Dar es Salaam Institute of Technology

Prospectus -2021/2022

Start your future today at DIT

DIT is committed to provide a learning environment that promotes a passion for excellence in professionalism and enduring knowledge which stimulates creativity and innovation consistent with the country and regional needs. We embrace competence based education and training approach. The Institute is fast establishing itself as the ideal tertiary institution for the holistic students' development. We are focused on nurturing the growth of academic excellence and instilling the importance of scientific, engineering skills and entrepreneurship, through the Teaching Factry Concept..

STATEMENT OF THE PRINCIPAL

Dar es Salaam Institute of Technology (DIT) was established by the Act of Parliament No.6 of 1997 as a higher technical training institution in Tanzania. DIT has a vision of becoming a leading technical education institution in addressing societal needs. The mission of DIT is to provide competence based technical education, through training, research, innovation and development of appropriate technology. DIT is an agent of industrialization, a progressive and customer-centered higher learning institution.

DIT understands that such a mission could only be realized if local technical training institutions will significantly increase students' enrollment and improve teaching methodology. Technical training at DIT is competency based, characterized by the ability to carry out an occupational activity, but still needs to be consolidated. In order to achieve this, we are fostering a teaching factory approach whereby technical training is interactively linked to a real life factory business. This is realized by either establishing a virtual or physical factory. The former is mainly achieved through industrial linkages. It is also envisioned to couple training with technology incubators as they provide space, partnerships and networks to build a national community in which project/research students, innovators, entrepreneurs, scientists, technologists, professionals and investors can continuously exchange knowledge, practices, develop innovative businesses and expand their networks locally, regionally and globally.

Strategies for improving the quality of teaching and learning process are notably vivid in a good number of curricula developed and reviewed recently. The application of ICT in teaching is also emphasized in the new curricula. Besides, DIT envisions putting in place support services for business start-ups for its students after completion of training, and similar measures for easing labour-entry and job-retention. To facilitate the teaching factory at DIT staff and students are intermittently attached to industries. Such initiatives are the testimony of DIT's willingness and readiness to play a key role in industrialization agenda.

DIT is also planning to increase students' enrollment from 4500 to 6000 students by 2022 through extending and strengthening its services to various parts of the country including Dar es Salaam, Mwanza, Songwe and Dodoma regions. We are also glad that the government of Tanzania has already extended financial support in tune of TZS 74 billion for infrastructure development and procurement of modern teaching facilities in the two DIT campuses (Dar es Salaam and Mwanza) through a World Bank loan under East Africa Skills for Transformation and Regional Integration Project (EASTRIP). Currently, DIT offers a wide range of programs namely certificates, ordinary diploma, bachelor to master level in the fields of maintenance

management, computing and communications technology, Computational science and Engineering, Sustainable Energy Engineering, civil engineering, computer engineering, electrical engineering, mechanical engineering, science and laboratory technology. Other fields are oil and gas engineering, information technology, mining engineering, biomedical equipment engineering, communication system technology and renewable energy technology. Others include multimedia and film technology, biotechnology, Leather products and allied technologies and food science and technology. During the financial year 2021/22, the Institute will embark in developing new programs including Doctor of Technology (DTech), Master of Electronics Engineering, Master of Engineering in Geotechnical Engineering, Master of Structural Engineering and Masters of Water Resources Engineering. Others are Master of Computer Engineering (by thesis), Master of Technology in Applied Science of Materials, Bachelor of Information Technology, Bachelor of Multimedia and Film Technology and Bachelor of Biomedical Engineering.

In the current year 2021/2022 DIT will continue strengthening the strategies aimed at providing competence in applied science and engineering programs and hands-on practice through the Teaching Factory concept. The Institute will keep on improving learning environment, which is key for nurturing critical thinking skills and personal development to enhance knowledge based economic growth in the country.

THE DIT WE WANT

Prof. Preksedis Marco Ndomba
PRINCIPAL

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MEMBERS OF THE DIT GOVERNING COUNCIL

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2. **Dr. Pancras M.S. Bujulu (Vice Chairperson)**
   Vocational Education and Training Authority (VETA)
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7. **Ms. Mercy M. Mrutu**
   Ministry of Constitutional and Legal Affairs
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10. **Prof. Preksedis M. Ndomba (Secretary)**
    Principal, Dar es Salaam Institute of Technology

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Director, DIT Mwanza Campus

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Dar es Salaam Institute of Technology Campuses

Dar es Salaam Institute of Technology has three campuses in Dar es Salaam, Mwanza and Songwe regions. Dar es Salaam Main Campus offers a wide range of full and part time A applied science engineering and professional training programs leading to the awards of Ordinary Diploma, Bachelor of Engineering, Bachelor of Technology and Master Degree programs. These programs are offered by six academic Departments namely, Civil Department, Electrical Department, Electronics & Telecommunications Department, Mechanical Department, Computer Studies Department, and Laboratory Science & Technology Department. The General Studies Department supports the academic departments through teaching Mathematics, Communications Skills, Research and Entrepreneurship Education modules. In addition, various short term professional training courses are offered by DIT through the Institute Consultancy Bureau (ICB) and the India-Tanzania Center of Excellency in Information Communication Technology (ITCoEICT).

