOTAL</b>		<b>50</b>

## Semester V Year 3

Code	Name	Credits
NSCH3116*	Chemistry Project*	12
NSCH3117	Chemistry Practical V	8
NSCH3118	Electrochemistry and Corrosion Protection	8
NSCH3119*	Polymer Chemistry*	8
<b>TOTAL</b>		<b>36</b>

## Semester VI Year 3

Code	Name	Credits
NSCH3220	Organic Spectroscopy	8
NSCH3221*	Spectroscopy in Coordination Chemistry*	8
NSCH3222*	Chemistry of Natural Products*	8
<b>TOTAL</b>		<b>24</b>

\* Elective Course

## C. UQF Level 8 Bachelor (Biology Courses)

## Semester I Year

Code	Name	Credits
NSBL 1101	Introduction to Cell Biology and Genetics	8
NSBL 1102	Invertebrate Zoology	8
NSBL 1103	Ecology	8
NSBL 1104*	Fundamentals of Microbiology I*	8
<b>TOTAL</b>		<b>32</b>

## Semester II Year 1

Code	Name	Credits
NSBL 1205*	Plant Physiology*	12
NSBL 1206	Chordate Zoology	8
NSBL 1207	Developmental Biology	8
NSBL 1208*	Mammalian Biology*	10
<b>TOTAL</b>		<b>38</b>

## Semester III Year 2

Code	Name	Credits
NSBL 2109	Vertebrate Anatomy and Physiology I	8
NSBL 2110	Introduction to Parasitology and Entomology	8
NSBL 2111*	Fundamentals of Soil Science*	8
<b>TOTAL</b>		<b>24</b>

## Semester IV Year 2

Code	Name	Credits
NSBL 2212*	Biochemistry*	10
NSBL 2213	Vertebrate Anatomy and Physiology II	10
NSBL 2214	Fundamentals of Microbiology II	8
<b>TOTAL</b>		<b>28</b>

## Semester V Year 3

Code	Name	Credits
NSBL 3115*	Molecular Genetics*	8
NSBL 3116	Evolution	8
NSBL 3117	Taxonomy of Higher Plants	8
NSBL 3118*	Plant Pathology*	8
<b>TOTAL</b>		<b>32</b>

## Semester VI Year 3

Code	Name	Credits
NSBL 3219	Introduction to Biodiversity	10
NSBL 3220	Anatomy of Angiosperm	10
NSBL 3221*	Physiology of Nutrition*	8
<b>TOTAL</b>		<b>28</b>

\* Elective Course

## D. UQF Level 8 Bachelor (Mathematics Courses)

## Semester I Year 1

Code	Name	Credits
NSMT1101*	Mathematical Analysis I*	8
NSMT1102	Linear Algebra and Applications	8
NSMT1103	Coordinate Geometry	8
NSMT1105*	Linear Programming C+*	8
<b>TOTAL</b>		<b>32</b>

## Semester II Year 1

Code	Name	Credits
NSMT1206	Basics of Statistics	8
NSMT1207	Ordinary Differential Equations	8
NSMT1208*	Discrete Mathematics*	8
NSMT1209*	Computer Programming in C++*	8
<b>TOTAL</b>		<b>32</b>

## Semester III Year 2

Code	Name	Credits
NSMT2110	Mathematical Analysis II	8
NSMT2111	Numerical Analysis I	8
NSMT2112*	Data Structures and Algorithm*	8
<b>TOTAL</b>		<b>24</b>

## Semester IV Year 2

Code	Name	Credits
NSMT2213	Basics of Functional Analysis	8
NSMT2214	Probability Theory	8
NSMT2215	Introduction to Number Theory	8
NSMT2216*	Partial Differential Equations*	8
<b>TOTAL</b>		<b>32</b>

## Semester V Year 3

Code	Name	Credits
NSMT3117	Abstract Algebra	8
NSMT3118	Introduction to Real Analysis	8
NSMT3119*	Database Design*	8
<b>TOTAL</b>		<b>24</b>

## Semester VI Year 3

Code	Name	Credits
NSMT3220	Complex Variable Analysis	8
NSMT3221*	Mathematics Project*	12
NSMT3222	Statistical Inference	8
<b>TOTAL</b>		<b>28</b>

\* Elective Course

## E. UQF Level 8 Bachelor (Education Courses)

## Semester I Year 1

Code	Name	Credits
NSED 1101	Education Foundation and Philosophy	8
NSED 1102	Education Media and Technology	8
<b>TOTAL</b>		<b>16</b>

## Semester II Year 1

Code	Name	Credits
NSED 1203	Introduction to Educational Psychology	8
NSED 1204	Teaching Methods	10
NSED 1205	Teaching Practice for First Year	12
<b>TOTAL</b>		<b>30</b>

## Semester III Year 2

Code	Name	Credits
NSED 2106	Guidance and Counselling in Education	8
NSED 2107	Education Measurement and Evaluation	8
<b>TOTAL</b>		<b>16</b>

## Semester IV Year 2

Code	Name	Credits
NSED 2108	Principles of Curriculum Development	10
NSED 2209	Teaching Practice for Second Year	12
<b>TOTAL</b>		<b>22</b>

## Semester V Year 3

Code	Name	Credits
NSED 3110	Education Management and School Administration	8
<b>TOTAL</b>		<b>8</b>

## Semester VI Year 3

Code	Name	Credits
NSED 3211	Professionalism and Ethics in Education	8
<b>TOTAL</b>		<b>8</b>

## F. Cross Cutting Courses

## Semester I Year 1

Code	Name	Credits
NSCS 1101	Communication Skills	8
NSDS 1102	Development Studies	8
NSTS 1103*	Basics of Technical Skills I*	8
NSTS 1104*	Basics of Technical Skills II*	8
<b>TOTAL</b>		<b>32</b>

## Semester II Year 1

Code	Name	Credits
NSTS 1205	Introductory Statistics	8
NSCT1206	Introduction to Computer	8
<b>TOTAL</b>		<b>16</b>

**BACHELOR OF SCIENCE IN CHEMISTRY****A. Bachelor of Science in Chemistry (1<sup>st</sup> Year)****Semester I**

Code	Name	Credits
CH 8185	Basic Analytical and Physical Chemistry	10
CH 8186	Water Chemistry	8
CH 8187	Introduction to Theoretical Chemistry	8
HS 8101	Communication Skills	8
CH 8188	Nuclear Chemistry	10
IT 8116	Information and Communication Technology	8
BM 8108	Entrepreneurship	8
DS 8101	Development Studies	8
<b>TOTAL</b>		<b>68</b>

**Semester II**

Code	Name	Credits
CH 8189	Chemistry Practical I	8
CH 8190	Introduction to Computational Chemistry	8
CH 8191	Organic Chemistry	12
CH 8192	Inorganic Chemistry	8
CH 8193	Soil Chemistry	8
CH 8194	Methods for Chemical Separation	10
CH 8195	Instrumental Methods in Analytical Chemistry	10
DS 8108	Development Perspectives	6
MS 8127	Limits of Functions and Calculus (Elective)	8
<b>TOTAL</b>		<b>78</b>

**B. Bachelor of Science in Chemistry (2<sup>nd</sup> Year)****Semester I**

Code	Name	Credits
CH 8288	Chemical Thermodynamics	8
CH 8289	Electrochemistry	8
CH 8290	Chemistry of Natural Products	12
CH 8291	Industrial Chemistry	12
CH 8292	Chemistry Practical II	8

CH 8293	Industrial Practical Training I	12
CH 8294	Solid State Chemistry	8
AS 8306	Food Chemistry and Analysis (Elective)	8
MS 8129	Application of Calculus (Elective)	8
CH 8295	Metal Technology (Elective)	8
<b>TOTAL</b>		<b>92</b>

## Semester II

Code	Name	Credits
CH 8296	Chemistry of Transition Elements	8
CH 8297	Stereochemistry and Aromaticity	12
CH 8298	Organic Reactions and Mechanisms	8
CH 8299	Research Methods	12
CH 82100	Environmental Analytical Chemistry	8
CH 82101	Chemistry practical III	8
CH 82102	Renewable energy technology	8
CH 82103	Organometallic and Catalysis Chemistry (Elective)	8
<b>TOTAL</b>		<b>72</b>

C. Bachelor of Science in Chemistry (3<sup>rd</sup> Year)

## Semester I

Code	Name	Credits
CH 8388	Chemistry Practical IV	8
CH 8389	Forensic Chemistry	9
CH 8390	Polymer Chemistry	8
CH 8391	Bio inorganics	8
CH 8392	Chemical Kinetics and Catalysis	8
CH 8393	Chemistry Project	12
CH 8394	Industrial Practical Training II	12
CH 8395	Surface and Colloid Chemistry	8
<b>TOTAL</b>		<b>73</b>

## Semester II

Code	Name	Credits
CH 8396	Chemistry Practical V	8
CH 8397	Spectroscopic Methods in Organic Chemistry	10
CH 8398	Basics of Biotechnology	8
CH 8399	Chemical Speciation Analysis	8
CH 3100	Quality Control and Assurance	8
CH 3101	Quantum Chemistry	8
CH 3102	Organic Synthesis	10
MS 8225	Statistical Inference (Elective)	8
CH 83103	Nanotechnology and Sensors (Elective)	8
<b>TOTAL</b>		<b>76</b>

### 8.4.3 THE DEPARTMENT OF MEDICAL SCIENCES AND TECHNOLOGY

#### Programmes

The Department offers one (1) Programme:

- i. Diploma in Biomedical Equipment Engineering

#### 8.4.3.1 LABORATORIES

- i. Biomedical Laboratory
- ii. Biomedical workshop

#### 8.4.3.2 LIST OF STAFF

##### *Head of Department*

Dr. Bernadether T. Rugumisa      PhD Molecular Sciences (UDSM), MSc. Life Sci & Bioengineering  
(Health & Biomedical Sciences (NM-AIST), BSc. Biotech & Lab Sci.  
(SUA)

##### **Assistant Lecturers**

Mr. Shukurani B. Philip	MSc. Clinical Microbiology and Molecular Biology (CUHAS), BSc. Medical Laboratory Sciences (CUHAS), Advanced Diploma in Medical Laboratory Sciences (MUHAS)
Mr. Revocatus J. Mang'ara	MSc. Tropical Diseases control (MUHAS), BSc. in Environmental Health with Information Technology (Ruaha Catholic University)
Mr. Optatus Mwalongo	MSc. Life Sciences & Bioengineering (Health and Biomedical Sciences) Nelson Mandela, BSc. with Education (UDSM)
Mr. Hamisi A. Maonezi	MSc. Biotechnology (Medical specialization), BSc. Molecular Biology and Biotechnology (UDSM), Msc. in Biotechnology Wageningen University – Netherlands.
Mr. Jotham Kimondo*	Master of Biomedical Engineering (Uazhong University of Science and Technology - China and Biotechnology (SUA), BSc. Electronics and Telecommunication (St. Joseph Tazania)
Mr. Omar R. Kombo	MSc Biomedical Engineering Wuhan University of Technology-China, BSc Biomedical Engineering Oran University of Sciences and Technology, Mohamed Boudiaf -Algeria
Mr. Heribert Kaijage	Master of Science in Natural Resources Assessment and Management (UDSM), Bachelor of Science in Environmental Health Science (UDSM)

**Tutorial Assistants**

Ms. Christina L. Mwabeza	MSc.in Electronics Engineering and Information Technology (UDSM), BSc. Computer Engineering (DIT)
Mr. Jackson G. Rusanyu*	BSc. Electrical and Electronics Engineering (MUST)
Dr. Jacob Jacob Mlelwa	Doctor of Medicine (UDOM)
Dr. Mary Nicholaus Suke	Doctor of Medicine (KCMC)
Dr. Malonja Yona Magaluda	Doctor of Medicine (MUHAS),
Mr. Mussa Samson Tyahso	Bachelor in Electrical and Biomedical Engineering (ATC)
Mr. Rebson Johakim Sanga	Bachelor in Electrical and Biomedical Engineering (ATC)
Mr. Oscar Punguti	Bachelor of Science in Environmental Health Science (MUHAS)

**Instructor II**

Mr. Kadoke M. Kadoke*	MSc. Telecommunication Engineering (UDOM), BSc. Electronics and Telecommunication (St. Joseph-Tanzania)
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*\*On Study leave*

## 8.4.3.3 PROGRAMME COURSES

## DIPLOMA IN BIOMEDICAL EQUIPMENT ENGINEERING

A. Diploma in Biomedical Equipment Engineering (1<sup>st</sup> Year)

## Semester 1

Code	Name	Credits
MS 6134	Basic calculus, Logarithms and Number systems	7
HS 6117	Communication Skills	10
HS 6116	Elements of Development Studies	10
MT 6116	Computer Basics and Word Processing	2
MT 6117	Statics and Dynamics	4
MT 6118	Workshop Technology I	5
MT 6119	Principles of DC Networks	9
MT 6120	Basic Electronics	6
MT 6121	Human anatomy and Physiology	9
MT 6122	Introduction to Biomedical Field, Hospital Safety and Standards	6
<b>TOTAL</b>		<b>68</b>

## Semester II

Code	Name	Credits
MS 6135	Binomial Theorem, Matrices and Polynomials	7
MT 6123	Workshop Technology II	6
MT 6124	Presentation and Internet	2
MT 6125	Gravitation and Simple Harmonic Motion	3
MT 6126	Basic Technical Drawing	6
MT 6127	Principles of AC Networks	10
MT 6128	Electronic Circuits	8
MT 6129	Basic Laboratory Equipment	6
MT 6130	Basic Theatre Equipment	6
MT 6131	Dental Equipment	6
MT 6132	Industrial Practical Training	10
<b>TOTAL</b>		<b>70</b>

**B. Diploma in Biomedical Equipment Engineering (2<sup>nd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
MS 6229	Trigonometry, Coordinate Geometry and Vectors	7
MT 6201	Strength of Materials and Rotational Dynamics	3
MT 6202	Spreadsheet and Database	2
MT 6203	Doctors' Equipment	6
MT 6204	Basic Intensive Care Unit Equipment	6
MT 6205	Patient Monitoring Equipment	9
MT 6206	Theatre Equipment	9
MT 6207	DC Machines	6
MT 6208	Digital electronics I	10
MT 6209	Biomedical Instrumentation	12
<b>TOTAL</b>		<b>70</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
MS 6230	Series, Complex numbers and Linear Programming	7
MT 6210	Fluid Mechanics	3
MT 6211	Optician and Dentistry Equipment	9
MT 6212	Laboratory Analyzer equipment	9
MT 6213	Fundamentals of XRAY and CTSCAN	9
MT 6214	Dialysis and Ultrasound technology	9
MT 6215	Digital Electronic II	6
MT 6216	AC Machines	6
MT 6217	Industrial Training	10
<b>TOTAL</b>		<b>68</b>

**C. Diploma in Biomedical Equipment Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
MS 6322	Boolean Algebra and Statistics	7
MT 6301	Electromagnetism	7
MT 6302	Basic Computer Programming	4
MT 6303	Computer Aided design	4
MT 6304	Biomedical Computer Networks and Data Communications	8
MT 6305	Principles of Signal Modulation and Demodulation	9
MT 6306	Principles of Magnetic Resonance Imaging	9
MT 6307	Research methods	10
MT 6308	Microprocessor Technology	12
<b>TOTAL</b>		<b>70</b>

## Semester II

Code	Name	Credits
MS 6325	Differential Equations and Numerical methods	7
MT 6309	Heat and Thermodynamics	7
MT 6310	Data Structure and file handling	5
MT 6211	Radiotherapy and Lithotripter	10
MT 6312	Medical Device Standards	6
MT 6313	Work Ethics	5
MT 6314	Biomedical Equipment Project	10
<b>TOTAL</b>		<b>50</b>



Ms. Agnes Kapinga	Master of Arts in Gender studies (UDSM), Bachelor of Arts with Education (Kampala University) *
Mr. Matata John. Mbegalo	Masters in Education Management and Administration (UDSM-DUCE), Bachelor of Arts with Education (UDSM)
Ms. Letisia Richard Byanjweli	Masters of Art in Applied Social Psychology (UDSM), BED Psychology (TEKU)*
Mr. Castory Wolfram Kayombo	Master of Education in Curriculum and Instruction (MEDCI) -Jordan University, BA Education (Jordan University)
Mr. Moabu Chandafa	Master of Science Education Science (Mkwawa), BSc Education (UDSM)
Ms. Miriam G. Kaliwa	MSc of Education in Biology (University of Rwanda), BED Science (Biology) UDSM
<b>Instructors</b>	
Ms. Stella Toto Fulgence	MA.Ed (Ed)-UDOM; Bed. (Policy Planning Management) UDOM*
Dr. Leoncia Kibani	PhD (education) (UDSM), Master of Education (Science) (UDSM), Bachelor of Science with Education (UDSM)
Dr. Mussa Ngonyani	PhD. in Education (University of Oslo-Norway), Master of Science in Education (University of Groningen, Netherlands), Bachelor of Education in Arts (UDSM)

\*Study Leave

## 8.4.4.3 PROGRAMME COURSES

## DIPLOMA OF TECHNICAL EDUCATION IN MECHANICAL ENGINEERING

A. Diploma of Technical Education in Mechanical Engineering (1<sup>st</sup> Year)

## Semester I

Code	Name	Credits
TE 6116	Vocational and Technical Education in Tanzania	6
TE 6117	Educational Psychology	6
ME 6116	Engineering Drawing, I	7
ME 6117	Engineering Materials I	5
ME 6118	Automotive Technology I	8
ME 6119	Manufacturing Engineering I	7
MS 6123	Applied Mathematics	6
HS 6117	Communication Skills	6
HS 6116	Elements of Development Studies	6
IT 6117	Fundamental Computer Application	6
<b>TOTAL</b>		<b>63</b>

## Semester II

Code	Name	Credits
TE 6118	Teaching and Learning Methods	8
TE 6119	Professionalism and Ethics in Education	6
ME 6120	Engineering Drawing II	6
ME 6121	Engineering Materials II	5
ME 6122	Automotive Technology II	8
ME 6123	Manufacturing Engineering II	7
ME 6124	Mechanical Engineering Science I	5
BM 6122	Entrepreneurship	5
MS 6124	Applied Mathematics II	5
ME 6208	Industrial Practical Training	10
<b>TOTAL</b>		<b>65</b>

**B. Diploma of Technical Education in Mechanical Engineering (2<sup>nd</sup> Year)****Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6201	Curriculum Development	6
ME 6201	Computer Aided Drafting I	8
ME 6202	Strength of Materials	5
ME 6203	Automotive Technology III	8
ME 6204	Manufacturing Engineering III	9
ME 6205	Thermodynamics	5
ME 6206	Mechanical Engineering Science II	5
ME 6207	Engineering Measurement and Control	5
EE 6270	Electrical Engineering Science	5
MS 6222	Applied Mathematics III	6
<b>TOTAL</b>		<b>62</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6202	Education Media and Technology	8
TE 6203	Guidance and Counselling	6
ME 6209	Computer Aided Drafting II	8
ME 6210	Auto Electrical System	8
ME 6211	Manufacturing Engineering IV	8
ME 6212	Machine Elements and Design, I	5
ME 6213	Fluids Mechanics	5
MS 6223	Applied Mathematics IV	5
TE 6204	Teaching Practice	10
<b>TOTAL</b>		<b>63</b>

C. Diploma of Technical Education in Mechanical Engineering (3<sup>rd</sup> Year)

## Semester 1

Code	Name	Credits
TE 6301	Research Methodology	6
TE 6302	Educational Measurement and Evaluation	8
ME 6301	Machine Elements and Design II	5
ME 6302	Power plant I	5
ME 6303	Refrigeration	9
ME 6304	Environment Management	5
ME 6305	Mechatronics Technology	6
ME 6214	Fundamental of Programmable Logic Controllers	6
EE 6207	Basic Electronics	5
MS 6322	Boolean Algebra and Statistics	5
<b>TOTAL</b>		<b>60</b>

## Semester II

Code	Name	Credits
ME 6309	Machine Elements and Design III	6
ME 6310	Power plant II	5
ME 6311	Air Conditioning	9
ME 6312	Computer Based Manufacturing	7
ME 6313	Workshop Management	6
ME 6314	Industrial Safety and Maintenance	5
ME 6315	Hydraulic and Pneumatic systems	7
ME 6316	Quality Control and Costing Management	5
TE 6303	Project in Education	10
<b>TOTAL</b>		<b>60</b>

**DIPLOMA OF TECHNICAL EDUCATION IN CIVIL ENGINEERING**

**A. Diploma of Technical Education in Civil Engineering (1<sup>st</sup> Year)**

**Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6116	Vocational and Technical Education in Tanzania	6
TE 6117	Educational Psychology	6
MS 6128	Advanced Mathematics I	4
NS 6141	Advanced Physics I	4
HS 6117	Communication skills	4
IT 6116	Basic Computer Applications	4
HS 6116	Elements of Development Studies	4
CE 6101	Building construction, I	4
CE 6102	Building Workshop Practice, I	10
CE 6103	Civil Engineering Materials I	9
CE 6104	Introduction to Engineering Drawing	7
CE 6105	Road Construction I	6
<b>TOTAL</b>		<b>68</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6118	Teaching and Learning Methods	7
TE 6119	Professionalism and Ethics	6
MS 6129	Advanced Mathematics II	4
NS 6142	Advanced Physics II	4
IT 6117	Computer Applications	4
BM 6122	Entrepreneurship	4
CE 6106	Building Maintenance, I	6
CE 6107	Building Workshop Practice II	12
CE 6108	Land Surveying, I	6
CE 6109	Road Maintenance I	6
CE 6110	Soil Mechanics I	6
CE 6111	Structural Mechanics I	6
<b>TOTAL</b>		<b>71</b>

A. Diploma of Technical Education in Civil Engineering (2<sup>nd</sup> Year)

## Semester I

Code	Name	Credits
TE 6201	Curriculum Development	6
MS 6221	Advanced Mathematics III	4
NS 6221	Advanced Physics III	4
CE 6201	Building construction II	6
CE 6202	Building Design and Drawing	7
CE 6203	Building Workshop Practice III	8
CE 6204	Civil Engineering Materials II	6
CE 6205	Pavement Design and Construction	6
CE 6206	Soil Mechanics II	6
CE 6207	Structural Mechanics II	6
CE 6208	Industrial practical training	10
<b>TOTAL</b>		<b>69</b>

## Semester II

Code	Name	Credits
TE 6202	Educational Media and Technology	8
TE 6203	Guidance and Counselling in Education	6
MS 6225	Advanced Mathematics IV	4
NS 6223	Advanced Physics IV	4
CE 6209	Basics of Technical Report Writing	4
CE 6210	Building Maintenance II	4
CE 6211	Construction Management I	4
CE 6212	Land Surveying II	8
CE 6213	Quantity Surveying, I	4
CE 6214	Reinforced Cement Concrete Design III	6
CE 6215	Road Maintenance II	4
CE 6216	Soil Mechanics III	4
CE 6217	Water Supply	7
<b>TOTAL</b>		<b>60</b>

**B. Diploma of Technical Education in Civil Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6302	Educational Measurement and Evaluation	7
TE 6301	Research Methodology	6
CE 6301	Building Construction III	6
CE 6302	Construction management II	6
CE 6303	Fluid Mechanics and Hydraulics	7
CE 6304	Quantity Surveying II	6
CE 6305	Reinforced Cement Concrete Design II	6
CE 6306	Structural Timber Design	7
CE 6307	Project I	8
TE 6204	Teaching Practice	10
<b>TOTAL</b>		<b>69</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
CE 6313	Building Construction IV	6
CE 6312	Civil Engineering Materials III	6
CE 6311	Construction Management III	6
CE 6309	Foundation Engineering	7
CE 6310	Reinforced Cement Concrete Design II	6
CE 6315	Structural Steel Design	7
CE 6314	Wastes Management	7
CE 6316	Project II	10
<b>Total</b>		<b>55</b>

**DIPLOMA OF TECHNICAL EDUCATION IN ELECTRICAL AND ELECTRONICS ENGINEERING****A. Diploma of Technical Education in Electrical and Electronics Engineering (1<sup>st</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6116	Vocational and Technical Education in Tanzania	6
TE 6117	Educational Psychology	6
EE 6116	Basics of Electrical Engineering I	5
EE 6117	Basic of Electrical Installation and Maintenance	6
EE 6118	Fundamental of Electrical Materials	6
EE 6119	Electrical Workshop Technology I	8
EE 6120	Technical Drawing, I	6
ET 6116	Basic of Electronics	6
MS 6121	Advanced Mathematics I	6
NS 6139	Physical Science I	6
HS 6117	Communication Skills	6
HS 6116	Elements of Development Studies	6
IT 6116	Introduction to computer	6
<b>TOTAL</b>		<b>79</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6118	Teaching and Learning Methods	8
TE 6119	Professionalism and Ethics in Education	6
ET 6117	Analog Electronics	5
ET 6118	Analog Electronics Lab	7
EE 6121	Basics of Electrical Engineering II	6
EE 6122	Electrical Measurements	6
EE 6123	Technical Drawing II	5
EE 6124	Electrical Workshop Technology II	7
MS 6122	Advanced Mathematics II	6
NS 6145	Physical Science II	6
BM 6122	Entrepreneurship	6
IT 6117	Computer Applications	6
<b>TOTAL</b>		<b>75</b>

**B. Diploma of Technical Education in Electrical and Electronics Engineering (2nd Year)****Semester I**

Code	Name	Credits
TE 6201	Curriculum Development	6
EE 6201	Industrial Practical Training I	10
ET 6201	Digital Electronics I	5
EE 6202	DC Machines	6
EE 6203	Domestic Installation Testing and Commission	6
EE 6204	Electrical Equipment	6
EE 6205	Fundamental of Automations I	5
EE 6206	Electrical Measurement Lab	6
EE 6207	Power Plants	5
MS 6221	Advanced Mathematics III	6
CS 6224	Computer Programming Basics	7
<b>TOTAL</b>		<b>68</b>

**Semester II**

Code	Name	Credits
TE 6202	Education Media and Technology	8
TE 6203	Guidance and Counselling	6
EE 6208	AUTOCAD	7
EE 6209	Electrical Power Transmission and Distribution	7
ET 6206	Digital Electronics II	7
EE 6210	Fundamental of Automation II	6
EE 6211	Introduction to Engineering Software	7
EE 6212	Static AC Machines	6
EE 6213	Static and Dynamic Machines Control	8
CS 6202	Object Oriented Programming	6
ST 6221	Advanced Mathematics IV	6
TE 6204	Teaching Practice	10
<b>TOTAL</b>		<b>84</b>

C. Diploma of Technical Education in Electrical and Electronics Engineering (3<sup>rd</sup> Year)

## Semester I

Code	Name	Credits
TE 6301	Research Methodologies	6
TE 6302	Educational Measurement and Evaluation	8
EE 6301	Industrial Practical Training II	10
EE 6302	Basic of Control System Engineering	6
EE 6303	Basic of Power Protection	6
EE 6304	Electric Drives I	5
ET 6302	Microprocessor and Microcontrollers	7
EE 6305	Motor and Transformer Rewinding	7
EE 6306	Power System Operations and Control	6
EE 6307	Power Electronics	5
EE 6308	Project I	8
<b>TOTAL</b>		<b>74</b>

## Semester II

Code	Name	Credits
TE 6303	Project in Education	10
ET 6317	Basic of Telecommunication Engineering	6
EE 6309	Control Engineering	6
EE 6310	Electric Drives II	6
EE 6311	Electric Installations	6
EE 6312	Induction Motors	6
EE 6313	Power Protection	5
EE 6314	Programmable Logic Controller	7
EE 6315	Synchronous Machines	6
EE 6316	Renewable Energy	6
EE 6317	Project II	10
<b>TOTAL</b>		<b>74</b>

A. Diploma of Technical Education in Architectural Technology (1<sup>st</sup> Year)

## Semester I

Code	Name	Credits
TE 6101	Vocational and Technical Education in Tanzania	5.5
TE 6102	Educational Psychology	5.5
AA 6101	Architectural Draughting, I	9.5
AA 6102	Structural Mechanics	5.5
AA 6103	Building Construction & Technology I	5
AA 6105	Building services, I	5.5
AA 6106	Building Materials, I	6
HS 6116	Elements of Development studies	5.5
MS 6126	Advanced Mathematics I	5.5
CS 6102	Basic Computer Application I	5
HS 6117	Communication Skills	5
NS 6138	Advanced Physics I	5.5
<b>TOTAL</b>		<b>69</b>

## Semester II

Code	Name	Credits
TE 6103	Teaching and Learning Methods	7.5
TE 6104	Professionalism and Ethics	5.5
AA 6107	Architectural Draughting II	10
AA 6108	Basics of Structural Design I	5.5
AA 6109	Building Construction and Technology II	5
AA 6110	History & Theory of Architecture I	5
AA 6104	AutoCAD	5.5
MS 6221	Advanced Mathematics II	5.5
CS 6202	Basic Computer Application II	4.5
NS 6143	Advanced Physics II	4
AA 6111	IPT I	10
<b>TOTAL</b>		<b>68</b>

**B. Diploma of Technical Education in Architectural Technology (2<sup>nd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6201	Curriculum development	5.5
AA 6201	Architectural Design I	9.5
AA 6202	Basics of Structural Design II	6.5
AA 6203	Building construction & Technology III	6.5
AA 6204	Building Services II	6
AA 6205	Geometrics I	5.5
AA 6206	Building Materials II	5.5
AA 6207	ArchiCAD	5
ST 6223	Advanced Mathematics III	5
NS 6222	Advanced Physics III	5
<b>TOTAL</b>		<b>60</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 6202	Educational media and Technology	7.5
TE 6203	Guidance and Counselling	5.5
TE 6204	Teaching Practice	10
AA 6208	Architectural Design II	11.5
AA 6209	Basics of Structural Design III	6
AA 6210	History & Theory of Architecture II	6
AA 6211	Geometrics II	7
NS 6224	Advanced Physics IV	5
MS 6228	Advanced Mathematics IV	5
AA 6212	IPT II	10
<b>TOTAL</b>		<b>73.5</b>

C. Diploma of Technical Education in Architectural Technology (3<sup>rd</sup> Year)

## Semester I

Code	Name	Credits
TE 6301	Research Methodology	7.5
TE 6302	Educational Measurement & Evaluation	7.5
AA 6301	Basics of Structural Design III	6
AA 6302	Building Construction & Technology IV	6
AA 6303	Cost Estimates & Tendering	6
AA 6304	Project I	9.5
AA 6305	Professional Practice I	5
AA 6306	Climatic Design	6
AA 6307	Building services III	6.5
BM 6122	Entrepreneurship	5.5
<b>TOTAL</b>		<b>65.5</b>

## Semester II

Code	Name	Credits
TE 6303	Project in Education	10
AA 6308	Project II	12
AA 6309	Thermal Design & Sonic Environment	8
AA 6310	Professional Practice II	7
AA 6311	Architectural Conservation	8
AA 6312	Building Information Modelling	8
AA 6313	Urban & Housing Development	7
<b>TOTAL</b>		<b>60</b>

## BACHELOR OF TECHNICAL EDUCATION IN MECHANICAL ENGINEERING

### A. Bachelor of Technical Education in Mechanical Engineering (1<sup>st</sup> Year)

#### Semester I

Code	Name	Credits
TE 8101	Foundation of Technical Education and Philosophy	6
TE 8102	Educational Psychology	8
ME 8101	Engineering Drawing, I	6
ME 8102	Engineering Materials	5
ME 8103	Strength of Materials I	5
ME 8104	Manufacturing Engineering, I	8
ME 8105	Automotive Engineering, I	8
IT 8116	Computer Applications	5
ME 8106	Environmental Engineering	5
MS 8117	Engineering Mathematics I	5
HS 8101	Communication Skills	5
DS 8101	Development Studies	5
<b>TOTAL</b>		<b>72</b>

#### Semester II

Code	Name	Credits
TE8103	Curriculum development	6
TE8104	Teaching and Learning Methods	6
ME 8107	Engineering Drawing II	8
ME 8108	Machine Elements and Design, I	5
ME 8109	Manufacturing Engineering II	8
ME 8110	Strength of Materials II	5
ME 8111	Automotive Engineering II	8
ME 8112	Power Production	5
MS 8102	Engineering Mathematics II	5
ME 8106	Industrial Practical Training (IPT)	10
<b>TOTAL</b>		<b>66</b>

### B. Bachelor of Technical Education in Mechanical Engineering (2nd Year)

#### Semester I

Code	Name	Credits
TE 8201	Educational Media and Technology	8

TE 8204	Educational Measurement and Evaluation	8
ME 8201	Computer Aided Drafting I	9
ME 8202	Mechanics of Machines	5
ME 8203	Engineering Thermodynamics	6
ME 8204	Machine Elements and Design II	6
ME 8209	Strength of Materials III	5
ME 8205	Manufacturing Engineering III	8
EE 8270	Fundamental of Electrical Engineering	5
MS 8203	Engineering Mathematics III	5
<b>TOTAL</b>		<b>65</b>

### Semester II

Code	Name	Credits
TE 8203	Guidance and Counselling	6
TE 8202	Teaching Practice I	10
ME 8207	Computer Aided Drafting II	9
ME 8208	Machine Elements and Design III	6
ME 8210	Materials Technology	7
ME 8211	Fluid Mechanics	6
ME 8212	Mechatronics	6
EE 8241	Electrical Machines I	7
MS 8217	Statistics and Numerical analysis	6
<b>TOTAL</b>		<b>63</b>

### C. Bachelor of Technical Education in Mechanical Engineering (3<sup>rd</sup> Year)

#### Semester I

Code	Name	Credits
TE 8301	Education Management and Administration	8
TE 8302	Research Methodology	6
ME 8301	Systems Reliability and Plant Maintenance	6
ME 8302	Dynamics of Mechanical Structures	6
ME 8303	Engineering Design	6
ME 8304	Industrial energy Management	6
ME 8305	Metal cutting and Machines Processes	8
EE 8370	Electrical Machines II	7
ME 8311	Engineering Economics	8
ME 8213	Industrial Management	6
CS 8200	Computer Programming	7
<b>TOTAL</b>		<b>74</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 8303	Sociology of Education	6
TE 8304	Teaching Practice II	10
ME 8309	Renewable Energy Technologies	6
ME 8310	Industrial Automation	7
ME 8312	Control Systems Engineering	6
ME 8313	Computer Aided Engineering (CAE)	8
ME 8314	Engineering Operations Management	6
ME 8315	Heat Transfer	6
CS 8315	Data Structure and Algorithms	6
<b>TOTAL</b>		<b>61</b>

**D. Bachelor of Technical Education in Mechanical Engineering (4<sup>th</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
TE 8401	Professionalism and Ethics in Teaching.	6
ME 8401	Fluid Power and Control	6
ME 8402	Power Plants	6
ME 8403	Material Handling Design	6
ME 8404	Turbo Machinery	6
ME 8405	Production Engineering	7
ME 8406	Refrigeration System	8
IT 8217	Computer Networking	6
CS 8406	Object Oriented Programming	7
BM 8108	Entrepreneurship	6
<b>TOTAL</b>		<b>64</b>

## Semester II

Code	Name	Credits
TE 8402	Project in Education	10
ME 8409	Quality Assurance and Control	6
ME 8410	Engineering Ethics and Professional Conduct	5
ME 8411	Automation and Robotics	7
ME 8412	Engine Design Technology	6
ME 8413	Foundry Technology	9
ME 8414	Air Conditioning System	8
ME 8415	Computer Aided Manufacturing (CAM)	7
ME 8416	Industrial Supervisor Skill and leadership	5
<b>TOTAL</b>		<b>63</b>

## BACHELOR OF TECHNICAL EDUCATION IN CIVIL ENGINEERING

A. Bachelor of Technical Education in Civil Engineering (1<sup>st</sup> Year)

## Semester I

Code	Course Name	Credits
TE 8101	Philosophy of Technical Education	6
TE 8102	Educational Psychology	7
MS 8101	Linear Algebra and Calculus	6
HS 8101	Communication Skills	6
CS 8104	Programming Concepts	9
DS 8101	Development Studies	6
BM 8108	Entrepreneurship Education	6
CE 8101	Engineering Drawing, I	9
CE 8102	Construction Technology I	9
CE 8103	Workshop practice	7
CE 8104	Structural Mechanics I	7
<b>Total</b>		<b>78</b>

## First Year - Semester II

Code	Course Name	Credits
TE 8103	Curriculum Development and Principles	6
TE 8104	Teaching Methods	6
MS 8102	Advanced Calculus	6
DS 8108	Development Perspectives	5
CS 8110	Advanced C Programming	9
CE 8105	Engineering Drawing II	8
CE 8106	Construction Technology II	7
CE 8107	Building Construction	8
CE 8108	Mechanics of Structures	6
CE 8109	Land Survey	9
<b>Total</b>		<b>70</b>

B. Bachelor of Technical Education in Civil Engineering (2<sup>nd</sup> Year)

## Semester I

Code	Course Name	Credits
TE 8201	Educational Media and Technology	7
TE 8202	Educational Measurement and Evaluation	7
MS 8201	Differential Equations	6
CE 8201	Soil Mechanics I	6
CE 8102	Civil Engineering Materials. -I	6
CE 8203	Fluid Mechanics	6
CE 8204	Engineering Survey I	7
CE 8205	Road Construction and Maintenance	9
CE 8206	Concrete Technology	6
CE 8207	Structural Analysis I	6
CE 8116	Industrial Practical Training	10
<b>Total</b>		<b>76</b>

## Semester II

Code	Course Name	Credits
TE 8203	Guidance and Counselling Psychology	6
MS 8303	Statistics and Numeric Analysis	6
CE 8208	Engineering Survey II	8
CE 8209	Fluid Mechanics and Hydraulics	8
CE 8210	Engineering Geology	6
CE 8211	Civil Engineering Materials. -II	8
CE 8212	Soil Mechanics II	6
CE 8213	Structural Analysis II	7
CE 8214	Building Planning and Drawing	6
<b>Total</b>		<b>61</b>

C. Bachelor of Technical Education in Civil Engineering (3<sup>rd</sup> Year)

## Semester I

Code	Course Name	Credits
TE 8301	Educational Management and Administration	7
CE 8301	Quantity Survey I	7
CE 8302	Geometric Design and Traffic Engineering	9
CE 8303	Reinforced Concrete Design and Detailing I	8
CE 8304	Foundation Engineering	8
CE 8305	Highway Engineering Materials	6
CE 8306	Construction Management	7
CE 8307	Engineering Hydrology	6
TE 8204	Teaching Practice I	8
<b>Total</b>		<b>66</b>

## Semester II

Code	Course Name	Credits
TE 8303	Sociology of Education	5
CE 8308	Building Services	6
CE 8309	Quantity Surveying II	7
CE 8310	Reinforced Concrete Design and Detailing II	8
CE 8311	Water Supply Engineering	6
CE 8312	Contract Planning and Administration	9
CE 8313	Pavement Design and Construction	6
CE 8314	Research Methodology	7
CE 8315	Construction of Multi-Storey Structures	7
<b>Total</b>		<b>61</b>