Currently, DIT Mwanza campus offers Ordinary Diploma courses in Science and Laboratory Technology and Leather Products Technology. DIT Myunga campus in Songwe region is offering vocational training Programs on Plumbing and Pipe Fitting (PL) and Information Communication Technology (ICT) and various professional short training programs.

CHAPTER ONE

DAR ES SALAAM INSTITUTE OF TECHNOLOGY

1.1 Brief Information about DIT

The Dar es Salaam Institute of Technology (DIT) is located in the Dar es Salaam city centre, at the junction of Morogoro Road and Bibi Titi Mohamed Street. DIT was established in 1997 by the Act of Parliament, "the DIT Act No.6 of 1997" to replace the Dar es Salaam Technical College, which had a long history of technical training in Tanzania. This history dates back to 1957 when its predecessor; the Dar es Salaam Technical Institute was established aiming at providing vocational training in the country. The Institute later expanded its scope to offer technical secondary school courses and training for Technical Assistants before it was upgraded in 1962 to become the Dar es Salaam Technical College (DTC), the first formal technical training institution in the country.

One of the responsibilities of DTC was to train technicians under the London City and Guilds Training Program. In order to enhance its contribution to the national capacity building in technical manpower, the College in 1964 introduced two-and-a-half-year Ordinary Technician Diploma (OTD) programs in Civil, Electrical, Telecommunications and Mechanical Engineering. These were later upgraded into three-year Full Technician Certificate (FTC) courses in 1970/1.

Later, the College also introduced Diploma in Engineering (DE) programs in the four traditional engineering disciplines to provide post-FTC technical training. Courses for Laboratory Technology and Diploma in Technical Education (DTE) were also introduced in 1962. The position of DTC in the provision of higher technical education was consolidated in 1991 when the corresponding Advanced Diploma in Engineering (ADE) programs replaced the Diploma in Engineering (DE) courses. Today, DIT, DE and ADE graduates can be found in almost all engineering firms/institutions. There are positive feedbacks from the respective employers indicating overall good performance by ADE graduates.

The current political and economic trends, as well as the new technological changes have increased competition in the demand for, and supply of quality products including technical education and services. Under such a competitive environment, the leading position of DTC in the provision of higher technical education could not be sustained for long given its old set-up and mission. Hence a new institution was therefore necessary to replace the Dar es Salaam Technical College. Such an institution could effectively address the current technological developments, provide competitive academic outputs in terms of quality technical training, applied research and expertise services to the community. The Dar es Salaam Institute of Technology was therefore established in 1997 to realize that aspiration, as guided by its vision and mission.

DIT is a fully accredited by the National Council for Technical Education (NACTE). Currently, DIT offers a wide range of full-time, part-time and professional applied sciences and engineering training courses /programs. The Institute has replaced the FTC and ADE programs with Ordinary Diploma and Bachelor of Engineering programs respectively. In addition, the Institute has started offering Bachelor of Technology in Laboratory Sciences and some courses in master programs: Master in Computational Science and Engineering, Master of technology in Computing and Communications, Master of Engineering in Maintenance Management and Master of Engineering in Sustainable Energy Engineering. Other courses are Bachelor of Mining Engineering and Bachelor of Oil and Gas and Diploma programs in Biotechnology, Food Science and Technology, Multimedia and Film technology, Information Communication Technology and Communication Systems technology.