D. Bachelor of Technical Education in Civil Engineering (4<sup>th</sup> Year)

## Semester I

Code	Course Name	Credits
TE 8401	Professionalism and Ethics in teaching	6
CE 8401	Engineering Economics	6
CE 8402	Structural Steel Design	6
CE 8403	Waste Water Management	6
CE 8404	Pavement Maintenance	6
CE 8405	Bridge Design and Construction	6
CE 8406	Pre-Stressed Concrete Design	6
CE 8407	Irrigation Engineering	6
CE 8408	Project I	18
TE 8304	Teaching practice II	8
<b>Total</b>		<b>62</b>

## Semester II

Code	Course Name	Credits
CE 8409	Design of Masonry and Retaining Structures	6
CE 8410	Structural Timber Design	6
CE 8411	Solid Waste Management	6
CE 8412	Industrial Building Construction	6
CE 8413	Hydraulic Structures	6
CE 8414	Transportation Engineering	6
CE 8415	Water Resources Management	6
CE 8416	Project II	18
CE 8216	Industrial Practical Training II	10
<b>Total</b>		<b>60</b>

## BACHELOR OF TECHNICAL EDUCATION IN ARCHITECTURAL

## Semester 1 year 1

Course Code	Course Name	Credits
HS 8101	Communication Skills	6
DS 8101	Development Studies	5
MS 8125	Calculus, Statistics and Coordinate geometry	5
BM 8108	Entrepreneurship	5
AA 8101	Architectural Draughting, I	10
AA 8102	Building Construction, I	6
AA 8103	Basics of Architectural Design	5
AA 8104	History of Architecture I	5
AA 8105	Building Materials I	5
AA 8106	Mini- Industrial Practical Training I	3
TE 8101	Foundation of Technical Education and Philosophy	6
TE 8102	Education Psychology	7
<b>Total</b>		<b>68</b>

## Semester 2 year 1

Course Code	Course Name	Credits
AA 8104	Structural Mechanics	5
AA 8108	Architectural Draughting II	10
AA 8109	Building Construction II	6
AA 8110	Principles of Architectural Design	5
AA 8111	History of Architecture II	5
AA 8112	Building material II	6
AA 8113	Construction Surveying	7
AA 8114	Industrial Practical Training (IPT)	7
TE 8103	Curriculum Development	6
TE 8104	Teaching Methods	6
<b>Total</b>		<b>63</b>

## Semester 1 year 2

Course Code	Course Name	Credits
AA 8201	Design Studio I	12
AA 8202	Building construction & technology I	6
AA 8203	Material Science	6
AA 8204	Design Theories I	6
AA 8205	History of Architecture III	5
AA 8206	Services & Installations I	5
AA 8207	Building Structures, I	5
AA 8208	Urban Design	5
AA 8209	Mini- Industrial Practical Training II	3
TE 8201	Education Media and Technology	7
TE 8202	Education Measurement and Evaluation	7
<b>Total</b>		<b>67</b>

## Semester 2 year 2

Course Code	Course Name	Credits
AA 8210	Design Studio II	10
AA 8211	Building Construction & Technology II	6
AA 8212	Product Manufacture Technology I	5
AA 8213	Design Theories II	6
AA 8214	Building Renovation and Maintenance I	5
AA 8215	Services and Installation II	5
AA 8216	Building Structures II	5
AA 8217	Advanced CAD	5
AA 8218	Industrial Practical Training (IPT)	7
TE 8203	Guidance and counselling	6
TE 8204	Teaching Practice I	8
<b>Total</b>		<b>68</b>

## Semester 1 year 3

Course Code	Course Name	Credits
AA 8301	Project I	10
AA 8302	Professional Practice & Management I	6
AA 8303	Building Construction and Technology III	7
AA 8304	Simulation Technology I	7
AA 8305	Product Manufacture Technology II	5
AA 8306	Alternative Energy Design	5
AA 8307	Environmental control & sustainability I	5
AA 8308	Building Renovation and Maintenance II	5
AA 8309	Mini- Industrial Practical Training	3
TE 8301	Education Management and Administration	7
TE 8302	Research Methodology	6
<b>Total</b>		<b>66</b>

## Semester 2 year 3

Course Code	Course Name	Credits
AA 8310	Project II	8
AA 8311	Construction Economics I	5
AA 8312	Professional Practice & Management II	5
AA 8313	Structural Analysis and Design I	5
AA 8314	Product Manufacture Technology III	5
AA 8315	Simulation technology II	6
AA 8316	Environmental control & sustainability II	5
AA 8317	Landscape technology	5
AA 8318	Conservation technology	5
AA 8319	Interior design	5
AA 8320	Industrial Practical Training (IPT)	7
TE 8303	Sociology of Education	5
TE 8304	Teaching practice II	8
<b>Total</b>		<b>74</b>

## Semester 1 year 4

Course Code	Course Name	Credits
AA 8401	Project part I	24
AA 8402	Structural Analysis and Design II	6
AA 8403	Disaster Management	6
AA 8404	Services & Installations III	6
AA 8405	Professional Practice & Management III	6
TE 8401	Professionalism and Ethics	6
<b>Total</b>		<b>54</b>

## Semester 2 year 4

Course Code	Course Name	Credits
AA 8407	Comprehensive Design Project	50
<b>Total</b>		<b>50</b>

## BACHELOR OF TECHNICAL EDUCATION IN ELECTRICAL AND ELECTRONICS ENGINEERING

## Semester I First Year

Course Code	Course Name	Credits
TE 8101	Foundation of Technical Education and Philosophy	6
TE 8102	Educational Psychology	6
EE 8101	Fundamentals of Electrical Measurements	4
EE 8102	Fundamentals of Electronics	4
IT 8116	Computer Application	6
EE 8103	Basics of Workshop Technology and Practice	6
ME 8176	Fundamentals of Technical Drawing	4
EE 8104	Basics of Electrical Engineering	4
EE 8105	Electrical Installation and Safety	4
MS 8121	Algebra	4
HS 8101	Communication Skills	6
DS 8101	Development Studies	6
BM 8108	Entrepreneurship	6
	<b>Total</b>	<b>66</b>

## Semester 2 First Year

Course Code	Course Name	Credits
TE 8103	Curriculum Development	6
TE 8104	Teaching and Learning Methods	6
EE 8106	Fundamentals of Electronics Devices	6
EE 8107	Fundamental of Electrical Power Systems	5
EE 8108	Fundamental of Electrical Machines	7
IT 8117	Computer Networking	5
EE 8109	Workshop Technology and Practice	6
ME 8177	Technical Drawing	5
EE 8110	Electrical Maintenance	5
EE 8111	Basics of Control Engineering	6
MS 8122	Advanced Calculus	4
DS 8108	Development Perspectives	6
	<b>Total Credits</b>	<b>67</b>

## Semester 1 Second Year

Course Code	Course Name	Credits
TE 8201	Educational Media and Technology	5
TE 8202	Educational Measurement and Evaluation	5
EE 8201	Industrial Practical Training 1	8
MS 8221	Differential Equations	5
EE 8202	Electrical Network Analysis	6
ME 8276	Engineering Drawing	4
EE 8203	Electrical Measurements and Instrumentation	6
EE 8204	Fundamentals of Analogue Electronics	6
EE 8205	Basics of Engineering Electromagnetic	6
ME 8277	Fundamentals of Engineering Mechanics	5
EE 8206	Power Plants	4
EE 8207	Engineering Software	4
<b>Total Credits</b>		<b>64</b>

## Semester 2 Second Year

Course Code	Course Name	Credits
TE 8203	Guidance and Counselling	5
TE 8204	Teaching Practice I	7
MS 8222	Numerical Analysis and Statistics	6
EE 8208	Electrical Circuits Analysis	6
ME 8278	Computer Aided Drafting	4
EE 8210	Basics of Power Systems	4
EE 8212	Analogue Electronics	6
EE 8213	Engineering Electromagnetic	6
ME 8278	Engineering Thermodynamics	6
EE 8215	Electrical Engineering Materials	6
EE 8216	Basics of Computer System Engineering	6
CS 8204	Computer Programming	4
<b>Total Credits</b>		<b>66</b>

## Semester 1 Third Year

Course Code	Course Name	Credits
TE 8301	Education Management and Administration	5
TE 8302	Research Methodology	5
EE 8301	Industrial Practical Training 2	7
EE 8302	DC Electrical Machines	6
EE 8303	Modelling in Control Systems Engineering	8
EE 8211	Electrical Power Transmission and Distribution	8
EE 8305	Basics of Power Electronics	6
EE 8306	Fundamental of Digital Electronics	7
IT 8317	Object Oriented Programming	6
EE 8308	Basics of Analogue Telecommunication	5
	<b>Total Credits</b>	<b>63</b>

## Semester 2 Third Year

Course Code	Course Name	Credits
TE 8303	Sociology of Education	6
TE 8304	Teaching Practice II	7
EE 8309	Environmental Engineering Management	4
EE 8310	3-Phase AC Machines	5
EE 8304	Electrical Power Systems Analysis	5
EE 8311	Control System Engineering Analysis	5
EE 8312	Microprocessor	6
EE 8314	Power Electronics Circuits	5
EE 8315	Digital Electronics	5
EE 8316	Basics of Digital Telecommunication	5
EE 8317	Electrical Safety and Maintenance	6
EE 8318	Research Methodology	6
	<b>Total</b>	<b>65</b>

## Semester 1 Fourth Year

Course Code	Course Name	Credits
TE 8401	Professionalism and Ethics in Teaching.	6
EE 8401	Industrial Practical Training 3	7
EE 8402	3- Phase AC Synchronous Machines	8
EE 8403	Digital Control System Engineering	6
EE 8404	Programmable Logic Controller	6
EE 8315	Electrical Power Systems Dynamics	9
EE 8406	Power Electronics Converters	6
EE 8407	Engineering Operation Management	6
EE 8408	Project I	10
	<b>Total</b>	<b>64</b>

## Semester 2 Fourth Year

Course Code	Course Name	Credits
TE 8402	Project in Education	7
EE 8409	Laws for Engineers	6
EE 8410	Electrical Drives	7
EE 8411	Digital Systems Engineering	6
EE 8412	High Voltage Engineering	8
EE 8413	Engineering Economic	6
EE 8414	Switchgear and Protection Engineering	6
EE 8415	Renewable Energy Technologies (RE)	6
EE 8416	Project II	12
	<b>Total Credits</b>	<b>64</b>



	Chemistry & Zoology (Islamic University in Uganda)
*Mr. Phenson Justine	MSc. Agr. (Environmental Quality Science) (Hebrew University of Jerusalem, Israel); BSc. Chemistry (UDOM)
*Mr. Azaria L. Stephano	MSc. Agr. (Environmental Quality Science) (Hebrew University of Jerusalem, Israel); BSc. Chemistry (UDOM)
*Mr. Ndaki M. Manyanza	MSc. Biodiversity Conservation (UDOM); BSc. Biology (UDOM)
Mr. Emmanuel Supuku	M.A Natural Resource Assessment and Management (OUT); B.A. Education (OUT)
Ms. Everlyn Swai	MSc. Environmental and Natural Resource Economics (SUA); BSc. Wildlife Management and Conservation (SUA)
Ms. Farida Mayowela	MSc. Ecosystem Services and Management (SUA); BSc. Wildlife Management (SUA); Diploma. Aquaculture (Mbegani Fisheries Development Center)
*Ms. Hildegard R. Kasambala	MSc. Environmental Science, BSc. Education (UDSM-DUCE)
*Mr. Gisandu K. Malungu	MSc. Biodiversity Conservation (UDOM), BSc. Ed Biology (UDOM)
Ms. Julieth Joseph Balilemwa	MSc. Land and Water Management (Kenyata University, Kenya); BSc. Environmental Science and Management (SUA)
Mr. Amani Jarafu Simbeye	MSc. Natural Resource Assessment and Management (UDSM); B.A. Education – Geography (UDSM)
<b>Tutorial Assistants</b>	
Ms. Suniva S. Aligonza	BSc. in Botanical Sciences (UDSM)
<i>*On study leave</i>	

## BACHELOR OF SCIENCE IN NATURAL RESOURCES CONSERVATION

A. Bachelor of Science in Natural Resources Conservation (1<sup>st</sup> Year)

## Semester I

<i>Core Courses</i>		
Course Code	Name	Credits
NS 8151	Invertebrate Zoology	8
NS 8152	Introductory Botany	8
NS 8153	Biodiversity Conservation	8
NS 8154	Natural Resource Management	8
NS 8155	Introduction to Genetics	8
HS 8101	Communication Skills	9
DS 8108	Development Perspectives	6
BM 8108	Entrepreneurship	9
<b>Total</b>		<b>64</b>
<i>Elective Courses</i>		
Course Code	Name	Credits
NS 8156	Plant Ecology and Phytogeography	6
NS 8157	Tourism and Leisure	6
NS 8158	Wildlife Diseases	6
<b>Total</b>		<b>18</b>

## Semester II

<i>Core courses</i>		
Course Code	Name	Credits
NS 8159	Chordate Zoology	8
NS 8160	Ecology	8
NS 8161	Evolutionary Botany	8
NS 8162	Biostatistics I	8
NS 8163	Biochemistry	8
NS 8164	Parasitology	8
IT 8116	Information and Communication Technology	8
<b>Total</b>		<b>56</b>
<i>Elective courses</i>		
Course Code	Name	Credits
NS 8165	Fundamentals of Microbiology	6
NS 8166	Principles of Land Use Planning	6
NS 8167	Ichthyology	6
<b>Total</b>		<b>18</b>

**B. Bachelor of Science in Natural Resources Conservation (2<sup>nd</sup> Year)****Semester I**

<i>Core courses</i>		
<b>Course Code</b>	<b>Name</b>	<b>Credits</b>
NS 8251	Mammalian Biology	8
NS 8252	Vertebrate Anatomy & Physiology	8
NS 8253	Conservation Biology	8
NS 8254	Nutrition in Wild Mammals	8
NS 8255	Conservation of Wetlands	8
NS 8256	Aquatic Sciences	8
NS 8257	Entomology	8
<b>Total</b>		<b>56</b>
<i>Elective courses</i>		
<b>Course Code</b>	<b>Name</b>	<b>Credits</b>
NS 8258	Management of Wildlife in Captivity	6
NS 8259	Developmental Biology	6
NS 8260	Tourism and Recreation Management	6
NS 8261	Herpetology	6
<b>Total</b>		<b>24</b>

**Semester II**

<i>Core courses</i>		
<b>Course Code</b>	<b>Course name</b>	<b>Credits</b>
NS 8262	Research Methods	8
NS 8263	Range and Fire Ecology	8
NS 8264	Animal Behaviour	8
NS 8265	Remote Sensing and GIS	8
NS 8266	Field Practical Training	10
NS 8267	Natural Resources Economics	8
NS 8268	Climate Change	8
IT 8215	Computing Applications	8
<b>Total</b>		<b>66</b>
<i>Elective courses</i>		
<b>Course Code</b>	<b>Course name</b>	<b>Credits</b>
NS 8269	Analysis and Utilization of Wildlife Populations	6
NS 8270	Taxonomy of Higher Plants	6
NS 8271	Ornithology	6
NS 8272	Biological Impact Assessment	6
<b>Total</b>		<b>24</b>

## C. Bachelor of Science in Natural Resources Conservation (3rd Year)

## Semester I

<i>Core course</i>		
Course Code	Name	Credits
NS 8351	Environmental Science	8
NS 8352	Governance in Natural Resources Conservation	8
NS 8353	Criminology and Wildlife Law Enforcement	8
NS 8354	Coastal and Marine Ecosystems	8
NS 8355	Aquatic Biology Field Course	8
NS 8356	Terrestrial Biology Field Course	8
NS 8357	Research Project I	8
<b>Total</b>		<b>56</b>

<i>Elective Courses</i>		
Course Code	Name	Credits
NS 8358	Community-based Conservation and Extension	6
NS 8359	Principles of Management and Administration	6
NS 8360	Environmental Physiology	6
<b>Total</b>		<b>18</b>

## Semester II

<i>Core Courses</i>		
Course Code	Course name	Credits
NS 8361	Biostatistics II	8
NS 8362	Environmental Impact Assessment	8
NS 8363	Research Project II	8
NS 8364	Evolutionary Zoology	8
NS 8365	Contemporary Issues in Natural Resource Conservation	8
NS 8366	Ecological Modelling	8
NS 8367	Introduction to Soil Science	8
<b>Total</b>		<b>56</b>
<i>Elective Courses</i>		
Course Code	Course name	Credits
NS 8368	Biogeography	6
NS 8369	Introduction to Tourism Marketing	6
NS 8370	Ecology and Utilisation of Natural Resources	6
<b>Total</b>		<b>18</b>

## BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY

A. Bachelor of Science in Environmental Science and Technology (1<sup>st</sup> Year)

## Semester I

<i>Core Courses</i>		
Course Code	Name	Credits
NS 8199	Introduction to Environmental Science	8
NS 8116	Information and Communication Technology	8
NS 81100	Chemical Laboratory Techniques	8
NS 81101	Plant Ecology and Phytogeography	6
HS 8101	Communication Skills	8
NS 81102	General chemistry	8
BM 8108	Entrepreneurship	8
DS 8101	Development Studies	8
<b>Total</b>		<b>62</b>

## Semester II

<i>Core courses</i>		
Course Code	Name	Credits
NS 81103	Climate Change and Variability	10
NS 81104	Biodiversity Conservation	8
NS 81106	Occupational Health and Safety	8
NS 81107	Environmental Physics	8
NS 81108	Environmental Chemistry	8
NS 81109	Environmental Microbiology	8
NS 81110	Entrepreneurship Skills for Environmental Technologists I	10
<b>Total</b>		<b>60</b>
<i>Elective courses</i>		
Course Code	Name	Credits
NS 81105	Introduction to Soil Science	8
<b>Total</b>		<b>8</b>

**B. Bachelor of Science in Environmental Science and Technology (2<sup>nd</sup> Year)****Semester I**

<i>Core courses</i>		
<b>Course Code</b>	<b>Name</b>	<b>Credits</b>
NS 82106	Industrial Practical Training	12
NS 82107	Environmental Toxicology and Contaminants	8
NS 82108	Solid waste Management Technologies	10
NS 82109	Forest Technology	8
NS 82110	Environmental Biotechnology	8
NS 8256	Entrepreneurship Skills for Environmental Technologists II	10
NS 8257	Water Treatment and Wastewater Management	8
<b>Total</b>		<b>64</b>

**Semester II**

<i>Core courses</i>		
<b>Course Code</b>	<b>Course name</b>	<b>Credits</b>
NS 82113	Atmospheric Physics	6
NS 82114	Instrumental methods in analytical Chemistry	8
NS 82115	Biostatistics I	8
NS 82116	Natural Resources Management	6
NS 82117	Environmental Restoration and Remediation Technologies	6
NS 82118	Research Methods	6
NS 82119	Environmental Sampling and Analysis	8
IT 82120	Atmospheric Chemistry	6
NS 82121	Remote Sensing and GIS	6
NS 82122	Entrepreneurship Skills for Environmental Technologists II	8
<b>Total</b>		<b>68</b>

**C. Bachelor of Science in Environmental Science and Technology (3<sup>rd</sup> Year)****Semester I**

<i>Core courses</i>		
<b>Course Code</b>	<b>Name</b>	<b>Credits</b>
NS 83106	Oceanography and Limnology	8
NS 83107	Natural Disaster Management	8
NS 83108	Project Planning and Management	6
NS 83109	Industrial Practical Praining II	12
NS 83110	Mine Waste Management Technologies	8
NS 83111	Urban Water, Sanitation and Hygiene	8
NS 83112	Hazardous Waste Management Technologies	8
NS 83113	Research Project I	8
<b>Total</b>		<b>64</b>

**Semester II**

<i>Core courses</i>		
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Course Code	Name	Credits
NS 83114	Environmental Impact and Risk Assessment	8
NS 83115	Environmental Economics	8
NS 83116	Environmental Law & Regulation	8
NS 83117	Industrial Practical Training III	12
NS 83118	Environmental Planning	8
NS 83119	Chemistry of Natural Products	8
NS 83120	Quality Control & Assurance	6
NS 83121	Research Project II	8
<b>Total</b>		<b>64</b>

## 8.4.6 THE DEPARTMENT OF MATHEMATICS AND STATISTICS

### 8.4.5.1 LIST OF STAFF

#### *(Head of Department)*

Dr. Isack E. Kibona  
PhD Applied Maths (Central China Normal University),  
MSc. Maths Modelling (UDSM), BSc. Ed (UDSM)

#### **Lecturers**

Dr. Mlyashimbi Helikumi  
PhD Applied Maths and Computational Sciences  
(NMAIST), MSc. Maths Modelling (UDSM), B.ED Science  
(UDSM)

Dr. Lukas W. Mrimi  
PhD Mathematics, UDSM , M.Sc. Mathematics, UDOM,  
B.Sc. Ed. Physics and Mathematics, Bugema University,  
Uganda

#### **Assistant Lecturers**

Mr. Alanus E. Mapunda  
MSc. Maths Modelling (UDSM), BSc. Ed (UDSM)

Ms. Beatha J. Ngonyani  
MSc. Maths Modelling (UDSM), BSc. Ed (UDSM)

Mr. Bushen G. Dome  
MSc. Maths (NM-AIST); B.Ed. Math (TEKU)

Mr. Francis J. Kita  
Master of Official Statistics (EASTC); B.Sc. Education  
(Mwenge University)\*

Mr. Gideon E. Rwabona  
MSc. Maths (AIMS-Tanzania), B.Ed. Math (TEKU)\*

Mr. Jacob O. Lyimo  
MSc. Maths Modelling (UDSM), BSc. Ed (DUCE)

Mr. Justin T. Kisakali  
MSc. Applied Maths (NM - AIST), BA. ED.(STEMMUOCO)

Mr. Jeremiah J. Ruhere  
MSc. Ed (UDSM); B.Ed (MU).