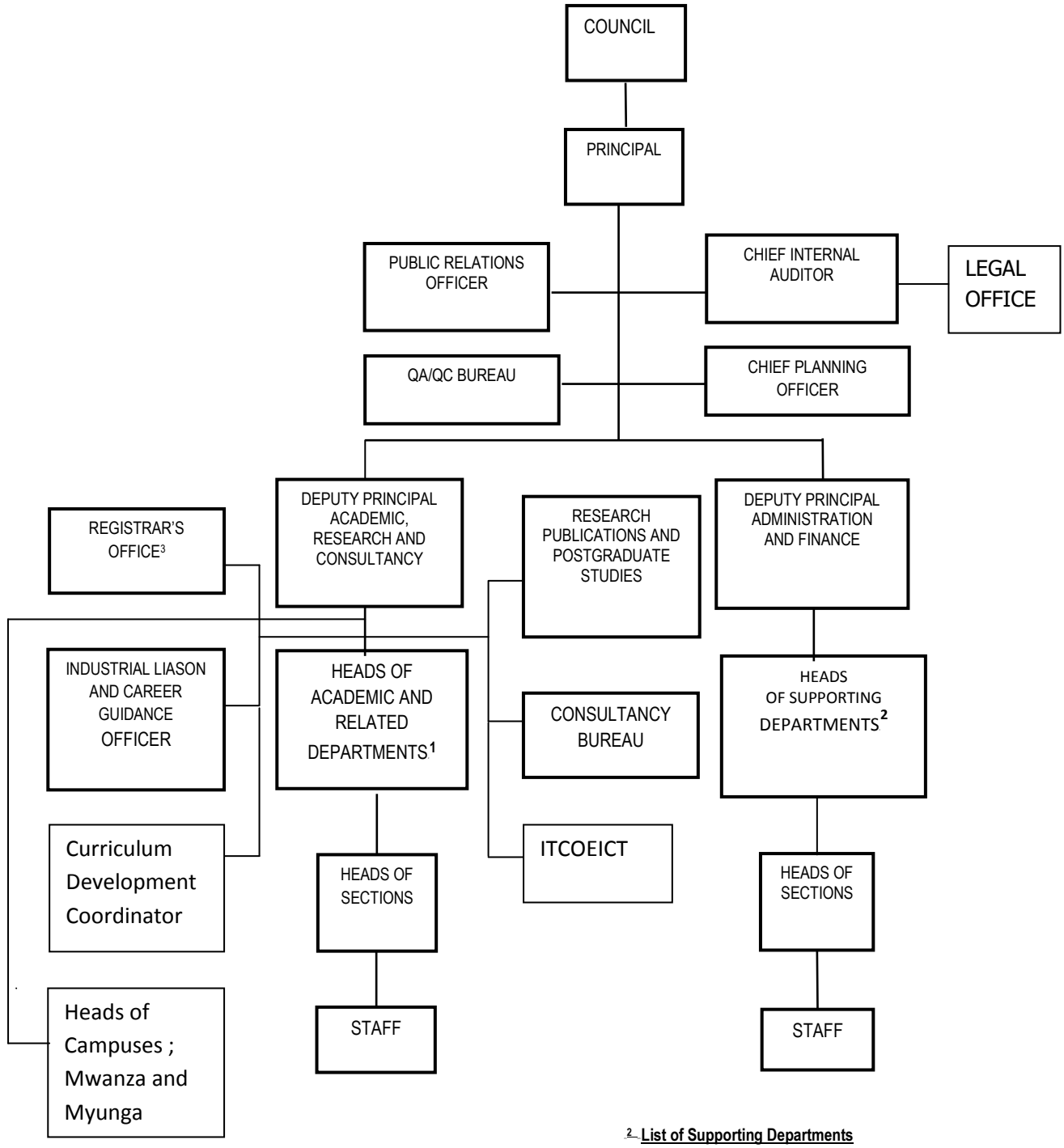
The expectations of Tanzanians towards DIT are very high because of the impact of producing graduates who meet the market demand. As expressed in the National Technical Education and Training Policy of 1996, National Higher Education Policy of 1999 and Tanzania Development Vision 2025, advancement in science and technology is a key area of focus for its positive impact to social economic growth as it ensures a knowledge-based economic growth. In order for DIT to match with its new structure, roles and functions, current market demand, training curricula are reviewed after every five years to incorporate various stakeholders' views.

This prospectus therefore, describes the main features of the DIT in line with

customers and stakeholders' interests. It provides an outline of academic programs, admission requirements, procedures and regulations to be met for one to get admission and graduate at the Institute. In addition, examination regulations, course programs, course duration, list of academic staff and other relevant information are also provided.

1.2 Organization Structure of DIT

The top organ of the DIT is the Council followed by the Chief Executive Officer (Principal) who is supported by the Deputy Principal (Academic, Research and Consultancy) and the Deputy Principal (Administration and Finance). The two Deputies are supported by heads of various departments, directors, coordinators and managers who oversee teaching, learning and manage Institutional resources. The Organization structure of DIT is shown in Figure 1.2.



1. **List of Academic and Related Departments**
   - Civil Engineering
   - Computer Studies
   - Electrical Engineering
   - Electronics & Telecommunications Engineering.
   - Mechanical Engineering
   - Science & Laboratory Technology
   - General Studies
   - Research, Publications and Postgraduate Studies
   - Industrial Liaison and Career Guidance
   - Library Services
   - Institute Consultancy Bureau

2. **List of Supporting Departments**
   - Accounts
   - Students' Affairs
   - Estate
   - Human Resources and Administration

- PMU
- ITCOICT
- Legal Office
- Heads of Campuses

List of Offices in the Registrar's Office

- Examination
- Admission

Figure 1.2 Organization Structure of DIT

1.3 Organization of the Prospectus

This prospectus provides an outline of the academic programs currently offered by DIT and the near-future plans towards the realization of the mission of the Institute with respect to training as presented in Chapter Two. It also provides information on procedures and regulations for admission to such programs and the corresponding fees in chapters Three and Four respectively.

Chapter Five provides examination regulations with details of all matters related to examinations conducted by the Institute for various programs leading to the awards of NTAs 4-9 levels namely; the Ordinary Diploma, Bachelor Degree and Master Degree programs. More information regarding procedures for offering master degree programs at DIT are detailed in the postgraduate guidelines.

Chapter Six shows the profiles of academic departments and other related units of the Institute including a list of academic staff and course outlines for academic programs offered by respective departments. The inputs of the prospectus as highlighted above are complemented with some additional and general information for the DIT dispensary, accommodation and catering services available to DIT Community as shown in Chapter Seven. Chapter Eight presents general information regarding students' prizes and awards, important information for students and the center of excellence in ICT. Chapter Nine covers the information on DIT Mwanza and Myunga campuses. The academic calendar for the academic year 2021/2022 for offered programs is shown on chapter Ten.

CHAPTER TWO

ACADEMIC PROGRAMS OFFERED

DIT is fully accredited by the National Council for Technical Education (NACTE) to run and grant awards to successful candidates as per the institute's and NACTE's regulations. Awards offered are National Technical Award (NTA) Level 4 – 6 (Ordinary Diploma Programs), Bachelor Degree Programs (NTA Level 7 – 8) and NTA Level 9 (Master Degree Programs). DIT is also registered by VETA to offer vocational training (NVA level I-III).

2.1. Vocational Training Programs

DIT Myunga Campus in Songwe, DIT Mwanza campus and the India Tanzania Center of Excellence in Information and Communication Technology(COEICT) in Dar es Salaam, have been registered by Vocational Education Training Authority (VETA) to run vocational training courses at National Vocational Awards (NVA) Level 1–3 in Information and Communication Technology (ICT).

2.2. Basic Technician Certificate and Technician Certificate

The Basic Technician Certificate and Technician Certificates are independent exit level of NTAs 4-5, respectively. Students who wish to exit or fail to attain an Ordinary Diploma but have successfully fulfilled the requirements for awards of Basic Technician Certificate (NTA 4) or Technician Certificate (NTA 5) shall be awarded the awards qualified for.

2.3. Ordinary Diploma Programs

Ordinary Diploma in Civil Engineering (offered at DIT Main campus and Myunga campus)
Ordinary Diploma in Computer Engineering
Ordinary Diploma in Electrical Engineering
Ordinary Diploma in Renewable Energy Technology
Ordinary Diploma in Biomedical Equipment Engineering
Ordinary Diploma in Electronics and Telecommunications Engineering
Ordinary Diploma in Mechanical Engineering
Ordinary Diploma in Science and Laboratory Technology (offered at DIT Main cumpus and Mwanza campus)

Ordinary Diploma in Mining Engineering

Ordinary Diploma in Information Technology

Ordinary Diploma Communication System Technology

Ordinary Diploma Multimedia and Film Technology

Ordinary Diploma in Food Science and Technology

Ordinary Diploma in Biotechnology

Ordinary Diploma in Leather Processing Technologies (offered at Mwanza campus)

Ordinary Diploma in Food Processing Technologies (offered at Mwanza campus)

2.4. Higher National Diploma Programs

The higher national diploma is part of the Bachelor Degree Program. Students who wish to exit or fail to attain Bachelor Degree but have successfully fulfilled the requirements for the awards of a Higher National Diploma shall be awarded the Higher National Diploma (NTA 7).

2.5. Bachelor Degrees Programs (NTA 8)

The Bachelor degree programs are carried out for three academic years and four academic years for Ordinary Diploma and Form six graduates, respectively. The listed below are the degree programs currently running at DIT.

i. Bachelor of Engineering (B.Eng) in Civil Engineering

ii. Bachelor of Engineering (B.Eng) in Computer Engineering

iii. Bachelor of Engineering (B.Eng) in Electrical Engineering

iv. Bachelor of Engineering (B.Eng) in Electronics and Telecommunications Engineering

v. Bachelor of Engineering (B.Eng) in Mechanical Engineering

vi. Bachelor of Technology (B.Tech) in Laboratory Sciences

vii. Bachelor of Engineering in Oil and Gas Engineering

viii. Bachelor of Engineering (B.Eng) in Mining Engineering

2.6. Master Program (NTA 9)

In response to the market demand capacity and technological challenges, DIT has three postgraduate programs,

i) Master of Engineering in Maintenance Management (18 months)

ii) Master in Computational Science and Engineering (18 months)

iii) Master of Technology in Computing and Communications. (18 months) and

iv) Master of Engineering in Sustainable Energy Engineering (24 months)

These programs are offered by coursework and dissertation. The detailed information on the courses offered, duration, and awards granted and related remarks are summarized in Table 2.1.

Table 2.1: A summary of Courses Offered at DIT

PROGRAMS OFFERED	PROGRAMME DURATION	CAMPUS
Certificate Programmes (NVA 1-3)		
Information Communication Technology (ICT)	NVA 1-1 Year NVA 2-1 Year NVA 3-1 Year	Dar es Salaam, Myunga & Mwanza
Plumbing and pipe fitting (PPF)	NVA 1-1 Year NVA 2-1 Year NVA 3-1 Year	Myunga
Leather Product Technology	NVA 1-1 Year NVA 2-1 Year NVA 3-1 Year	Mwanza
Science and Laboratory Technology	NVA 1-1 Year NVA 2-1 Year NVA 3-1 Year	
Diploma Programmes (NTA 4-6)		
Ordinary Diploma in Leather Products Technology	NTA 4-1 Year NTA 5-1 Year NTA 6-1 Year	Mwanza
Ordinary Diploma in Leather Processing Technology		
Ordinary Diploma in Food Processing Technology		
Ordinary Diploma in Civil Engineering	NTA 4-1 Year NTA 5-1 Year NTA 6-1 Year	Dar es Salaam & Myunga
Ordinary Diploma in Computer Engineering		Dar es Salaam
Ordinary Diploma in Electrical Engineering		
Ordinary Diploma in Electronics and Telecommunication Engineering		
Ordinary Diploma in Mechanical Engineering		
Ordinary Diploma in Science and Laboratory Technology		Dar es Salaam & Mwanza
Ordinary Diploma in Mining Engineering		Dar es Salaam
Ordinary Diploma in Biomedical Equipment Engineering		
Ordinary Diploma in Information Technology		