Mr. Joseph N. Lutera  
MSc. Maths-AIMS; BSc. Ed-UDSM\*

Mr. Musa F. Juma  
M.Sc. Maths (AIMS), B.Sc. B.Sc. Ed. (SUA)

Mr. Lyimo S. Mhagama  
M.Sc. Maths (Mysore-India), BSc. Ed (UDSM)\*

Mr. Mohamed H. Mohamed  
M.Sc. Maths Sc. (AIMS-Tanzania), BSc. Maths (UDOM)

Ms Tatu S. Irunde  
M.Ed. Maths (Aga Khan), B.Sc. Ed. St. John University,  
Dip Sec Ed. MoTCO

Mr. Traziasi Herman  
M. Sc. Maths (AIMS-Tanzania); BSc.Ed (UDSM)\*

Ms. Violet G. Saria  
M. Sc. Maths (Nairobi Univ.), BSc.Ed (UDSM)

Mr. Yasin K. Kowa  
MSc. Maths (NM-AIST); B.Ed. Math (TEKU)

Mr. Justin Kisakali  
M.Sc. Applied Maths & Computational Science (NM-

AIST),

B.A. with Education (STEMMUCO – Mtwara)

**Tutorial Assistant**

Mr. Kasmiri John Shila

BSc.Ed (SUA), Dip.Ed (Butimba TTC)

Mr. Sadamu M. Hassani

BSc. Maths & Statistics (UB)\*

Mr. Salim Msalilwa

BSc. Applied Statistics (MU)

**Instructor I**

Mr. Paulo J. Ngayekamwe

M.Sc. Maths (Mangalore Univ. India), BSc. Ed. (UDSM)



Dr. Ibrahim Kadigi	PhD in Agricultural Economics (SUA), MSc Agricultural Economics (SUA), BSc in Information and Communication Technology (Mzumbe University)
Dr. Yasinta Kassimba	Doctorate of Management in Business Management (Capital University of Economics and Business-Beijing, China), MSc in Supply Chain Management (University of Bolton-UK), BSc in Procurement and Supply Chain Management (SAUT-Mwanza)
*Mr. Abbas Y. Sanga	MARD (SUA); Bed (UDSM); Accounting technician certificate (DSA)
*Mr. Yohana J. Sesabo	MBA (Mzumbe); BBA (Marketing) (MZUMBE)
*Ms. Herieth J. Rogath	MSc (Industrial Logistics) (Molde, Norway); MSc International Trade (UDSM); BSc (Urban and Regional Planning) (UCLAS)
<b>Assistant Lecturers</b>	
*Mr. Phillip A. Magembe	MBA-Corporate Management (Mzumbe); Advanced Diploma in Accountancy (TIA)
*Mr. Galus A. Kitapankwa	MEED (UDSM), BEd. Sc (UDSM)
*Mr. Said M. Msangi	MBA (UDSM), BA (UDSM)
*Ms. Albentina Leonard	MBA (Finance & Banking) Mzumbe, BA.Ed (UDSM)
*Ms. Ukende Kingu	MBA (UDSM), BSc. Food Science & Tech (SUA).
*Mr. Evans J. Lupenza	MBA (OUT), B. Com (UDSM), DACA, (Moshi Coop. College).
Mr. John F. Mogha	MBA-Corporate Management (Mzumbe); BSc (Agricultural Education and Extension) (SUA), Diploma in Education (Physics and Mathematics)
*Mr. Ibrahim Mwasyeba	MBA-Corporate Management (Mzumbe); Advanced Diploma in Accountancy (IAA)
*Mr. Stephano Matiku	Master Degree in Business Management (Moshi Co-operativie University), BBA (MUST)
Mr. Justus S. Massawe	MSc.PSCM (Mzumbe), CPSP (T), 2014, BA (Procurement and Supply Management) (MUCCoBS)
Mr. Emmanuel Sanga	MBA (HRM) (TEKU), Bachelor of Public Administration (HRM) (Mzumbe)
Ms. Fatuma M. Mwinyange	MBA (UDOM), Bachelor of Education with Mathematics (Tumaini University)
Mr. Nickson Severian Kahigi	MSc. Agricultural Economics (SUA), BSc Agricultural Economics and Agribusiness (SUA)

Ms. Helen Samwel Sese	MSc. Agricultural and Applied Economics (SUA, Pretoria University of South Africa), BSc. Agricultural Economics and Agribusiness (SUA).
Mr. Brown Claus Mwasyeba	MBA (Accounting and Finance) Ruaha Catholic University; BBA (Accounting and Finance) Tumaini University-Iringa
CPA Evetha Dickson Kisanga	MBA (Finance) SAUT-Mwanza; Advanced Diploma in Accountancy (SAUT); Certified Professional Accountant

#### **Tutorial Assistants**

Mr. Ezekia M. Laiton	BBA with Education (Arusha University)
CPA Naomi R. Nyambo	BAF (Mzumbe)
*Ms Shukuru Sanga	BBA (Marketing and Entrepreneurship) (MUST), Diploma in Business Administration (MUST)
Mr. Allen Temba	Bachelor of Procurement and Logiistic Management (Tanzania Institute of Accountancy)
Mr..Willy Innocent	Bachelor of Human Resource Management (OUT)
Ms. Beatrice Samagwa	Bachelor of Accounting and Finance (Mzumbe University)

#### **Instructor**

Grace Julius Moshu	MBA (TEKU), PGD (Regional Planning) (IRDP), Advanced Diploma (Business Administration) (CBE).
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\* *On study leave*

**8.5.1.2 PROGRAMME COURSES****CERTIFICATE IN BUSINESS ADMINISTRATION****Semester I**

		<b>CREDITS</b>
MS 6125	Introductory Business Mathematics	10
BM 6102	Records Management	10
BM 6103	Elementary economics	10
HS 6101	Basic Communication Skills	10
IT 6101	Basic Computer skills	10
BM 6104	Basic procurement and supply	10
<b>TOTAL</b>		<b>60</b>

**Semester II**

		<b>CREDITS</b>
BM 6105	Basics of Entrepreneurship	10
BM 6106	Basics of Service Marketing	10
BM 6107	Elements of Commerce	10
BM 6108	Principles of Salesmanship	10
BM 6109	Basic of Booking keeping	10
BM 6110	Basics of Customer Care and Public Relation	10
BM 6111	Basics of Consumer Behaviour	10
<b>TOTAL</b>		<b>70</b>

**CERTIFICATE IN AGRIBUSINESS WITH TECHNOLOGY****Semester I**

		<b>CREDITS</b>
CAGT 611	Introduction to Agribusiness	12
CAGT 612	Basic Applied Statistics	9
CAGT 613	Elementary Agro-Entrepreneurship	10
CAGT 614	Communication Skills	9
CAGT 615	Introduction to Green Environmental Technology	12
CAGT 616	Information and Communication Technology	12
CAGT 617	Crop Production Technology	12
<b>TOTAL</b>		<b>74</b>

**Semester II**

		<b>CREDITS</b>
CAGT 621	Forest Production Technology	12
CAGT 622	AgroPost-Harvest Technology	12
CAGT 623	Introduction to Agricultural Economics	12
CAGT 624	Fundamental of Agricultural Marketing	10
CAGT 625	Basics of Bookkeeping and Accounting for Agribusiness	10
CAGT 626	Basics of Agricultural Technology	10
<b>TOTAL</b>		<b>66</b>

**DIPLOMA IN BUSINESS ADMINISTRATION****A. Diploma in Business Administration (1<sup>st</sup> Year)****Semester I**

		<b>CREDITS</b>
BM 6116	Small Business Management	<b>9</b>
BM 6117	Basics of Management Principles	<b>9</b>
BM 6118	Basics of Financial Accounting	<b>10</b>
IT 6118	Information and Computer Technology	<b>10</b>
BM 6119	Basics of Quantitative Techniques	<b>10</b>
BM 6120	Principles of Procurement and Supply	<b>9</b>
HS 6116	Elements of Development Studies	<b>10</b>
<b>TOTAL</b>		<b>67</b>

**Semester II**

		<b>CREDITS</b>
BM 6122	<b>Entrepreneurship</b>	<b>10</b>
BM 6123	Elements of Strategic Management	<b>10</b>
BM 6124	Basics of Business Law and Ethics	<b>10</b>
BM 6125	Basics of Consumer Behaviors	<b>9</b>
BM 6126	Elementary Economics	<b>9</b>
HS 6117	Business Communication	<b>10</b>
BM 6127	Field Practice	<b>10</b>
<b>TOTAL</b>		<b>68</b>

**B. Diploma in Business Administration (2<sup>nd</sup> Year)****Semester I**

		<b>CREDITS</b>
BM 6201	Freight Clearing and Forwarding	<b>9</b>
BM 6202	Principles of Marketing	<b>9</b>
BM 6203	Elementary Production Management	<b>12</b>
BM 6204	Customer Care and Public Relation	<b>10</b>
BM 6205	Basics of Research Methodology	<b>10</b>
BM 6206	Basics of Logistics and Transportation	<b>12</b>
<b>TOTAL</b>		<b>62</b>

**Semester II**

		<b>CREDITS</b>
BM 6207	Basics of Financial Management	10
BM 6208	Business Environment	10
BM 6209	Basics of Taxation	10
BM 6210	Sales Management	9
BM 6211	Basics of Human Resources Management	10
BM 6212	Research Project	12
<b>TOTAL</b>		<b>61</b>
<b>Option Courses</b>		
<b>Code</b>	<b>Title</b>	<b>Credits</b>
BM 6213	International finance	10
BM 6214	Basics of supervisory skills	10
<b>TOTAL</b>		

**DIPLOMA OF BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE****A. Diploma of Business Administration in Accounting and Finance (1<sup>st</sup> Year)****Semester I**

		<b>CREDITS</b>
BM 6117	Basics of Management Principles	9
BM 6131	Basics of Commerce	12
BM 6118	Basics of Financial Accounting	10
BM 6119	Basics of Quantitative Techniques	10
IT 6118	Information and Computer Technology	10
HS 6116	Elements of Development Studies	10
<b>TOTAL</b>		<b>61</b>

**Semester II**

		<b>CREDITS</b>
BM 6132	Basics of Auditing	9
BM 6126	Elementary Economics	9
HS 6117	Business Communication	10
BM 6134	Computerized Accounting Systems	9
BM 6122	Entrepreneurship	10
BM 6128	Field Practice	10
BM 6124	Basics of Micro Finance	10
BM 6133	Intermediate Accounting 1	9
<b>TOTAL</b>		<b>76</b>

**B. Diploma of Business Administration in Accounting and Finance (2<sup>nd</sup> Year)****Semester I**

		<b>CREDITS</b>
BM 6201	Freight Clearing and Forwarding	9
BM 6216	Basics of Taxation and Public Finance	10
BM 6205	Basics of Research Methodology	10
BM 6218	Principles of Insurance	10
BM 6219	Elementary Money and Banking	10
BM 6203	Elementary Production Management	12
<b>TOTAL</b>		<b>61</b>

**Semester II**

		<b>CREDITS</b>
BM 6207	Basics of Financial Management	10
BM 6220	Basics of Finance Markets and Services	9
BM 6221	Basics of Public Sector Accounting	10
BM 6217	Basics of Cost Accounting and Procurement	10
BM 6208	Business Environment	10
BM 6222	Basics of Business Law and Ethics	10
BM 6212	Research Project	12
<b>TOTAL</b>		<b>67</b>

**DIPLOMA OF BUSINESS ADMINISTRATION IN MARKETING AND ENTREPRENEUSHIP****A. Diploma of Business Administration in Marketing and Entrepreneurship****Semester I**

		<b>CREDITS</b>
BM 6116	Small Business Management	9
IT 6118	Information and Computer Technology	10
HS 6116	Elements of Development Studies	10
BM 6119	Basics of Quantitative Techniques	10
BM 6120	Principles of Procurement and Supply	9
BM 6118	Basics of Financial Accounting	10
BM 6117	Basics of Management Principles	9
<b>TOTAL</b>		<b>67</b>

**Semester II**

		<b>CREDITS</b>
BM 6125	Basics of Consumer Behaviour	9
BM 6126	Elements of Economics	9
BM 6117	Business Communication	10
BM 6124	Basics of Business Law and Ethics	10
BM 6122	Entrepreneurship	10
BM 6123	Elements of Strategic Management	10
BM 6127	Field Practice	10
<b>TOTAL</b>		<b>68</b>

**B. Diploma of Business Administration in Marketing and Entrepreneurship (2<sup>nd</sup> Year)****Semester I**

		<b>CREDITS</b>
BM 6203	Elementary Production Management	12
BM 6231	Fundamentals of Marketing and Management	10
BM 6202	Principles of Marketing	9
BM 6204	Customer Care Public Relation	10
BM 6205	Basics of Research Methodology	10
BM 6206	Basics of Logistics and Transportation	12
<b>TOTAL</b>		<b>63</b>

**Semester II**

		<b>CREDITS</b>
BM 6211	Basics of Human Resources Management	10
BM 6208	Business Environment	10
BM 6232	Basics of International Marketing	10
BM 6233	Marketing Research	9
BM 6207	Basics of Financial Management	10
BM 6210	Sales Management	9
<b>TOTAL</b>		<b>59</b>
<b>Option Courses</b>		
		<b>CREDITS</b>
BM 6234	Basics of Organization Behavior	10
BM 6214	Basics of Supervisory Skills	10

**DIPLOMA IN AGRIBUSINESS WITH TECHNOLOGY****First year, Semester I**

		<b>CREDIT</b>
DAGT 611	Horticulture Production	12
DAGT 612	Crop Post Harvest Handling and Management Technologies	12
DAGT 613	Agribusiness Marketing	10
DAGT 614	Livestock Technology	12
DAGT 615	Principles of Bookkeeping and Accounting	10
DAGT 616	Bee Production and Product Processing	10
DAGT 617	Information and Computer Technology	10
<b>TOTAL</b>		<b>76</b>

**Year 1, Semester II**

		<b>CREDIT</b>
DAGT 621	Applied Mathematics	10
DAGT 622	Business Communication Skills	9
DAGT 623	Entrepreneurship	10
DAGT 624	Risks Management	10
DAGT 625	Research Methodology	10
DAGT 626	Field Practical Training	12
<b>TOTAL</b>		<b>61</b>

**Year 2, Semester I**

		<b>CREDIT</b>
DAGT 631	Principles of Agribusiness Management	<b>12</b>
DAGT 632	Fundamentals of Financial Management	<b>12</b>
DAGT 633	Agribusiness Project Management	<b>9</b>
DAGT 634	Creativity and Innovation in Business	<b>10</b>
DAGT 635	Agrarian Change and Development	<b>10</b>
DAGT 636	Agribusiness Ethics and Formalization	<b>10</b>
<b>TOTAL</b>		<b>63</b>

**Year 2, Semester II**

		<b>CREDIT</b>
DAGT 641	Research Project	25
DAGT 642	Internship	15
DAGT 643	Final Research Project II	25
<b>TOTAL</b>		<b>63</b>

**BACHELOR OF BUSINESS ADMINISTRATION****Year 1, Semester I**

		<b>Credits</b>
BMH 07101	Introduction to Communication Skills	9
BMH 07102	Development Studies	9
BMH 07103	Business Mathematics	9
BMH 07104	Microeconomics	10
PSH 07101	Principles of Procurement and Management	10
HRH 07101	Principles of Management	10
MKH 07101	Principles of Marketing	10
<b>Total</b>		<b>67</b>

**Year 1, Semester II**

		<b>Credits</b>
BMH 07205	Information and Communication Technology	8
BMH 07206	Macroeconomics	9
FAH 07201	Principles of Accounting	10
FAH 07202	Cost Accounting	10
BMH 07207	Introduction to Business laws	9
MKH 07202	Theories of Entrepreneurship	9
MKH 07203	Business Communication Skills	9
<b>Total</b>		<b>64</b>

**BACHELOR OF BUSINESS ADMINISTRATION (2<sup>nd</sup> Year)****A. Bachelor of Business Administration (Procurement and Supply Chain Management) (2<sup>nd</sup> Year)****Semester I**

		<b>Credits</b>
PSH 07302	Procurement and Supply	9
PSH 07303	E-Procurement and Supply Chain Management	9
PSH 07304	Principles of Warehousing Management	10
HRH 07310	Organizational Behaviour	9
BMH 07309	Project Management	9
BMH 07310	Quantitative Techniques	9
BMH 07311	Consultancy Service Management	9
<b>Total</b>		<b>64</b>

## Year 2, Semester II

		Credits
PSH 07405	Public Procurement	10
PSH 07406	Inventory Control and Management	10
PSH 07407	Strategic Procurement	10
PSH 07408	Principles of Store Administration	9
FAH 07413	Public Sector Accounting	9
BMH 07412	Research Methodology	9
BMH 07413	Managerial Economics	9
BMH 07414	Field Practical Training I	8
<b>Total</b>		<b>64</b>

B. Bachelor of Business Administration (Marketing and Entrepreneurship) (2<sup>nd</sup> Year)

## Semester I

		Credits
MKH 07303	Small Business Management	9
MKH 07304	Sales Management	9
PSH 07303	E-Procurement and Supply Chain Management	9
BMH 07309	Project Management	9
BMH 07310	Quantitative Techniques	9
HRH 07310	Organizational Behaviour	9
BMH 07311	Consultancy Service Management	9
<b>Total</b>		<b>63</b>