Ordinary Diploma in Renewable Energy Technology		Dar es Salaam
Ordinary Diploma in Communication System Technology		
Ordinary Diploma in Multimedia and Film Technology		
Ordinary Diploma in Food Science and Technology		
Ordinary Diploma in Biotechnology		
Degree Programmes (NTA 7-8)		
Bachelor of Eng. in Civil Engineering	NTA 7 : 2-3 Years NTA 8 : 1 Year	Dar es Salaam
Bachelor of Eng. in Computer Engineering		
Bachelor of Eng. in Electrical Engineering		
Bachelor of Eng. in Electronics and Telecommunication Engineering		
Bachelor of Eng in Mechanical Engineering		
Bachelor of Engineering in Oil and Gas Engineering		
Bachelor of Engineering in Mining		
Bachelor of Technology in Laboratory Sciences		
Masters Programmes (NTA 9)		
Master of Engineering in Maintenance Management	18 Months	Dar es Salaam
Master of Technology in Computing and Communication	18 Months	
Master in Computational Science and Engineering	18 Months	
Master of Engineering in Sustainable Energy Engineering	24 months	

CHAPTER THREE

ADMISSION REGULATIONS

3.0 ADMISSION REQUIREMENTS

DIT is accredited to run programs leading to both National Vocational Awards (NVA Levels 1-3) and National technical Awards (NTA Levels 4-9). DIT is accredited by the Vocational Education and Training Authority (VETA) to run NVA programs. Currently, the NVA programs are offered in all the DIT campuses, i.e. Dar es Salaam main campus (ICT), Myunga campus (ICT and Plumbing), and Mwanza campus (ICT, Laboratory and Leather Technology).

3.1. Admission Requirements for National Vocational Award (NVA LEVEL 1-3) Programs

3.1.1 Minimum Entry Qualifications for NVA Level 1

To qualify for admission into NVA Level 1, a candidate must be a holder of a CSEE **OR** Certificate of Primary Education **OR** any other equivalent qualifications as per VETA regulations.

3.1.2 *Minimum Entry Qualifications for NVA Level 2*

To qualify for admission into NVA level 2, a candidate must be a holder of NVA Level 1 **OR** any other equivalent qualifications as per VETA regulations.

3.1.3 *Minimum Entry Qualifications for NVA Level 3*

To qualify for admission into NVA Level 3, a candidate must be a holder of NVA levels **OR** any other equivalent qualifications as per VETA regulations

3.2 Admission Requirements for National Technical Award (NTA LEVEL 4-6) Programs

Candidates may join the Ordinary Diploma (NTA LEVEL 4-6) programmes offered by DIT if they hold the following qualifications:

3.2.1 General Entry Qualifications for Basic Technician Certificate in Engineering or Technology (NTA LEVEL 4)

To qualify for admission into Basic Technician Certificated in Engineering or Technology (NTA LEVEL 4) programmes, a candidate must be a holder of a CSEE with at least four (4) passes (i.e. D grade or higher) in Physics/Engineering Science, Mathematics and Chemistry and any other subject excluding a religious subject **OR** any other equivalent qualifications from recognized institutions as per NACTE regulations.

3.2.2 Specific Entry Qualifications for Basic Technician Certificate in Biomedical Equipment Engineering (NTA LEVEL 4)

To qualify for admission into Basic Technician Certificated in Biomedical Equipment Engineering (NTA LEVEL 4) programmes, a candidate must be a holder of a CSEE with at least four (4) passes (i.e. D grade or higher) in Physics/Engineering Science, Mathematics, Chemistry and Biology and any other subject excluding a religious subject **OR** any other equivalent qualifications from recognized institutions as per NACTE regulations.

3.2.3 Specific Entry Qualifications for Basic Technician Certificate Science and Laboratory Technology, Food Science and Technology, and Leather Products Technology (NTA Level 4) Programmes

For admission into Basic Technician Certificate (NTA Level 4) programmes, in Science and Laboratory Technology, Food Science and Technology and Leather Products Technology, applicants must be a holder of a CSEE with at least four (4) passes (i.e. D grade or higher) in Physics, Mathematics, Chemistry, Biology and any other subject excluding a religious subject **OR** any other equivalent qualifications from recognized institutions as per NACTE regulations.

3.2.4 Specific Entry Qualifications for Basic Technician Certificate in Multimedia and Film Technology, and Information Technology (NTA Level 4) Programmes

For admission into Basic Technician Certificate (NTA Level 4) programmes, in Multimedia and Film Technology, and Information Technology applicants must be a

holder of a CSEE with at least four (4) passes (i.e. D grade or higher) in Physics/Mathematics and any other subjects excluding religious subjects **OR** any other equivalent qualifications from recognized institutions as per NACTE regulations.

3.2.5 General Entry Qualifications for Technician Certificate in Engineering or Technology (NTA Level 5) Programmes

To qualify for admission into Technician Certificate in Engineering or Technology (NTA Level 5) programmes, a candidate must be a holder of Basic Technician Certificate in Engineering or Technology (NTA Level 4) **OR** any other equivalent qualifications as per NACTE regulations.

3.2.6 Specific Entry Qualifications for Technician Certificate in Science and Laboratory Technology, Food Science and Technology, and Leather Products Technology (NTA Level 5) Programmes

To qualify for admission into Technician Certificated in Science and Laboratory Technology, Food Science and Technology, and Leather Products Technology (NTA Level 5) programmes, a candidate must be a holder of Basic Technician Certificate (NTA Level 4) in relevant programmes **OR** any other equivalent qualifications as per NACTE regulations.