## Year 2, Semester II

Course Code	Course Name	Credits
MKH 07405	E- Marketing	9
MKH 07406	Creativity and Innovation in Business	9
BMH 07412	Research Methodology	9
BMH 07413	Managerial Economics	9
HRH 07402	Production Management	9
BMH 07412	International business	9
BMH 07414	Field Practical Training	8
<b>Total</b>		<b>62</b>

**C. Bachelor of Business Administration (Human Resources Management) (2<sup>nd</sup> Year)****Year 2, Semester I**

		<b>Credits</b>
HRH 07303	Principles of Human Resource Management	<b>10</b>
HRH 07304	Human Resource Planning	9
HRH 07305	Human Resource Staffing	9
HRH 07310	Organizational Behaviour	9
BMH 07309	Project Management	9
BMH 07310	Quantitative Techniques	9
BMH 07311	Consultancy Service Management	9
<b>Total</b>		<b>64</b>

**Year 2, Semester II**

		<b>Credits</b>
HRH 07402	Production Management	9
HRH 07407	Leadership in Human Resource Management	9
HRH 07406	Human Resource Training and Development	7
HRH 07408	Career Planning and Management	9
HRH 07409	Employments and Labour Relations	8
BMH 07412	Research Methodology	9
BMH 07413	Managerial Economics	9
BMH 07414	Field Practical Training I	8
<b>Total</b>		<b>68</b>

**D. Bachelor of Business Administration (Accounting and Finance) (2<sup>nd</sup> Year)****Semester I**

		<b>Credits</b>
FAH 07303	Auditing and Assurance Services	8
FAH 07306	Contemporary Issues in Accounting	9
FAH 07307	Intermediate Financial Accounting	9
FAH 07308	Public Finance and Taxation	8
FAH 07309	Financial Management	9
BMH 07309	Project Management	9
BMH 07310	Quantitative Techniques	9
HRH 07310	Organizational Behaviour	9
<b>Total</b>		<b>70</b>

## Semester II

		Credits
FAH 07410	Advanced Accounting I	9
FAH 07411	Corporate Finance	8
FAH 07412	Advanced public Finance and Taxation	8
FAH 07413	Public Sector Accounting	9
BMH 07412	Research Methodology	9
BMH 07413	Managerial Economics	9
FAH 07405	Money and Banking	9
BMH 07414	Field Practical Training I	8
<b>Total</b>		<b>69</b>

BACHELOR OF BUSINESS ADMINISTRATION (3<sup>rd</sup> Year)A. Bachelor of Business Administration (Accounting and Finance) (3<sup>rd</sup> Year)

## Semester I

		Credits
BMB 08116	Research Project I	15
BMB 08115	Research Project II	15
BMB 08118	Field Practical Training	30
<b>TOTAL</b>		<b>60</b>

## Semester II

		Credits
FAB 08215	Accounting and Soft ware Accounting	9
FAB 08216	Advanced Accounting II	9
HRB 08217	Micro Finance Management	9
FAB 08218	Management Accounting	9
FAB 08219	International Finance	9
FAB 08220	Auditing and Assurance Services	9
MKB 08210	International Business Management	9
BMB 08215	Strategic Management	10
BMB 08214	Management Information System	9
<b>TOTAL</b>		<b>82</b>

B. Bachelor of Business Administration (Procurement and Supply Chain Management) (3<sup>rd</sup> Year)

**Semester I**

		<b>Credits</b>
BMB 08116	Research Project I	15
BMB 08118	Field Practical Training	30
BMB 08115	Research Project II	15
<b>TOTAL</b>		<b>60</b>

**Semester II**

		<b>Credits</b>
PSB 08209	Strategic Supply Chain Management	9
PSB 08210	International Procurement	8
PSB 08211	Procurement and Supply Audit	9
PSB 08212	Procurement Contract Management	9
PSB 08213	Legal Aspect of Procurement	9
BMB 08217	Risk Management	10
PSB 08214	Principles of Clearing and Forwarding	9
FAB 08218	Management Accounting	9
<b>TOTAL</b>		<b>72</b>

**C. Bachelor of Business Administration (Marketing and Entrepreneurship) (3<sup>rd</sup> year)****Semester I**

		<b>Credits</b>
BMB 08116	Research Project I	15
BMB 08118	Field Practical Training	30
BMB 08115	Research Project II	15
<b>TOTAL</b>		<b>60</b>

**Semester II**

		<b>Credits</b>
MKB 08207	Service Marketing	9
MKB 08208	Consumer Behaviour	9
MKB 08209	Marketing Research	9
MKB 08212	Consumer Marketing and Brand Management	9
MKB 08211	Strategic Marketing	9
MKB 08210	International Business Management	9
FAB 08218	Management Accounting	9
BMB 08217	Risk Management	10
<b>TOTAL</b>		<b>73</b>

<b>A. Bachelor of Business Administration (Human Resource Management) (3rd Year)</b>		
<b>Semester I</b>		
BMB 08116	Research Project I	15
BMB 08118	Field Practical Training	30
BMB 08115	Research Project II	15
<b>TOTAL</b>		<b>60</b>

**Semester II**

		<b>Credits</b>
HRB 08210	Occupation Health and Safety	8
HRB 08211	Employments and Labour Laws	9
HRB 08212	Human Resources Management Information Systems	9
HRB 08213	Compensation and Performance Management	8
HRB 08215	Strategic Management	10
FAB 08218	Management Accounting	9
BMB 08217	Risk Management	9
<b>TOTAL</b>		<b>62</b>

**BACHELOR OF AGRIBUSINESS MANAGEMENT AND TECHNOLOGY****A. Bachelor of Agribusiness Management and Technology (1<sup>st</sup> Year)****Semester I**

		<b>Credit</b>
HS 8101	Communication Skills	9
DS 8108	Development Studies	9
AG 8104	Principles of Agricultural Economics	9
MS 8128	Business Mathematics and Statistics	7
AG 8101	Introduction to Agribusiness	10.5
AS 8109	Food and Nutrition Security	9
AG 8103	Elementary Agro-entrepreneurship	10.5
<b>TOTAL</b>		<b>64</b>

**Semester II**

		<b>Credit</b>
IT 8115	Information and Communication Technology	7.5
AG 8107	Contemporary Agriculture	9
BM 8104	Principles of Accounting	9
AG 8110	Crop Production and Marketing Technology	9
BM 8106	Theories of Entrepreneurship	9
AG 8105	Emerging Agricultural Technologies	6
DS 8101	Development Perspectives	6
AG 8106	Field Practical Training 1	10
<b>TOTAL</b>		<b>65.5</b>

**B. Bachelor of Agribusiness Management and Technology (2<sup>nd</sup> Year)****Semester I**

		<b>Credits</b>
BM 8201	Procurement Principles and Management	9
BM 8202	Organizational Behaviour	7
DS 8110	Project Management, Monitoring and Evaluation	9
BM 8203	Quantitative Techniques	9
AG 8203	Livestock Production Technology	9
AG 8201	Agricultural Food Marketing	9
AG 8202	Agricultural Environment and Community Development	9
BM 8209	Cost Accounting	9
<b>TOTAL</b>		<b>70</b>

**Semester II**

		<b>Credit</b>
AG 8205	Horticulture Production and Marketing Technology	10.5
AG 8206	Agricultural Finance and Credit Management	9
AG 8207	Fisheries Production and Marketing Technology	10.5
AG 8208	Extension Methods	9
BM 8207	Financial Management	9
BM 8206	Research Methodology	9
BM 8209	Cost Accounting	9
<b>TOTAL</b>		<b>66</b>

C. Bachelor of Agribusiness Management and Technology (3<sup>rd</sup> Year)

## Semester I

Course Code	Course Name	Credits
AG 8301	Research Project I	15
AG 8302	Research Project II	15
AG 8303	Field Practical Training	30
<b>TOTAL</b>		<b>60</b>

## Semester II

		Credits
BM 8301	Risk Management	9
AG 8308	Agricultural Price Analysis	10
AG 8307	Livestock Products Processing and Marketing Technologies	10
AG 8304	Agro-Post Harvest Technologies	10
AG 8305	Contract Farming and Management	7
AG 8306	International Agricultural Trade Management	7
BM 8302	Strategic Management	7
<b>TOTAL</b>		<b>60</b>

## 8.5.2 DEPARTMENT OF HUMANITIES

### 8.5.2.1 LIST OF STAFF

#### *(Head of Department)*

\*Ms. Patricia Fela Muraguri MA-Linguistics-UDSM, BED-English and Literature-KU

#### **Assistant Lecturers**

Ms. Patricia Fela Muraguri MA-Linguistics-UDSM, BED-English and Literature-KU

\*Mr. Peter C. Majura MA-Linguistics (UDOM), BAED-English and Geography (UoA), Diploma-Education (Butimba TTC)

\*Ms. Neema Kibona MA-Linguistics (TEKU), BEL-English and Kiswahili (TEKU), Diploma-Education (Morogoro TTC)

Mr. Stephen Nsyengula MA-Linguistics (UDOM), BAED-Linguistics and Literature (UDSM), Diploma-Education (Mkwawa TTC)

\*Mr. Noel Richard Mwegoha MA-Linguistics (RUCO), BAED-English and Kiswahili (RUCO), Certificate-Education (Tandala TTC)

Mr. Joel Wang'uba PGD-Education (UDOM), BA-English (UDOM)

Mr. Emmanuel Haule Master of Arts – Linguistics (SAUT), BED- English (MMU)

Ms. Anna Yassin Master of Public Relations and Media Management (Canvedish University), Bachelor of Mass Communication (KIU)

#### **Tutorial Assistant**

\*Mr. Raytoni Songa BAED-Language and Literature (UDSM)

*\*On Studies*

## 8.6 MUST RUKWA CAMPUS COLLEGE (MRCC)

### 8.6.1 DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING

#### Programmes

The department offers two (2) programmes;

- i. Diploma in Mechanical Engineering
- ii. Bachelor of Mechanical Engineering

#### 8.6.1.1 LABORATORIES AND WORKSHOPS

- i. Machine Shop
- ii. Automotive Workshop
- iii. Welding Workshop
- iv. Computer Laboratory

#### 8.6.1.2 LIST OF STAFF

##### (Head of Department)

Dr. Joachim J. Mwambeleko                      PhD in Electrical Engineering (SUT – Thailand), M.Eng. in Electrical Engineering (SUT- Thailand), B.Sc. in Electrical Engineering (SAUT-Mwanza)

##### Associate Professors

Prof. Osmund K. Kaunde                      PhD (Leeds), MSc. (Leeds) BSc. (UDSM)

##### Lecturers

Dr. Joachim J. Mwambeleko                      PhD in Electrical Engineering (SUT – Thailand), M. Eng (SUT- Thailand), B.Sc in Electrical Engineering (SAUT-Mwanza)

##### Assistant Lecturers

Mr. Joram L. Ngilangwa\*                      MSc. Prod. Eng. (UDSM), BSc. Mech. Eng. (UDSM), FTC Mech. Eng. (MTC).

Mr. Nyanda M. Malashi\*                      MSc. Material Science and Eng. (NM-AIST).B. Eng. Mech. (MUST),

Mr. Alex S. Mwalyego\*                      M.Sc. in Mathematical Modelling (UDSM), B.Sc Maths & Statistics (UDSM)

Mr. Widson K.Mwasenga                      M. Tech. in Alternate Hydro Energy Systems (IITR - India), B.Eng. in Mech. (MUST), FTC. Mech. Eng. (MTC)

##### Tutorial Assistants

Mr. Joseph B. Matwani                      B.Eng. in Electrical Engineering (MUST), FTC Electrical Eng. (MTC)

Mr. Peter C. Leiya*	B.Sc. in Geomatics ((UDSM (UCLAS))
Mr. Mathew M. Mbaule	PGDE Mech.Eng. (UDSM), ADE Mech. Eng (MIST), FTC Mech. Eng. (MTC)
Mr. Nyamwaga M. Kaare*	B.Sc. in Computer Science (St. Joseph University in Tanzania)
Mr. Emmanuel G. Lema	B.Eng. in Mech. Eng (MUST)
Mr, Emmanuel J. Ndunguru	B.Eng. in Mech. Eng (MUST)
Mr. Hussein A. Mlonja*	B.Eng. in Mech. Eng (DIT)
Mr. Sabatho D. Ghibaka	BEd. in Mathematics (TUMa)

**Instructors**

Mr. Baraka F. Kilave	Dip. Mech. Eng (NIT)
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**Technicians**

Mr. Mosses D. Mazengo*	B.Eng. in Civil Engineering (MUST), FTC Civil. Eng. (ATC).
Mr. Fredrick Y. Maula	Dip. Mech Eng (MIST)

*\*On study leave*

## 8.6.1.3 PROGRAMME COURSES

## DIPOMA IN MECHANICAL ENGINEERING

A. Diploma in Mechanical Engineering (1<sup>st</sup> Year)

## Semester I

Code	Name	Credit
ME 6116	Engineering Drawing I	8
ME 6117	Engineering Materials I	7
ME 6118	Automotive Technology I	8
ME 6119	Manufacturing Engineering I	9
IT 6117	Fundamental Computer Application	6
HS 6116	Elements of Development Studies	6
HS 6117	Communication Skills I	6
NS 6139	Applied Physics I	6
MS 6123	Applied Mathematics I	6
<b>TOTAL</b>		<b>62</b>

## Semester II

Code	Name	Credit
ME 6120	Engineering Drawing II	9
ME 6121	Engineering Materials II	7
ME 6122	Automotive Technology II	9
ME 6123	Manufacturing Engineering II	9
ME 6124	Mechanical Engineering Science I	6
CS 6124	Computer programming	6
BM 6122	Entrepreneurship	6
NS 6144	Applied Physics II	6
MS 6124	Applied Mathematics II	6
<b>TOTAL</b>		<b>64</b>

B. Diploma in Mechanical Engineering (2<sup>nd</sup> Year)

## Semester 1

Code	Name	Credit
ME 6201	Computer Aided Drafting I	8
ME 6202	Strength of Materials	6
ME 6203	Automotive Technology III	9
ME 6204	Manufacturing Engineering III	9
ME 6205	Thermodynamics	6
ME 6206	Mechanical Engineering Science II	6
ME 6207	Engineering Measurement and Control	6
MS 6222	Applied Mathematics III	6

ME 6208	Industrial Practical Training I	10
	<b>TOTAL</b>	<b>66</b>

**Semester II**

Code	Name	Credit
ME 6209	Computer Aided Drafting II	9
ME 6210	Auto Electrical Systems	9
ME 6211	Manufacturing Engineering IV	9
ME 6212	Machine Elements and Design I	6
ME 6213	Fluids Mechanics	6
ME 6214	Fundamental of Programmable Logic Controllers	7
EE 6270	Electrical Engineering Science	6
EE 6271	Basic Electronics	6
MS 6223	Applied Mathematics IV	6
<b>TOTAL</b>		<b>64</b>

**C. Diploma in Mechanical Engineering (3<sup>rd</sup> Year)****Semester I**

Code	Name	Credit
ME 6301	Machine Elements and Design II	6
ME 6302	Power plant I	6
ME 6303	Refrigeration	9
ME 6304	Environment Management	6
ME 6305	Mechatronics Technology	7
ME 6306	Fundamental of Research Methodology	6
MS 6322	Boolean Algebra and Statistics	6
ME 6307	Mechanical Project I	10
ME 6308	Industrial Practical Training II	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

Code	Name	Credit
ME 6309	Machine Elements and Design III	6
ME 6310	Power plant II	6
ME 6311	Air Conditioning	9
ME 6312	Computer Based Manufacturing	9
ME 6313	Workshop Management	6
ME 6314	Industrial Safety and Maintenance	6
ME 6315	Hydraulic and Pneumatic systems	7
ME 6316	Quality Control and Costing Management	7

ME 6317	Mechanical Project II	10
<b>TOTAL</b>		<b>66</b>

### BACHELOR OF MECHANICAL ENGINEERING

#### A. Bachelor of Mechanical Engineering (1<sup>st</sup> Year)

##### Semester 1

Code	Name	Credits
ME8101	Engineering Drawing I	7
ME8102	Engineering Materials	6
ME 8103	Strength of Materials I	6
ME8104	Manufacturing Engineering I	8
ME 8105	Automotive Engineering I	8
BM 8108	Entrepreneurship	6
IT 8116	Computer Applications	7
MS 8117	Engineering Mathematics I	6
HS 8101	Communication Skills	6
DS 8101	Development Studies	6
<b>TOTAL</b>		<b>66</b>

##### Semester II

Code	Name	Credits
ME8107	Engineering Drawing II	9
ME8108	Machine Elements and Design I	6
ME8109	Manufacturing Engineering II	10
ME8110	Strength of Materials II	6
ME 8111	Automotive Engineering II	10
ME 8112	Power Production	6
DS 8108	Development Perspectives	6
ME 8106	Environmental Engineering	6
MS 8102	Engineering Mathematics II	6
<b>TOTAL</b>		<b>65</b>

#### B. Bachelor of Mechanical Engineering (2<sup>nd</sup> Year)

##### Semester 1

Code	Name	Credits
ME8201	Computer Aided Drafting I	9
ME8202	Mechanics of Machines	6
ME8203	Engineering Thermodynamics	7
ME8204	Machine Elements and Design II	6
ME 8209	Strength of Materials III	6

ME8205	Manufacturing Engineering III	10
EE 8240	Fundamental of Electrical Engineering	6
MS8203	Engineering Mathematics III	6
ME8206	Industrial Practical Training I	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME 8207	Computer Aided Drafting II	9
ME 8208	Machine Elements and Design III	6
ME 8210	Materials Technology	7
ME 8211	Fluid Mechanics	6
ME 8212	Mechatronics	6
ME 8213	Industrial Management	6
EE 8241	Electrical Machines I	7
CS 8200	Computer Programming	7
IT 8217	Computer Networking	6
MS 8217	Statistics and Numerical analysis	6
<b>TOTAL</b>		<b>66</b>

**C. Bachelor of Mechanical Engineering (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME 8301	Systems Reliability and Plant Maintenance	6
ME 8302	Dynamics of Mechanical Structures	6
ME 8303	Engineering Design	6
ME 8304	Industrial Energy Management	6
ME 8305	Metal cutting and Machines Processes	8
ME 8306	Research Methodology	7
EE 8340	Electrical Machines II	7
ME 8307	Mini Project I	10
ME 8308	Industrial Practical Training II	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME 8309	Renewable Energy Technologies	6
ME 8310	Industrial Automation	7
ME 8311	Engineering Economics	8

ME 8312	Control Systems Engineering	6
ME 8313	Computer Aided Engineering (CAE)	8
ME 8314	Engineering Operations Management	6
ME 8315	Heat Transfer	6
CS 8315	Data Structure and Algorithms	6
ME 8316	Mini Project II	10
<b>TOTAL</b>		<b>63</b>

**D. Bachelor of Mechanical Engineering (4<sup>th</sup> Year)**

**Semester 1**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME 8401	Fluid Power and Control	6
ME 8402	Power Plants	6
ME 8403	Material Handling Design	6
ME 8404	Turbo Machinery	6
ME 8405	Production Engineering	7
ME 8406	Refrigeration System	8
CS 8406	Object Oriented Programming	7
ME 8407	Senior Project I	10
ME 8408	Industrial Practical Training III	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credits</b>
ME 8409	Quality Assurance and Control	6
ME 8410	Engineering Ethics and Professional Conduct	6
ME 8411	Automation and Robotics	7
ME 8412	Engine Design Technology	6
ME 8413	Foundry Technology	9
ME 8414	Air Conditioning System	8
ME 8415	Computer Aided Manufacturing (CAM)	7
ME 8416	Industrial Supervisor Skill and leadership	6
ME 8417	Senior Project II	10
<b>TOTAL</b>		<b>65</b>