3.2.7 Specific Entry Qualifications for Technician Certificate in Multimedia and Film, and Information Technology (NTA Level 5) Programmes

To qualify for admission into Technician Certificated in Multimedia and Film Technology, and Information Technology (NTA Level 5), a candidate must be a holder of Basic Technician Certificate (NTA Level 4) in relevant programmes **OR** any other equivalent qualifications as per NACTE regulations.

3.2.8 General Entry Qualifications for Diploma in Engineering or Technology (NTA Level 6) Programmes

To qualify for admission into Diploma in Engineering or Technology (NTA Level 6) programmes, a candidate must be a holder of Technician Certificate in Engineering or

Technology (NTA Level 5) in relevant programmes **OR** any other equivalent qualifications as per NACTE regulations.

3.2.9 Specific Entry Qualifications for Diploma in Science and Laboratory Technology, Food Science and Technology, and Leather Products Technology (NTA Level 6) Programmes

To qualify for admission into Diploma in Science and Laboratory Technology, Food Science and Technology and Leather Products Technology (NTA Level 6) programmes, a candidate must be a holder of Technician Certificate (NTA Level 5) in relevant programmes **OR** any other equivalent qualifications as per NACTE regulations.

3.2.10 Specific Entry Qualifications for Diploma in Multimedia and Film Technology, and Information Technology (NTA Level 6) Programmes

To qualify for admission into Diploma in Multimedia and Film Technology, and Information Technology (NTA Level 6), a candidate must be a holder of Basic Technician Certificate (NTA Level 5) in relevant programmes **OR** any other equivalent qualifications as per NACTE regulations.

3.3 ADMISSION REQUIREMENTS FOR NTA (7-8) PROGRAMS

Candidates may join the Bachelor Degree in Engineering or Technology (NTA Level 7-8) programmes offered by DIT if they hold the following qualifications:

3.3.1 Minimum Entry Qualifications for Higher National Diploma in Engineering (NTA Level 7) Two (2) Years Programme

(i) To qualify for admission into a Higher National Diploma in Engineering (NTA Level 7) two (2) years programme, the candidate must be a holder of Ordinary Diploma in Engineering (NTA Level 6) **OR** its equivalent in the respective field with minimum GPA of 3.0 from a recognized Institution by NACTE, and at least any of the following:

- Four (4) passes (i.e D grade or higher) in relevant subjects at CSEE
- General Certificate Course in Engineering (GCE)
- NVA Level III in the relevant field with a minimum of D grade in Mathematics at Certificate of Secondary Education (CSEE).

For student who successfully completed NTA level 6 and did not meet the minimum entry requirements (GPA of 3.0) may join this programme through the foundation course recognized by TCU.

(ii) Holder of Full Technician Certificate (FTC) or its equivalent in the relevant field from a recognized Institution by NACTE with an average of minimum pass of C or an average of minimum 3 points based on the following conversion scale: A=5, B=4, C=3, D=2 or its equivalent and:

- At least four (4) passes (i.e D grade or higher) in the relevant subjects at Certificate of Secondary Education (CSEE)
- General Certificate Course in Engineering (GCE) in the relevant field with a minimum of D grade in Mathematics at CSEE.

3.3.2 Minimum Entry Qualifications for Higher National Diploma in Engineering (NTA Level 7) Three (3) Years Programme

(i) To qualify for admission into Higher National Diploma in Engineering (NTA Level 7) three (3) years programmes, a candidate must be holders of ACSEE in the combination of Physics, Chemistry and Mathematics (PCM); or Physics, Geography and Mathematics (PGM); and Physics, Mathematics and Computer (PMC) with Principal Pass in Mathematics and Physics from the same sitting with a total of not less than 4.0 points based on the following conversion scale: (A=5, B=4, C=3, D=2, E=1, S=0.5, F=0 for candidates who completed Form VI before 2014 and after 2015, and A=5, B+=4, B=3 C=2, D=1, E=0.5, F=0 for candidates who completed Form VI in 2014 and 2015.

OR

(ii) A holder of Ordinary Diploma in Engineering (NTA Level 6) **OR** its equivalent in other engineering fields with minimum GPA of 3.0 from a recognized Institution by NACTE, and at least any of the following:

- Four (4) passes (i.e D grade or higher) in relevant subjects at CSEE
- General Certificate Course in Engineering (GCE)
- NVA Level III in the relevant field with a minimum of D grade in Mathematics at Certificate of Secondary Education (CSEE).

3.3.3 Specific Entry Qualifications for Higher National Diploma in Science and Laboratory Technology (NTA level 7) Two (2) Programme.

(i) To qualify for admission into Higher National Diploma in Science and Laboratory Technology (NTA Level 7) two (2) years programme, candidates must be a holder of Ordinary Diploma (NTA Level 6) in the relevant programme or its equivalent in the respective field with minimum GPA of 3.0 from a recognized Institution by NACTE and at least four (4) passes (i.e D grade or higher) in relevant subjects at CSEE with a minimum of D grade in Chemistry or Biology.