## 8.6.2.2 PROGRAMME COURSES

## CERTIFICATE IN BUSINESS ADMINISTRATION

## A. Certificate in Business Administration

## Semester I

		CREDITS
MS 6125	Introductory Business Mathematics	10
BM 6102	Records Management	10
BM 6103	Elementary economics	10
HS 6101	Basic Communication Skills	10
IT 6101	Basic Computer skills	10
BM 6104	Basic procurement and supply	10
<b>TOTAL</b>		<b>60</b>

## Semester II

		CREDITS
BM 6105	Basics of Entrepreneurship	10
BM 6106	Basics of Service Marketing	10
BM 6107	Elements of Commerce	10
BM 6108	Principles of Salesmanship	10
BM 6109	Basic of Booking keeping	10
BM 6110	Basics of Customer Care and Public Relation	10
BM 6111	Basics of Consumer Behaviour	10
<b>TOTAL</b>		<b>70</b>

**DIPLOMA IN BUSINESS ADMINISTRATION****C. Diploma in Business Administration (1<sup>st</sup> Year)****Semester I**

		<b>CREDITS</b>
BM 6116	Small Business Management	<b>9</b>
BM 6117	Basics of Management Principles	<b>9</b>
BM 6118	Basics of Financial Accounting	<b>10</b>
IT 6118	Information and Computer Technology	<b>10</b>
BM 6119	Basics of Quantitative Techniques	<b>10</b>
BM 6120	Principles of Procurement and Supply	<b>9</b>
HS 6116	Elements of Development Studies	<b>10</b>
<b>TOTAL</b>		<b>67</b>

**Semester II**

		<b>CREDITS</b>
BM 6122	<b>Entrepreneurship</b>	<b>10</b>
BM 6123	Elements of Strategic Management	<b>10</b>
BM 6124	Basics of Business Law and Ethics	<b>10</b>
BM 6125	Basics of Consumer Behaviors	<b>9</b>
BM 6126	Elementary Economics	<b>9</b>
HS 6117	Business Communication	<b>10</b>
BM 6127	Field Practice	<b>10</b>
<b>TOTAL</b>		<b>68</b>

**D. Diploma in Business Administration (2<sup>nd</sup> Year)****Semester I**

		<b>CREDITS</b>
BM 6201	Freight Clearing and Forwarding	<b>9</b>
BM 6202	Principles of Marketing	<b>9</b>
BM 6203	Elementary Production Management	<b>12</b>
BM 6204	Customer Care and Public Relation	<b>10</b>
BM 6205	Basics of Research Methodology	<b>10</b>
BM 6206	Basics of Logistics and Transportation	<b>12</b>
<b>TOTAL</b>		<b>62</b>

**Semester II**

		<b>CREDITS</b>
BM 6207	Basics of Financial Management	10
BM 6208	Business Environment	10
BM 6209	Basics of Taxation	10
BM 6210	Sales Management	9
BM 6211	Basics of Human Resources Management	10
BM 6212	Research Project	12
<b>TOTAL</b>		<b>61</b>

**Option Courses**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
BM 6213	International finance	10
BM 6214	Basics of supervisory skills	10
<b>TOTAL</b>		

**DIPLOMA IN AGRIBUSINESS WITH TECHNOLOGY****First year, Semester I**

<b>Module Code</b>	<b>MODULE NAME</b>	<b>CREDIT</b>
DAGT 611	Horticulture Production	12
DAGT 612	Crop Post Harvest Handling and Management Technologies	12
DAGT 613	Agribusiness Marketing	10
DAGT 614	Livestock Technology	12
DAGT 615	Principles of Bookkeeping and Accounting	10
DAGT 616	Bee Production and Product Processing	10
DAGT 617	Information and Computer Technology	10
<b>TOTAL</b>		<b>76</b>

**Year 1, Semester II**

<b>Module Code</b>	<b>MODULE NAME</b>	<b>CREDIT</b>
DAGT 621	Applied Mathematics	10
DAGT 622	Business Communication Skills	9
DAGT 623	Entrepreneurship	10
DAGT 624	Risks Management	10
DAGT 625	Research Methodology	10
DAGT 626	Field Practical Training	12
<b>TOTAL</b>		<b>61</b>

## Year 2, Semester I

Module Code	MODULE NAME	CREDIT
DAGT 631	Principles of Agribusiness Management	12
DAGT 632	Fundamentals of Financial Management	12
DAGT 633	Agribusiness Project Management	9
DAGT 634	Creativity and Innovation in Business	10
DAGT 635	Agrarian Change and Development	10
DAGT 636	Agribusiness Ethics and Formalization	10
<b>TOTAL</b>		<b>63</b>

## Year 2, Semester II

Module Code	MODULE NAME	CREDIT
DAGT 641	Research Project	25
DAGT 642	Internship	15
DAGT 643	Final Research Project II	25
<b>TOTAL</b>		<b>63</b>

## BACHELOR OF BUSINESS ADMINISTRATION

## Year 1, Semester I

		Credits
BMH 07101	Introduction to Communication Skills	9
BMH 07102	Development Studies	9
BMH 07103	Business Mathematics	9
BMH 07104	Microeconomics	10
PSH 07101	Principles of Procurement and Management	10
HRH 07101	Principles of Management	10
MKH 07101	Principles of Marketing	10
<b>Total</b>		<b>67</b>

## Year 1, Semester II

		Credits
BMH 07205	Information and Communication Technology	8
BMH 07206	Macroeconomics	9
FAH 07201	Principles of Accounting	10
FAH 07202	Cost Accounting	10
BMH 07207	Introduction to Business laws	9
MKH 07202	Theories of Entrepreneurship	9
MKH 07203	Business Communication Skills	9
<b>Total</b>		<b>64</b>

**BACHELOR OF BUSINESS ADMINISTRATION (2<sup>nd</sup> Year)****A. Bachelor of Business Administration (Procurement and Supply Chain Management) (2<sup>nd</sup> Year)****Semester I**

		<b>Credits</b>
PSH 07302	Procurement and Supply	9
PSH 07303	E-Procurement and Supply Chain Management	9
PSH 07304	Principles of Warehousing Management	10
HRH 07310	Organizational Behaviour	9
BMH 07309	Project Management	9
BMH 07310	Quantitative Techniques	9
BMH 07311	Consultancy Service Management	9
<b>Total</b>		<b>64</b>

**Year 2, Semester II**

		<b>Credits</b>
PSH 07405	Public Procurement	10
PSH 07406	Inventory Control and Management	10
PSH 07407	Strategic Procurement	10
PSH 07408	Principles of Store Administration	9
FAH 07413	Public Sector Accounting	9
BMH 07412	Research Methodology	9
BMH 07413	Managerial Economics	9
BMH 07414	Field Practical Training I	8
<b>Total</b>		<b>64</b>

**B. Bachelor of Business Administration (Marketing and Entrepreneurship) (2<sup>nd</sup> Year)****Semester I**

		<b>Credits</b>
MKH 07303	Small Business Management	9
MKH 07304	Sales Management	9
PSH 07303	E-Procurement and Supply Chain Management	9
BMH 07309	Project Management	9
BMH 07310	Quantitative Techniques	9
HRH 07310	Organizational Behaviour	9
BMH 07311	Consultancy Service Management	9
<b>Total</b>		<b>63</b>

## Semester II

Course Code	Course Name	Credits
MKH 07405	E- Marketing	9
MKH 07406	Creativity and Innovation in Business	9
BMH 07412	Research Methodology	9
BMH 07413	Managerial Economics	9
HRH 07402	Production Management	9
BMH 07412	International business	9
BMH 07414	Field Practical Training	8
<b>Total</b>		<b>62</b>

C. Bachelor of Business Administration (Human Resources Management) (2<sup>nd</sup> Year)

## Semester I

		Credits
HRH 07303	Principles of Human Resource Management	10
HRH 07304	Human Resource Planning	9
HRH 07305	Human Resource Staffing	9
HRH 07310	Organizational Behaviour	9
BMH 07309	Project Management	9
BMH 07310	Quantitative Techniques	9
BMH 07311	Consultancy Service Management	9
<b>Total</b>		<b>64</b>

## Year 2, Semester II

		Credits
HRH 07402	Production Management	9
HRH 07407	Leadership in Human Resource Management	9
HRH 07406	Human Resource Training and Development	7
HRH 07408	Career Planning and Management	9
HRH 07409	Employments and Labour Relations	8
BMH 07412	Research Methodology	9
BMH 07413	Managerial Economics	9
BMH 07414	Field Practical Training I	8
<b>Total</b>		<b>68</b>

**D. Bachelor of Business Administration (Accounting and Finance) (2<sup>nd</sup> Year)****Semester I**

		<b>Credits</b>
FAH 07303	Auditing and Assurance Services	8
FAH 07306	Contemporary Issues in Accounting	9
FAH 07307	Intermediate Financial Accounting	9
FAH 07308	Public Finance and Taxation	8
FAH 07309	Financial Management	9
BMH 07309	Project Management	9
BMH 07310	Quantitative Techniques	9
HRH 07310	Organizational Behaviour	9
<b>Total</b>		<b>70</b>

**Semester II**

		<b>Credits</b>
FAH 07410	Advanced Accounting I	9
FAH 07411	Corporate Finance	8
FAH 07412	Advanced public Finance and Taxation	8
FAH 07413	Public Sector Accounting	9
BMH 07412	Research Methodology	9
BMH 07413	Managerial Economics	9
FAH 07405	Money and Banking	9
BMH 07414	Field Practical Training I	8
<b>Total</b>		<b>69</b>

**BACHELOR OF BUSINESS ADMINISTRATION (3<sup>rd</sup> Year)****A. Bachelor of Business Administration (Accounting and Finance) (3<sup>rd</sup> Year)****Semester I**

		<b>Credits</b>
BMB 08116	Research Project I	15
BMB 08115	Research Project II	15
BMB 08118	Field Practical Training	30
<b>TOTAL</b>		<b>60</b>

**Semester II**

		Credits
FAB 08215	Accounting and Soft ware Accounting	9
FAB 08216	Advanced Accounting II	9
HRB 08217	Micro Finance Management	9
FAB 08218	Management Accounting	9
FAB 08219	International Finance	9
FAB 08220	Auditing and Assurance Services	9
MKB 08210	International Business Management	9
BMB 08215	Strategic Management	10
BMB 08214	Management Information System	9
<b>TOTAL</b>		<b>82</b>

**B. Bachelor of Business Administration (Procurement and Supply Chain Management) (3<sup>rd</sup> Year)****Semester I**

		Credits
BMB 08116	Research Project I	15
BMB 08118	Field Practical Training	30
BMB 08115	Research Project II	15
<b>TOTAL</b>		<b>60</b>

**Year 3, Semester II**

		Credits
PSB 08209	Strategic Supply Chain Management	9
PSB 08210	International Procurement	8
PSB 08211	Procurement and Supply Audit	9
PSB 08212	Procurement Contract Management	9
PSB 08213	Legal Aspect of Procurement	9
BMB 08217	Risk Management	10
PSB 08214	Principles of Clearing and Forwarding	9
FAB 08218	Management Accounting	9
<b>TOTAL</b>		<b>72</b>

**C. Bachelor of Business Administration (Marketing and Entrepreneurship) (3<sup>rd</sup> year)****Semester I**

		Credits
BMB 08116	Research Project I	15
BMB 08118	Field Practical Training	30
BMB 08115	Research Project II	15
<b>TOTAL</b>		<b>60</b>

**Semester II**

		<b>Credits</b>
MKB 08207	Service Marketing	9
MKB 08208	Consumer Behaviour	9
MKB 08209	Marketing Research	9
MKB 08212	Consumer Marketing and Brand Management	9
MKB 08211	Strategic Marketing	9
MKB 08210	International Business Management	9
FAB 08218	Management Accounting	9
BMB 08217	Risk Management	10
<b>TOTAL</b>		<b>73</b>

**D. Bachelor of Business Administration (Human Resource Management) (3<sup>rd</sup> Year)****Semester I**

		<b>Credits</b>
BMB 08116	Research Project I	15
BMB 08118	Field Practical Training	30
BMB 08115	Research Project II	15
<b>TOTAL</b>		<b>60</b>

**Semester II**

		<b>Credits</b>
HRB 08210	Occupation Health and Safety	8
HRB 08211	Employments and Labour Laws	9
HRB 08212	Human Resources Management Information Systems	9
HRB 08213	Compensation and Performance Management	8
HRB 08215	Strategic Management	10
FAB 08218	Management Accounting	9
BMB 08217	Risk Management	9
<b>TOTAL</b>		<b>62</b>



	Science and Technology (SUA)
Ms. Buzo H. Maige	MSc. Food Science (Makerere Univ.), BSc. Food Science and Technology (SUA)
Mr. Chacha Nyangi	MSc. Food Science (SUA), BSc. Food Science and Technology (SUA)*
Mr. Frank M. Kaseka	MSc. Food Science (SUA), BSc. Food Science and Technology (SUA)*
Mr. Fred Mwabulili:	MSc. Food Quality Management (Wageningen University), BSc. Food Science and Technology (SUA) *
Mr. Tumaini K. Marango	MSc. Food Quality Management (Wageningen University), BSc. Food Science and Technology (SUA)
Ms. Lilian S. Maro	MSc. Food Safety (Wageningen University), BSc. Food Science and Technology (SUA)
Ms. Amina M. Ahmed	MSc. Food Science (BSc. Food Science and Technology (SUA) *)
Mr. Arthur B. Mhauka	MSc. Public Health & Food Safety (SUA), BSc. Food Science and Technology (SUA), Diploma in Environmental Health Sciences (UDSM)
Ms. Naelijwa Mshanga	MSc. Food Biotechnology & Nutritional Sci (NM-AIST), BSc Human Nutrition (SUA)*
Ms. Zerida Samwel	MSc. Human Nutrition, (SUA), BSc. Home Economics & Human Nutrition (SUA)
	Msc. Food Technology (CAN THO University) BSc. Food Science and Technology (SUA)
<b>Tutorial Assistants</b>	
Mr. Elisha Ezekiel Ntumbo	BSc. Food Science and Technology (SUA)
Mr. Warren Henry Kilemile	BSc. Food Science and Technology (SUA)
<b>Instructors</b>	
Ms. Prisca Siyame	MSc Life Sciences (Food and Nutritional Sciences) (NM-AIST), BSc. Food Science and Technology (SUA).
Mr. John Emmanuel	BSc. Food Science and Technology (SUA)
<b>Technicians</b>	
Mr. Charles E. Chekecha	BSc. Lab Tech. (SUA), FTC Science and Lab. (DIT)
Mr. Moses Musa	Diploma in Food Science and Technology (MUST)*

*\*Study leave*

## 8.7.1.3 PROGRAMME COURSES

## DIPLOMA IN FOOD SCIENCE AND TECHNOLOGY

A. Diploma in Food Science and Technology (1<sup>st</sup> Year)

## Semester I

Code	Name	Credit
AS 6116	Introduction to Food Science	10
AS 6117	Principles of Preservation	12
AS 6118	Introduction to Biochemistry	10
AS 6119	Introduction to Microbiology	12
IT 6117	Fundamentals of Computer Application	6
MS 6130	Algebra for Laboratory and Food Science	10
<b>TOTAL</b>		<b>60</b>

## Semester II

Code	Name	Credit
AS 6122	Food Microbiology	10
AS 6123	Material Science and Food Packing	10
AS 6124	Basic Food and Engineering	10
AS 6125	Food Biochemistry	10
HS 6117	Communication Skills	10
BM 6122	Entrepreneurship	10
MS 131	Basics of Calculus	12
<b>TOTAL</b>		<b>72</b>

**B. Diploma in Food Science and Technology (2<sup>nd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
AS 6201	Food Chemistry	12
AS 6202	Introduction to Biotechnology	12
AS 6203	Principles of Human Nutrition	10
AS 6204	Basic Food Instrumentation	10
AS 6205	Plant Layout and Equipment Maintenance	12
ST 6222	Applied Statistics	10
<b>TOTAL</b>		<b>66</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
AS 6206	Food Analysis	10
AS 6207	Cereal and Legume Processing Technology	12
AS 6208	Food Contaminant and Hygiene	8
AS 6209	Food Research Methods	9
NS 6136	Industrial Practical Training (IPT)	10
NS 6136	Analytical Chemistry	11
<b>TOTAL</b>		<b>60</b>

**C. Diploma in Food Science and Technology (3<sup>rd</sup> Year)****Semester I**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
AS 6301	Food and Nutrition Security	10
AS 6302	Sensory Evaluation of Foods	10
AS 6303	Food Engineering Operations	12
AS 6304	Beverage Technology	10
AS 6305	Meat Science and Technology	10
AS 6306	Dairy Technology	8
AS 6307	Project I	8
<b>TOTAL</b>		<b>68</b>

**Semester II**

<b>Code</b>	<b>Name</b>	<b>Credit</b>
AS 6308	Fish and Marine Products Technology	9
AS 6309	Food Biotechnology	10
AS 6310	Food Safety and Quality Management	12
AS 6311	Pilot Plant Processes	9
AS 6312	Project II	10
AS 6313	Industrial Practical Training (IPT)	10
<b>TOTAL</b>		<b>60</b>

**BACHELOER OF SCIENCE IN FOOD SCIENCE AND TECHNOLOGY****A. Bachelor Science in Food Science and Technology (1st Year)****Semester I**

<b>Code</b>	<b>Course name</b>	<b>Credits</b>
NS 8126	General Chemistry	12
MS 8124	Algebra and Calculus	8
NS 8127	Physics	9
HS 8101	Communication Skills	8
DS 8108	Development Perspectives	6
CS 8104	Programming Concepts	9
AS 8101	Introductory Food Science	8
AS 8102	Technical Drawing	8
<b>TOTAL</b>		<b>68</b>

**Semester II**

<b>Code</b>	<b>Course name</b>	<b>Credits</b>
ST 8123	Introductory Statistics	10
AS 8103	General Microbiology	8
AS 8104	Food Processing and Preservation	12
AS 8105	Physico-Chemistry of Food	11
AS 8106	Principles of Food Engineering	11
AS 8107	Principles of Animal and Crop Production	11
AS 8108	Instrumental Methods of Food Analysis	8
AS 8109	Food Entrepreneurship	8
<b>TOTAL</b>		<b>79</b>

**B. Bachelor Science in Food Science and Technology (2nd Year)****Semester I**

<b>Code</b>	<b>Course name</b>	<b>Credits</b>
ST 8222	Biometry	9
AS 8201	Food Biochemistry	8
AS 8202	Food Microbiology	8
AS 8203	Food Process Engineering - I	12
AS 8204	Plant Layout, Processes and Design	12
AS 8205	Technology of Beef, Poultry and Eggs	11
AS 8206	Cereals and Pulse Processing Technology	10
AS 8207	Principles of Human Nutrition	10
<b>TOTAL</b>		<b>80</b>

**Semester II**

<b>Code</b>	<b>Course name</b>	<b>Credits</b>
AS 8208	Technology of Fish and Marine Food products	12
AS 8209	Food Research Methods	8
AS 8210	Food Process Engineering - II	12
AS 8211	Sugarcane Processing and Sugar Technology	10
AS 8212	Industrial Practical Training - I	12
AS 8213	Beverage Technology	8
AS 8214	Postharvest Handling of Perishable Crops	12
AS 8215	Dairy Technology	10
<b>TOTAL</b>		<b>84</b>

**B. Bachelor Science in Food Science and Technology (3rd Year)****Semester I**

<b>Code</b>	<b>Course name</b>	<b>Credits</b>
AS 8301	Plantation Products and Spices Technology	9
AS 8302	Food Product Development	12
AS 8303	Food Biotechnology	8
AS 8304	Food Hygiene	7
AS 8305	Food Safety and Quality Management	12
AS 8306	Food Chemistry and Analysis	11
AS 8307	Food Project - I	12
<b>TOTAL</b>		<b>71</b>

## Semester II

Code	Course name	Credits
AS 8308	Food Packaging	12
AS 8309	Food Sensory Evaluation	8
AS 8310	Food Project - II	12
AS 8311	Industrial Practical Training - II	12
AS 8312	Agro-Food Economics and Marketing	8
AS 8313	Technology of Oils and Fats	10
AS 8314	Postharvest Handling of Non-Perishable Crops	11
<b>TOTAL</b>		<b>73</b>

## 8.7.2 THE DEPARTMENT OF CROP SCIENCE AND HORTICULTURE

### 8.7.2.1 LABORATORIES

None

### 8.7.2.2 LIST OF STAFF

#### (Head of Department)

Dr. Marco E. Mng'ong'o  
PhD in Sustainable Agriculture (NM-AIST), MSc. Soil Sciences (Ghent University, Belgium), BSc. Agriculture General (SUA)

#### Lecturers

Dr. Marco E. Mng'ong'o  
PhD in Sustainable Agriculture (NM-AIST), MSc. Soil Sciences (Ghent University, Belgium), BSc. Agriculture General (SUA)

#### Assistant Lecturers

Mr. Abubakar M. Mshora  
MSc. Horticulture (Punjab University, India), BSc. Agriculture General (SUA)

Ms. Rehema E. Mwaipopo  
MSc. Crop Science (SUA), BSc. Horticulture (SUA)

Mr. Selema S. Shimo  
MSc. Agricultural Biotechnology (Hungarian University of Agriculture and Life Sciences, Hungary), BSc. Science with education (UDSM)

#### Tutorial Assistants

Mr. Edwin Wanyato  
BSc. Agriculture General (SUA),

Mr. Absolam Komanya  
BSc. Animal Science (SUA)

Mr. Christopher C. Msigwa\*  
BSc. Agriculture General (SUA)

*\*Study leave*

## 8.8 DIRECTORATE OF LIBRARY SERVICES (DLS)

### 8.8.1 DEPARTMENT OF INFORMATION AND RECORDS STUDIES (IRS)

#### Programmes

The department is currently preparing curricula for offering Certificate, Diploma and Bachelor degree programmes.