OR

(ii) Holder of good Full Technician Certificate (FTC) or its equivalent in the relevant field from a recognized Institution by NACTE with an average of a minimum pass of C or an average of minimum 3 points based on the following conversion scale: A=5, B=4, C=3, D=2 or its equivalent and at least four (4) passes (i.e D grade or higher) in the relevant subjects at Certificate of Secondary Education (CSEE) OR General Certificate Course in Engineering (GCE) in the relevant field with a minimum of D grade in Chemistry and Biology at Certificate of Secondary Education (CSEE).

3.3.4 Minimum Entry Qualifications for Bachelor of Engineering (NTA Level 8) Programme

To qualify for admission into Bachelor of Engineering (NTA Level 8), the candidate must be holders of a Higher National Diploma in Engineering or Technology (NTA level 7) in the relevant field OR any other equivalent qualifications as per NACTE regulations.

3.4 ADMISSION REQUIREMENTS FOR NTA LEVEL 9 PROGRAMS

Candidates may join the Master Degree (NTA Level 9) programmes offered by DIT if they hold the following qualifications:

3.4.1 Minimum Entry Qualifications for Master of Engineering in Maintenance Management Programme:

Admission to the programme will be open to candidates who have NTA level 8 qualifications or equivalent who fulfil one of the following requirements:

(i) Applicants must be Holders of Bachelor degree in Engineering with a GPA of at least 2.7 from a recognized higher learning institution or its equivalent from any other accredited higher learning Institutions as per NACTE regulations.

OR

(ii) Applicants must be Holders of Bachelor degree in Engineering with PASS from a recognized higher learning institution and with three years working experience.

OR

(iii) Holders of Advanced Diploma in Engineering with a PASS from a recognized higher learning institution with a minimum of three years of working experience.

3.4.2 Minimum Entry Qualifications to join Master of Technology in Computing and Communications programme:

Admission to the programme will be open to candidates who have NTA level 8 qualifications or equivalent who fulfil one of the following requirements:

(i) Applicants must be Holders of Bachelor degree in Engineering or Science in a relevant field with a GPA of at least 2.7 from a recognized higher learning institution.

OR

(ii) Holders of Advanced Diploma in Engineering or Science in a relevant field with a PASS from a recognized higher learning institution with a minimum of five years working experience

3.5 ADMISSION CONDITIONS FOR TRANSFERRING AND RESUMING STUDENTS

A candidate who has already studied at DIT and halted studies for different reasons would again wish to study the same program level. A student studying in other similar institutions would want to be transferred to DIT for continuing with studies. For those cases, the following conditions will apply:

(i) If a candidate completed a DIT program level and would like to continue with higher program level, will have to apply for admission following the regular admission procedures.

(ii) The resumption of studies is only possible within the respective period of studies and when the applied program for is still available. The candidate will be admitted without exception to the currently valid curriculum and the fees/costs payable to the Institute by the candidate in that respective academic year will apply.

(iii) Masters student may freeze studies for maximum of two years upon request after completion of coursework. The resumption of studies will based on condition in item (ii) above.

(iv) Students who transferred to DIT will be asked to do all the modules covering DIT graduate skills requirements for the given NTA level.

(v) According to Institute examination regulations, a student who postponed studies for more than two academic years or absconded studies shall not be allowed to resume studies and will be required to apply for re-admission and pay all respective application fees.

3.6 PROCEDURES FOR APPLICATION AND ADMISSION

(i) Candidates applying for admission into various programs must apply through the DIT Online System within the announced deadline. Information about fees structure and application forms (DIT/PS/APPL/01 and DIT/PS/APPL/02) and procedures are available on DIT website (www.dit.ac.tz)

(ii) All eligible applicants applying for re-admission at NTA Level 5 or NTA Level 6 or NTA Level 8 are required to collect an application form from the Registrar's office.

(iii) All applications must pay a non-refundable application fee as described in application guideline advert.

(iv) The Applications are Scrutinized and Ranked According to the Performance In Terms Of Qualifications and The Availability of Admission Chances through the DIT Systems.

(v) The Applications will be processed through different organs, and the Successful Applicants will be notified through DIT Online System, DIT Website and DIT Notice Boards.

(vi) Non-disclosure of details or provision of false information to any of the sections in the application form if discovered shall render the candidate's admission with DIT cancelled.

3.6.1 Additional Information to International Students

(i) In order to give enough time for processing International applications, the deadline for international applicants will be three weeks earlier than local applicants' deadline.

(ii) International applicants will be required to submit certified copies of their relevant certificates to DIT for validation processes. The Institute will be responsible for handling the validation processes on behalf of applicants.

(iii) Application fee paid by the International applicant should include the certificate validation processing fee.

(iv) Applicants with foreign certificates will be considered after obtaining an equivalent of translation of their academic certificates from Tanzania Commission for Universities (TCU) or the National Council for Technical Education (NACTE) or National Examination Council of Tanzania (NECTA)

(v) All international students are required to apply for a residence permit from their nearest Tanzania embassy before they depart for Tanzania.

3.6.1.1 Admission for Short-Term/Occasional Students

These are students admitted into undergraduate degree programmes for duration of one academic year or students admitted for one semester.