#### 8.8.1.1 LIST OF STAFF

##### *(Head of Department)*

Dr. Nabahani B. Hamadi  
PhD in Computer Science (BJUT - China), MSc. Automated systems software (KHNURE - Ukraine), BSc. Computer science (KHNURE - Ukraine).

##### **Assistant librarian trainee**

Mr. Atulinda K. Katto  
Bachelor of library and information management (Open University of Tanzania)

Mr. Sospeter E. Martinius\*  
Bachelor of information and records management (SUA)

Mr. Amani L. Magava  
Bachelor of Science in library and information management (Mzumbe University), Diploma in library, records and information studies (SLADS), Certificate in library, records and information studies (SLADS).

Mr. David G. Ruvugo  
Bachelor of Science in library and information management (Mzumbe University)

Ms. Zuhura W. Mayendi  
Bachelor in records archives and information management (TPSC)

Ms. Leah S. Makiria  
Bachelor of information and records management (SUA), Diploma in library and information studies (Jordan University College), Certificate in library and information science (Jordan University College)

Ms. Zainabu H. Lilutu  
Bachelor of information and records management (SUA), Diploma in information technology (SUA), Certificate in information technology (SUA)

*\*On study leave*

*\*\*Secondment*

## **9.0 ACADEMIC RELATED UNITS**

### **9.1 RESEARCH AND PUBLICATIONS DIRECTORATE**

The Research and Publications Directorate is responsible for overall coordination and administration of Research and Publications activities. In addition, the Directorate performs the following activities:

- i. Coordinates projects for both students and staff.
- ii. Plans and coordinates curriculum activities.
- iii. Plans, organizes and produces posters, leaflets, Newsletters and other information documents.
- iv. Arranges for academic workshops.
- v. Acts as the custodians of Research and Consultancy reports and disseminate findings for academic and other uses.

### **9.2 MUST CONSULTANCY BUREAU (MCB) Company Ltd**

MCB Company Ltd is an incorporated company under the Company Ordinance CAP 212, and registered with the registrar of companies, BRELA. It has a Class IV registration to undertake Civil, Building, Electrical, and Mechanical works from the National Contractors Registration Board (CRB) since March 2017.

The Company has its headquarters and offices located at Mbeya University of Science and Technology (MUST). The company is owned by Mbeya University of Science and Technology (MUST), formerly Mbeya Institute of Science and Technology (MIST) and Mbeya Technical College (MTC). It constitutes the Board of Directors and other personnel, and run by the Managing Director and Project Manager.

### **9.3 INDUSTRIAL LINKAGE AND LABOUR DEPARTEMNT**

The department of Industrial Linkage and Labour is responsible for coordinating Students' Industrial/Field Practical Training (IPT/FPT/TP). The IPT/FPT/TP is recognized as a course module and is conducted often after completing the class modules. The IPT/FPT/TP module is designed to enable MUST graduates to become competent and able to meet challenges of the job market and also makes them think positively towards self-employment undertakings. The office is also responsible for Industrial Relations and students' employment guidance.

## **9.4 UNIVERSITY FACILITIES**

### **9.4.1 ASSEMBLY HALL (THE NYERERE HALL)**

The University has a multipurpose assembly hall named after the first president named "Nyerere Hall", it has a capacity to hold 800 people and is used for meetings, lectures, social functions and gatherings.

### **9.4.2 CAFETERIA**

The University provides meals to Diploma students in a well-equipped cafeteria and kitchen facilities capable of accommodating 350 students at a time. The Equipments include modern cooking and refrigeration facilities. The services are provided under the private sector partnership (PSP) arrangement.

**9.4.3 SOCIAL CLUB**

The social club provides recreational and accommodation services to guests and members of the University community.

Provides meals services to off campus and private sponsored students and members of the community a low cost.

**9.4.4 MAMA/BABA LISHE**

The University has a building where caterers (mama/ baba lishe) provide food service for the students. This service is meant to ensure that food at affordable prices is provided for the students who need it. Provision of this catering service at the University also ensures that meals are provided in a clean and safe environment.

## 10 UNDERGRADUATE EXAMINATION REGULATIONS

### PREAMBLE

These Regulations are meant to provide guidelines for conduct of University examinations and carrying out students' assessment. The Regulations present what staff and students should abide in the whole examination process. These Regulations shall apply to all undergraduate programmes offered by the University that are evaluated by any form of Continuous Assessment and Semester Examination, except where otherwise indicated. These Regulations pertain to all examinations that are conducted by the College and any other academic unit of the University. These Examination Regulations will take effect from the Academic year 2019/2020 for first-year Students.

### 10.1 GENERAL EXAMINATION REGULATIONS

#### 10.1.1 Definitions

<b>Abscondment</b>	The act of being absent from scheduled examination at the time, day and place specified without prior permission or failure to attend scheduled classes to the stipulated minimum percentage (75%) of attendance in a specific semester.
<b>Appeal</b>	A request for a review of a decision made by an Examinations Authority about the performance in an examination of a student.
<b>Board</b>	Refers to the group of people who have power to make decisions and control over a formal written, spoken or practical test(s) and examination(s) in the University. It specifically includes Department Committee, College/School Subcommittee Board, College/School Board, Undergraduate Committee and the University Senate.
<b>Candidate</b>	Any person registered for any programme of study conducted by the University and eligible for examination.
<b>Carry Over</b>	Repeating the failed course(s) in the subsequent years by fulfilling all requirements of the course(s) as stipulated in these regulations and it is abbreviated as "CO".
<b>Continuous Assessment</b>	An assessment process that consists of quizzes, tests, assignments, case studies, and field/project work report where applicable.
<b>Core Course</b>	An essential and compulsory course of a programme which must be completed by all students in a particular semester.
<b>Course</b>	Any independent unit that contributes in making up a programme of study offered and it has a unique identification code.
<b>Cumulative GPA</b>	Refers to the summation of all grade points of all credit course divided by the total number of credits taken by a student beginning from his/her admission till

	the last examination held.
<b>De-conformant of an Award</b>	Any act of depriving the right of owning the award for diploma, degree or any other academic legality possessed by the graduand/graduate after failing to adhere or comply to certain academic conditions.
<b>De-registration</b>	An official record that disqualifies a particular student as no longer eligible as legitimate student of the University.
<b>Diploma</b>	A non-degree programme studied for a minimum of two/three years.
<b>Discontinuation</b>	Stopping a student from continuing with studies and/or deprivation of a degree, non-degree award or any other academic credentials already awarded by the University. The student will stay away from the University for three (3) years and he/she may re-apply for first year in another programme different from the first one that he/she was discontinued provided that such student has minimum entry requirements to the programme.
<b>Elective Course</b>	Course chosen by a student from the list of the options taken as additional course to compulsory courses in particular semester.
<b>Examination</b>	Any formal written, spoken or practical timed and supervised assessment(s) (Continuous Assessment, Semester Examination and Industrial/Field Practical Training).
<b>Examination Cheating</b>	Possession of, using, giving, receiving or copying unauthorized materials during and/or after a test, examination, assignment, quizzes, project, research report or collaborating with another candidate to commit examination irregularity. It also includes any kind of dishonesty, destruction, falsification or any evidence of examination irregularity.
<b>Examination Irregularity</b>	Any act or conduct prohibited or failure to abide by general or specific examination regulation(s).
<b>Examination Venue</b>	Any area that the Senate has approved to be used for conducting examinations of any form.
<b>Final Examination Results</b>	Refer to results which combines the first and/or second semesters' examinations' results approved by the Senate.
<b>Incomplete Examination Results</b>	Examination results with unfinished component of assessment.
<b>Invigilation</b>	Refers to the action of monitoring candidates while they are taking an examination to make sure that they have everything they need; they keep to the

	rules and all regulations regarding the given examinations.
<b>Invigilator</b>	Refers to a person monitoring candidate while they are sitting for examination(s) to make sure that they have everything they need, they keep to the rules and all regulations regarding the given examination(s).
<b>Maximum Period of Registration</b>	The maximum time (years) of which a student will stay at the University pursuing his/her programme (ie. five years and six years for three and four-year programmes respectively).
<b>Oral Examination</b>	A test in which examiners pose question(s) in spoken form and the answers must be in spoken form.
<b>Pending Issue</b>	An issue of which a decision is not yet made by the given authority.
<b>Plagiarism</b>	Refers to an act of copying another person's ideas, words or work and pretend that they are your own; this includes lifting, stealing, illegally use, bootlegging of work, passing off of the words or ideas of someone else as his/her without proper acknowledgement or crediting of original source or use of academic work that constitute breach of copyright.
<b>Postponement of Examinations</b>	Adjourn examinations to a later date with the approval of the authority and it is abbreviated as PEX.
<b>Postponement of Studies</b>	Adjourn studies to a later date with the approval of the authority and it is abbreviated as 'POS'
<b>Pre-requisite Course</b>	An essential course of a programme which must be completed before proceeding to the next semester or level.
<b>Programme</b>	The totality of courses offered towards the award of certificate to the student
<b>Provisional Examination Results</b>	Examination results which have not yet been approved by the Senate. They express the temporary score(s) of the formal written, spoken or practical test(s) and examination(s) in the University done at the end of the given academic semester. These results are arranged for the present time only and are likely to be changed in the future by the Senate.
<b>Registration</b>	An official record that qualifies a particular student as eligible and legitimate student of the University
<b>Semester</b>	The time period in which a particular learning takes place in the University. One semester consists of seventeen (17) weeks of which fifteen (15) weeks are set for tuition and two (2) weeks are for examinations.
<b>Semester Examination</b>	An examination administered as first sitting at the end of a semester or at the end of a taught course as stipulated in these Regulations.

<b>Semester Grade Point Average</b>	Refers to the summation of the product of all credit modules and grade point scored by a student divided by the total number of credits taken by a student during a semester.
<b>Senate</b>	The overall principal decision making organ in respect of all academic matters of the University and it is responsible for the academic work of the University both in teaching, research and consultancy.
<b>Special Examination</b>	An examination administered to a candidate as the first sitting parallel to Supplementary Examinations after failing to sit for semester examination with genuine reason(s); and it is awarded the marks equivalent to semester examination.
<b>Student</b>	Any person registered for any programme of study conducted by the University.
<b>Supplementary Examination</b>	An examination administered to a candidate after failing the first sitting in the semester examination or special examination after fulfilling all required conditions for that sitting and awarded a maximum of grade C.
<b>Termination of Studies</b>	An official record that refers to a particular student who has stopped his/her studies intentionally/unintentionally before completing the final year at the University. It is abbreviated as TOS.
<b>Unauthorized Material</b>	Any form of prohibited written or printed material(s) which is/are not allowed into the examination venues including but not limited to written papers, books, notes, annotated materials, cellular or mobile phone, radios, radio cassette or other type of players, computer, iPod, smart pen, smart watch, smart spectacle, earphones, recording apparatus, programmable calculator, calculator with unauthorized written material, written handkerchief, DVD, VCD, soft or alcoholic drinks, annotated documents which one knows, believes, suspects or reasonably ought to have known, believed or suspected that the same could be used to assist him/her cheating in the examination and any other material as may be specified from time to time by the DVC Academic, Research and Consultancy.
<b>Undergraduate</b>	Refers to a University or College student who is studying for his/her first degree, diploma or certificate.
<b>University</b>	Mbeya University of Science and Technology.
<b>Valid/genuine Reason</b>	Means any reason that may be accepted such as medical ground(s), acquired consent or officially granted permission by the University.
<b>Withheld Results</b>	Results which have been retained/ not been released due to various reasons.

**10.1.2 Eligibility for Examinations**

- 10.1.2.1 A candidate shall be allowed to sit for examination if he/she is dressed in a decent manner as stipulated in Student's by Laws.
- 10.1.2.2 A candidate shall be allowed to sit for any semester examination if he/she has registered and paid all prescribed fees by the University within two weeks from the first day of beginning the particular semester.
- 10.1.2.3 A candidate shall sit for semester examination in a given course(s) if he/she has attained at least 75% of attendance in a course(s) delivery.
- 10.1.2.4 A candidate shall be allowed to sit for semester examination if he/she has completed course assessment in all required courses.
- 10.1.2.5 A candidate shall sit for supplementary examination(s) in the failed course(s) provided that the overall GPA is 1.8 or above. Supplementary Examination shall be held before commencement of the next academic year.
- 10.1.2.6 The highest mark awarded in the supplementary examination(s) shall be minimum passing grade i.e. Grade 'C'. This will be used in the calculation of Overall GPA.

**10.2 SPECIFIC EXAMINATION REGULATIONS****10.2.1 Course Assessment Criteria**

- 10.2.1.1 Student performance shall be assessed continuously throughout the course. Such Continuous Assessment shall include at least two-timed test under examination conditions and homework exercises in a specific semester. The weight of such Continuous Assessment in every course shall be 40% and Semester Examination shall be 60%, unless otherwise stated as stipulated in the curriculum for a given course.
- 10.2.1.2 Continuous Assessment shall be open to students before sitting for the Semester Examination through Students Information Management System (SIMS) and the signed printout from instructor shall be submitted to the respective Head of Department at least two weeks before commencement of semester examinations.
- 10.2.1.3 A candidate who for genuine reason(s) has not completed continuous assessment in a course(s) shall be awarded an "Incomplete" Continuous Assessment (ICA). Such a student shall be required to sit for special continuous assessment(s) in a given semester before commencement of semester examination.
- 10.2.1.4 It shall be the duty of the concerned instructor to inform the students at the beginning of the semester on the procedures of assessment for the respective course.
- 10.2.1.5 All courses shall be examined or otherwise assessed at the end of each semester and the results shall count in determining successful completion of studies.

10.2.1.6 Determination of overall GPA for pass or fail status of the candidate shall be done at the end of each academic year by the concerned authority.

### **10.2.2 Examination Setting, Moderation and Marking**

10.2.2.1 The examination process shall involve setters, moderators and markers.

10.2.2.2 The criteria, procedure to appoint setters, moderators and markers together with their roles are stipulated in separate document (Examination Setting, Moderation and Marking).

10.2.2.3 All examinations which are set must be moderated as per moderation procedures and the moderation report(s) shall be submitted to the Head of Department.

### **10.2.3 Conduct of Semester Examinations**

10.2.3.1 Draft Timetable for semester examinations shall be available and accessible in University Website, Notice Board and SIMS in four weeks before the commencement of the semester examinations.

10.2.3.2 Final Timetable for semester examinations shall be available and accessible in University Website, Notice Board and SIMS in two weeks before the commencement of the semester examinations.

10.2.3.3 It shall be the duty of the candidate to consult the concerned Department's Examination Coordinator for changes of Draft Examinations Timetable in not more than one week after the release of Draft Examinations Timetable.

10.2.3.4 No candidate shall enter into the examination room unless he/she has produced his/her Student Identity Card and Examination Card for inspection by the Invigilator before entering to the examination room.

10.2.3.5 No candidate shall be admitted to the examination room after 30 minutes have elapsed since examination commencement.

10.2.3.6 No student shall be allowed to leave the examination room 30 minutes before the end of examination.

10.2.3.7 A student who is unable to continue doing the examination may be allowed to leave the examination room 30 minutes after the commencement of the examination. Such student shall neither be allowed to return into the examination room nor leave with the question paper or answer booklets.

10.2.3.8 Without prejudice article 10.2.3.6, a candidate who finishes an examination before the finishing time may be allowed to leave the examination room provided that 30 minutes have elapsed since the commencement of the examination.

10.2.3.9 A candidate may leave the examination room temporarily for five minutes; only with the permission of the Invigilator after filling the Examination Short-call Form. In any such situation, the Invigilator will satisfy him/herself that the candidate does not carry with him/her any unauthorized material.

- 10.2.3.10 A candidate allowed to leave the examination room temporarily will be accompanied by an examination attendant designated by the Invigilator while outside the examination room.
- 10.2.3.11 A candidate shall not bring any book, paper or written information or other unauthorized materials before entering into the examination room. A candidate who is suspected of hiding unauthorized material shall be asked by the Invigilator to surrender the material and if necessary, shall be subjected to a body search. Refusing to surrender the suspected materials or body search is tantamount to misconduct and will result to denial of examination room entry.
- 10.2.3.12 A candidate sitting for semester examination or test shall be guilty of an irregularity if:
- (i) He/she possess any unauthorized materials such as written or printed document or memorandum, notes, sketch, map, diagram, any inadmissible electronic/non electronic equipment or article in the examination room;
  - (ii) He/she helps or tries to help or tries to obtain help from another candidate or communicates or tries to communicate with any other person other than an Invigilator when the examination or test has begun;
  - (iii) He/she causes disturbance in the examination venue, or acts in an improper or unseemly manner and refuses to comply after a warning issued by an Invigilator to cease such disturbance, improper conduct, or destroys what would have been evidence of such conduct.
- 10.2.3.13 While an examination is in progress the following shall be observed:
- (i) A candidate shall not copy or attempt to copy from another candidate or engage in any similar activity;
  - (ii) When a candidate needs any assistance; he/she may attract the attention of the Invigilator by raising his/her hand.
- 10.2.3.14 No candidate shall be allowed to borrow or lend any tools/equipment (e.g. calculator, pen, pencil, rubber, ruler, drawing instruments) from another candidate or asking the Invigilator to borrow or lend on behalf thereof in the examination room.
- 10.2.3.15 No candidate shall be allowed to take outside of examination room any used or unused answer booklet(s)/question paper(s).
- 10.2.3.16 A candidate shall not in any way interfere with the stapling of the answer booklets. Any complaints about the answer booklet should be brought to the attention of the Invigilator.
- 10.2.3.17 No candidate shall be allowed to possess and use programmable calculators or calculators with facilities for storing and retrieving text; smart watch, smart pen, portable computers, electronic organizers, mobile phones and other electronic devices capable of communicating directly with similar nature.

- 10.2.3.18 Any candidate found with unauthorized material(s) or device(s) in in the examination room; shall be deemed guilty of examination irregularity. The found unauthorized materials or devices shall be immediately confiscated by the Invigilator and the University will be under no obligation to issue the candidate with a replacement of unauthorized material(s) or device(s).
- 10.2.3.19 All rough work shall be done at the back of the answer booklet(s) and must be cancelled showing not being part of the solutions/answers.
- 10.2.3.20 No candidate is allowed to write anything on the question paper(s). Any written information on the question paper will be treated as an unauthorized material(s).
- 10.2.3.21 Provision for examination offence(s) and penalty (ies) stipulated in these regulations shall apply to any student found guilty of any offence(s).

#### **10.2.4 Supervision and Invigilation of Examinations**

- 10.2.4.1 The Principal who shall also be the Chief Invigilator shall appoint a Supervisor for each examination session.
- 10.2.4.2 For each examination, there shall be the Supervisor and Invigilator appointed by the Principal of the College as the case may be, in consultations with Heads of Departments or other appropriate authority.
- 10.2.4.3 The Invigilator must report at the examination venue at least half an hour before the commencement of the examination.
- 10.2.4.4 The Supervisor and the Invigilator shall be responsible in ensuring that no candidate is allowed to enter into the examination room with unauthorized material.
- 10.2.4.5 The Invigilator shall allow candidates to enter in the examination room half an hour to time.
- 10.2.4.6 When candidates are seated, the Invigilator shall make sure that:
- (i) Candidates are in possession of the correct paper;
  - (ii) Candidates read carefully the instruction on the examination paper;
  - (iii) Candidates commence examination on the specified time.
- 10.2.4.7 The Invigilator shall not allow any candidate who reports half an hour late to sit for examination after the commencement of the examination.
- 10.2.4.8 When the examination is in progress; the Invigilator shall mark the attendance list, check the Student ID Card and Examination ID Card and note every instance of absence. In so doing, the Invigilator shall satisfy him/herself that the student is qualified to do the semester examination.

- 10.2.4.9 The Supervisor/Invigilator may permit a candidate to leave the examination room temporarily for only five (5) minutes on genuine reason(s). The given Invigilator must designate another Invigilator/examination attendant to accompany the candidate. In such a case the Invigilator shall keep records of candidate(s) who leave the examination room temporarily.
- 10.2.4.10 The Supervisor/Invigilator shall move around the examination room(s) as often as he/she deems necessary.
- 10.2.4.11 The Supervisor/Invigilator shall not engage himself/herself in any activity other than invigilation during the examination.
- 10.2.4.12 The Supervisor/Invigilator shall announce to candidates at reasonable intervals (e.g. one hour gone, half an hour left, etc.) the time available to them from time to time and eventually must announce for examination stoppage.
- 10.2.4.13 On stoppage of examination, the Invigilator shall instruct candidates to leave the answer booklets appropriately labelled and question papers on their tables, collect answer booklets and instruct candidates to leave the examination room.
- 10.2.4.14 The Invigilator shall count all answer booklets against the attendance list, for submission to the Head of Department or any authorized person. It shall be the responsibility of the Head of Department to verify the booklets. The supervisor/Invigilator shall also return all unused answer booklets, question papers and other materials to the Head of Department Office.
- 10.2.4.15 The Supervisor/Invigilator shall fill and submit irregularity report form on each examination to the Examinations Officer and copied to the Head of Department who will eventually report to the appropriate authority.
- 10.2.4.16 The examination irregularity report from relevant authority shall be forwarded to the University Senate. Based on its review, the Senate may nullify the results of that examination and discontinue the candidate; or if proved otherwise, the candidate shall be reinstated accordingly.
- 10.2.4.17 If a candidate is suspected of an examination irregularity, the following procedures shall be followed:
- (i) The Invigilator shall approach the candidate immediately after suspicion/discovery;
  - (ii) The Invigilator shall collect all unauthorized materials;
  - (iii) The Invigilator shall require a candidate to sign on the Invigilator's Examination Irregularity Form of the issue (collected material(s), time and place);
  - (iv) The Invigilator shall require other nearby Invigilator(s) to sign as witnesses of the offence made by the given candidate;
  - (v) The Invigilator may also require other nearby candidate(s) to sign as witnesses of the offence made by the given candidate;

(vi) The Invigilator shall allow the candidate to proceed with examination but his/her all results will be withheld pending to decision of concerned University Authority.

10.2.4.18 In case of failure or refusal to sign on the Invigilator's Examination Irregularity Report, the suspected candidate's action shall be deemed a contempt of the University Authority, and shall mean accepting or causing commotion in the examination room, which is tantamount to violation of examination regulations and this shall lead to discontinuation from studies.

10.2.4.19 The Invigilator shall be assisted by VAI whose information are legally and legitimately acceptable for any examination proceeding.

10.2.4.20 The Invigilator shall adhere to all provisions as stipulated in these Examination Regulations.

### **10.2.5 Absence from Examinations**

10.2.5.1 A candidate who for genuine reason(s) has not completed Semester Examination(s) (SE) in a course(s) shall apply for by writing the letter to the University within the first week of missing the examination(s) and he/she will be awarded PEX status. Such a student shall be eligible to sit for special semester examination(s) as the first attempt in a given semester during supplementary examination session provided that he/she has all Continuous Assessment (CAs) for that particular course (s).

10.2.5.2 In case a candidate has incomplete in SE and has supplementary examinations, he/she will be allowed to sit for special Semester Examination as well as the supplementary examinations. However, results of supplementary examinations shall not be considered unless the GPA amounts 1.8 or above after considering firstly the results of Special Examination(s).

10.2.5.3 In case, a candidate's results do not amount to the GPA of 1.8 after considering firstly special examination(s) results; his/her supplementary examination(s) shall not be considered and the candidate shall be automatically discontinued from studies.

10.2.5.4 A candidate who falls sick during the examination period shall inform his/ her Head of Department immediately with assistance of Invigilator and report to the University Health Centre.

(i) If this leads to inability to sit for some or all courses, a certified medical report from the MUST Medical Officer In-charge shall be forwarded to his/her Head of Department not more than two days after the incidence.

(ii) A candidate found to have cheated and/or forged medical report during semester examination shall be deemed guilty of examination irregularities; and shall have absconded the given examination(s).

**10.2.5.5 A candidate who misses any scheduled Continuous Assessment (ie. quiz, individual assignment, group assignment, presentation or test) without genuine reason(s) shall be awarded zero marks in the missed component of that Continuous Assessment.**

**10.2.6 Releasing of Examination Results**

- 10.2.6.1 The provisional semester examination results shall be released through SIMS after three weeks from the last date of the semester examination.
- 10.2.6.2 The provisional supplementary/special examination results will be released after two weeks from the last date of the examination.
- 10.2.6.3 Undergraduate Studies Committee shall release the Provisional Examination Results after recommending to the Senate.

**10.2.7 Conditions for Proceeding to Next Level**

- 10.2.7.1 A candidate shall proceed in the following academic year of study after attaining a minimum overall GPA of **2.0** or above in the given academic year of assessment with a minimum total of 120 course credits.
- 10.2.7.2 A candidate who fails to pass in any course assessed by continuous assessment only shall carry over once the failed course(s) in the subsequent academic year provided that, his/her overall GPA of 2.0 is attained.
- 10.2.7.3 A candidate who fails to pass in any course after sitting for supplementary examination(s); shall carry over the failed course(s) once in the subsequent academic year during the Regular Semester Examination Session provided that, his/her overall GPA of 2.0 is attained.
- 10.2.7.4 In case, a candidate`s results do not amount to the GPA of 2.0 after sitting for supplementary examination(s) shall be automatically discontinued from studies.
- 10.2.7.5 A candidate who fails to pass in any course after sitting once for carry over; shall be discontinued from studies in the given academic year.
- 10.2.7.6 The highest mark awarded in the carry over(s) shall be minimum passing grade i.e. Grade 'C' and this will be used in the calculation of overall GPA.
- 10.2.7.7 A candidate whose overall GPA is less than 1.8 in the first sitting of the academic year shall be discontinued from studies in the given academic year of assessment.

**10.3 EXAMINATION IRREGULARITIES AND PENALTIES****10.3.1 Discontinuation**

- 10.3.1.1 A candidate who is found engaging himself/herself in smoking, eating or drinking of beverages or doing other acts that may cause nuisance in the examination room; shall be deemed guilty of irregularity, stopped from continuing with the given examination and eventually discontinued from studies.
- 10.3.1.2 A candidate found borrowing or lending any tools/equipment (e.g. calculator, pen, pencil, rubber, ruler, drawing instruments) from another candidate without asking permission from the Invigilator in the examination room; shall be discontinued from studies.

- 10.3.1.3 A candidate found late 30 minutes after examination commencement shall be deemed guilty of examination irregularity and shall be discontinued from studies.
- 10.3.1.4 A candidate found leaving examination room before 30 minutes after commencement of examination; shall be deemed guilty of examination irregularity and shall be discontinued from studies.
- 10.3.1.5 A candidate who intentionally absent him/herself from attempting any scheduled End of Semester Examination(s) or Supplementary/Special/Carry Over Examination without genuine reason(s) shall be treated as absconded and eventually discontinued from studies.**
- 10.3.1.6 A candidate found cheating and/or forging medical report of his/her absence during semester examinations shall be deemed guilty of examination irregularities; and shall have absconded the given examination(s) and eventually discontinued from studies.
- 10.3.1.7 Any candidate found with possession or access of unauthorized materials as assistance in his/her examination shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.8 A candidate talking or communicating or making an arrangement to another candidate or any person for assistance during the examination session; inside or outside the examination room without the permission of an Invigilator shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.9 A candidate found copying or indulging in copying or giving another candidate answer book/question paper for copying with the intention of assistance shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.10 A candidate found writing on any other piece of paper, parts of the body or anywhere, a question set in the paper or anything connected with a question set the paper or solution thereof shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.11 A candidate found passing/receiving or attempting to pass on or receive, a copy of question set in the paper or question paper itself or a part thereof or a solution of a question paper, during the examination session shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.12 A candidate found possessing of solution to a question set to the paper in collusion with any member of supervisory or any other staff or some outside agency shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.13 A candidate found smuggling in the answer book or taking out or arranging to send out an answer book or continuation sheet, during or after the examination with or without the help or collusion of any person connected with the examination room or of any agency within or outside examination room shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued

from studies.

- 10.3.1.14 A candidate found writing outside the examination room an answer book or continuation sheet for a candidate, which the letter smuggles into the examination room or to replace the answer book of the candidate after the examination shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.15 A candidate found showing misconduct or misbehaving towards the Invigilator or any member of the supervisory staff shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.16 A candidate found impersonating another candidate shall be deemed committed irregularities and thereof shall be discontinued from studies, also that person may be reported to the police.
- 10.3.1.17 A candidate for whom the impersonation was attempted shall be expelled from the University and discontinued from studies.
- 10.3.1.18 A candidate obtaining admission/forging ID for the examination on the false representation made by a candidate himself/herself shall be deemed guilty of examination irregularities; declared ineligible for the given examination and discontinued from studies and may be reported to the police.
- 10.3.1.19 A candidate forging another person's signature on a student's examination registration form or using a forged document knowing it to be forged and with a view to seeking admission shall be deemed guilty of examination irregularities; declared ineligible for the given examination and discontinued from studies and may be reported to the police.
- 10.3.1.20 A candidate leaving the examination room without delivering the answer book to the concerned Invigilator and taking away answer book with him/her or internationally tearing off or otherwise disposing off his/her answer book or any part thereof or the continuation sheet or part thereof inside or outside the examination room shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.21 A candidate approaching or influencing directly or indirectly a member of the University staff regarding his/her cheating case; shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.
- 10.3.1.22 A candidate swallowing or attempting to swallow a note or paper or snatching or cause disappearance or destroy any unauthorized material; shall be deemed guilty of examination irregularities; and shall have failed whole examination and eventually discontinued from studies.
- 10.3.1.23 A candidate attacking physically or verbally the Invigilator or any member of supervisory staff; shall be deemed guilty of examination irregularities; and shall have failed the whole examination and eventually discontinued from studies.

10.3.1.24 A candidate found cheating and/or forging medical report during semester examination shall be deemed guilty of examination irregularities; and shall have absconded the given examination(s) and eventually discontinued from studies.

10.3.1.25 A candidate found communicating or attempting to communicate directly or indirectly through a relative, guardian or friend with an examiner for the purpose of influencing him/her on award of marks; shall be deemed guilty of examination irregularities; and the given examination results shall be nullified and eventually discontinued from studies.

## **10.4 APPEAL**

### **10.4.1 Appealing Procedures**

10.4.1.1 A student who is not satisfied with his/her Examination Results or decision shall appeal in writing using an Appeal Form, and submit within a period not exceeding fourteen (14) days from the date of released Provisional Examination Results. The Appeal Form will be accepted after the student has paid the prescribed appeal fee and submit it through the following address:

*Deputy Vice Chancellor Academics, Research and Consultancy*

*Mbeya University of Science and Technology,*

*P.O. Box 131 MBEYA.*

10.4.1.2 A request for an appeal hearing shall be accompanied by non-refundable fee, prescribed by the University, for a course (s) or for any other academic ground(s) of appeal made to the University. Such a fee(s) shall be revised from time to time.

10.4.1.3 Time frame for appeal hearing shall be set to facilitate speedy and prompt hearing as per procedure, so as to ensure that study progression from one UQF level to another is not interfered.

10.4.1.4 The Senate Appeals Committee shall, on the basis of the laid down guidelines and procedures, hear the appeal, investigate, discuss and make recommendations accordingly.

10.4.1.5 In case of the necessity for re-marking, Principal shall appoint a suitable expert(s) in the relevant course to be a third marker. Third maker shall re-mark the respective script(s) using the same marking scheme used by the internal and external examiners.

10.4.1.6 Marks from the third marker shall be tabled before the College Board on behalf of Senate Appeals Committee for provisional approval before the final approval by the Senate.

10.4.1.7 The decision made by the Senate on any academic matter for a student shall be final.

10.4.1.8 All appeals should follow the procedures outlined in the Examination Regulations. No appeal will be considered where:

- i) The candidate appeals for re-marking but fails to establish reasonable grounds for prejudice, incompetence, or lack of integrity on the part of the Internal Examiner;

- ii) It arises for the first-time issues concerning the supervision, teaching or coursework assessment. Such matters should only be considered if they have been raised by the student promptly and in writing, at the time they first arose; and
- iii) A student alleges illness or other factors although he/she had an opportunity to postpone studies or examinations(s) but voluntarily opted not to take that opportunity.

## **10.5 PLAGIARISM**

### **10.5.1 Plagiarism Cases**

10.5.1.1 Commitment of plagiarism to a candidate shall be considered if:

- (i) The candidate has fabricated or falsified results/data;
- (ii) The candidate has submitted the same, or substantially the same work more than once at the same or another institution;
- (iii) The candidate has submitted or presented the work of another person as his or her own;
- (iv) The candidate has submitted false records, information or documents;
- (v) The candidate has omitted due acknowledgement of the work of another person;
- (vi) There is collusion i.e. when two or more candidates collaborate to produce the same work submitted by each, without prior formal permission for such collaboration;
- (vii) The candidate has used, by payment or otherwise, a third party to produce Research Project report or any assignment write-up in whole or in part.

10.5.1.2 All plagiarisms stated from 5.1.1 (i) to (vii) shall be checked and certified by the mandated supervisor, examiner, Head of Department or mandated member of the various responsible committees.

10.5.1.3 All cases of alleged plagiarism shall be reported to the DVC ARC who shall refer to Director of Undergraduate Studies for investigation.

10.5.1.4 The minimum tolerable level for plagiarism shall be 25% of the whole assignment, research or project proposal, research or project report.

10.5.1.5 A candidate found guilty in plagiarizing any assignment, research or project proposal, research or project report or part thereof; he/she shall be discontinued from studies.

## 10.6 AWARD OF ACADEMIC CERTIFICATES AND TRANSCRIPTS

Academic Certificates and Transcripts will be awarded to student who has a status of pass for all his/her examination from the year of registration to final year.

### 10.6.1 Grading System, Award Classification and Computation of GPA

#### (a) Grading System

Grades and Grade Points for each course shall be assigned with reference to ranges of scores as indicated below:

Score Range	Grade	Grade Points	Definition of Grade
70-100	A	5	Excellent
60-69	B+	4	Very good
50-59	B	3	Good
40-49	C	2	Fair
35-39	D	1	Weak
0-34	E or F	0	Poor

#### (b) Classification of Awards

(i) The GPA for final Degree or Diploma shall be computed from credits and grades classified as indicated below:

Class of Award	Division	Cumulative GPA
First Class		4.4 – 5.0
Second Class	Upper	3.5 – 4.3
	Lower	2.7 – 3.4
Pass		2.0 – 2.6

(ii) A Class with Honour shall be awarded to a Bachelor Degree student whose cumulative GPA falls in First Class or Upper Second-Class award and he/she did not supplement or carry over any course during his/her studies.

#### (c) Computation of GPA

(i) **Overall GPA** shall be computed from the summation of all products for course credits and grade points divide to the summation of all course credits for the two semesters in a particular academic year.

$$\text{Overall GPA} = \frac{\text{Sum of } (P \times C)}{\text{Sum of } C}$$

- (ii) **Cumulative GPA** shall be the combined GPA of all academic years of studies computed from the summation of all products for course credits and grade points *divide* to the summation of all course credits.

$$\text{Cumulative GPA} = \frac{\text{Sum of } (P \times C)}{\text{Sum of } C}$$

Where;

*P: Grade points assigned to a letter grade scored by the student in a given course*

*C: Number of credits associated with the course.*

## 10.6.2 Conditions for Awards

A student shall be deemed eligible for the award of Academic Transcript and Certificate of Graduation, if there is evidence that; a student has completed and passed all courses for the award and has fulfilled all terms and conditions established by the University.

## 10.7 REPLACEMENT OF ACADEMIC TRANSCRIPTS AND CERTIFICATES

### 10.7.1 Procedures for Replacement of Academic Transcripts and Certificates

10.7.1.1 In occurrence of loss, partly or complete destruction of the original certificates/transcript or copy thereof, the University may be responsible to issue a certified copy of certificate based on the following conditions for a student:

- (i) Producing the evidence of the loss from the police;
- (ii) Producing evidence of the public announcement from the Government Gazette; and
- (iii) Producing a sworn affidavit.

10.7.1.2 The certificate shall be issued until a period of 12 months has elapsed from the date of such a loss.

10.7.1.3 The transcript shall be issued until a period of one month has elapsed from the date of such a loss.

10.7.1.4 The academic certificate and transcript shall be replaced by paying a non-refundable fee of Tsh 100,000/= (one hundred thousand only) and Tsh 20,000/= (twenty thousand only) respectively. The fees are subject to review by Senate from time to time.

## 10.8 REVIEW OF UNDERGRADUATE EXAMINATION REGULATIONS

These Examination Regulation are subject to review from time to time as need arises.