Upon successful completion of conditions mentioned in subsection 1.7 (i) through (v), the applicant who intends to enroll in NTA levels for short term basis and leave the country is required to meet the DIT admission criteria as described in individual NTA level. Upon successfully completion of the program, his/her grades will be submitted to the home institution.

3.7. OTHER IMPORTANT INFORMATION RELATED TO ADMISSION

3.7.1 Registration

(i) Every student is required to report at the Institute at the beginning of the semester and on the prescribed date by the Institute.

(ii) All continuing students at DIT are required to register for studies in every semester/academic year through DIT OSIM or as determined by the DIT management.

(iii) All first-year students will be registered for studies at DIT upon submission and verification of original (Academic and Birth) certificates and payment of all prescribed fees of the Institute within four weeks from the first day of the orientation week.

(iv) All fees paid to the Institute shall not be refunded

(v) All selected candidates are required to register after they have paid registration fee within the first four weeks after arrival at the Institute. Specifically, the deadline for registration of first-year students is four weeks from the first day of the orientation week, while for continuing students it is the Friday of the fourth week after the beginning of the First Semester session.

(vi) Registered students will be issued Identity Cards (IDs), either for full-year or single semester upon payment in full or 50% of the prescribed fee, respectively.

(vii) Students who have been selected but cannot register for any reason cannot defer the admission to the next academic year. Such students need to apply afresh.

(viii) Change of names by students is not allowed during study at the Institute. Names appearing on the original academic certificates shall be used.

(ix) The student will be allowed to change the programme of study if there is the availability of place in the new programme, eligibility of a student for the new course or based on medical grounds. No student is allowed to change course later than the Friday of the second week after the beginning of the first-semester session.

(x) No student is allowed to postpone studies after the commencement of an academic year except under exceptional circumstances deemed necessary by the Registrar. Permission to postpone studies is considered after producing satisfactory evidence for the reasons for postponement and written approval from the sponsor.

(xi) Students discontinued from studies on academic grounds may be re-admitted to a different programme in the immediate next academic year or the same programme after a lapse of one year.

(xii) Students discontinued from studies on disciplinary grounds are barred from re-admission to any programme at the Institute.

(xiii) Students discontinued from studies because of examination irregularities will be considered for re-admission after they have been away for a minimum of two years. They will be required to re-apply and complete with other applicants.

(xiv) Students who do not appear or register for the retake will automatically be ABSCONDED from studies.

3.7.1.1 During registration, every student must produce the following documents:

(i) DIT Joining Instructions sent to the candidate

(ii) A duly filled acceptance form to abide by the Institute Rules and Regulations

(iii) A duly filled medical examination form

(iv) All the original receipts/pay in slips of the money paid to the Institute through the Bank

(v) Original certificates, academic transcripts, statement of results, etc.

(vi) A birth certificate/affidavit

(vii) Two recent stamp size photographs

(viii) TCU Certified undergraduate certificates for candidates who graduated in other Universities/Institutes/colleges outside Tanzania.

3.7.1.2 Institute Regulations

Upon admission, all First Years (Students) must obtain and read thoroughly and comply with the following regulations: (Other information can be obtained on DIT Website (http://www.dit.ac.tz).

(i) Conditions for Government sponsorship (in case of government-sponsored students)

(ii) Students General Welfare, Conduct and Disciplinary Regulations

(iii) Examination Regulations

(iv) The Constitution of the Dar es Salaam Institute of Technology Students Organization (DITSO)

(v) Industrial Practical Training (IPT) Regulations

(vi) Library Regulations

(vii) Postgraduate guidelines special for postgraduate students

(viii) Any other regulations, guidelines and policies issued by DIT from time to time.

(ix) DIT Prospectus

(x) ISAB policy

CHAPTER FOUR

FEES AND OTHER FINANCIAL REQUIREMENTS

4.1. General Information

Apart from tuition fee, each student is required to pay the following:

4.1.1 Registration Fee

All selected candidates will be required to register annually and pay a registration fee of 10,000/= only for Tanzanian citizen and USD 40 for non-Tanzanian citizen per year. For Postgraduate Programs, registration fees is TSh 50,000/= for Tanzanian or USD 50 for non-Tanzanian students per year.

4.1.2 Caution Money

Each student is required to pay TSh. 10,000/= for Tanzanian citizen or USD 50 for non-Tanzanian students as caution money. The money shall be refunded upon completion of course if he/she was not involved in any loss or damage of the Institute's properties. Where losses/damage exceed 10,000/= or USD 50 the student shall be asked to pay the difference.

4.1.3 Identity Card

Each student is required to come with two recently taken stamp size photographs and TSh. 10,000/= for the cost of identity card. This amount is paid once. Replacement for a lost identity card shall be done after obtaining a loss report from Police Station and payment of TSh. 10,000/= for Tanzanian citizen or USD 20 for non-Tanzanian students.

4.1.4 Membership to the DIT Students' Organization

Every DIT registered student is a member of the DIT Students Organization (DITSO). The membership registration fee for the first year students is TSh. 10,000/= for Tanzanian citizen or USD 20 for non-Tanzanian students Membership subscription fees for every continuing student is TShs 5,000/= for Tanzanian student or USD 20 for non-Tanzanian students each year.

4.1.5 Students Relief Fund /Medical Contribution

Students with no valid health insurance membership cards are required to pay a total of TShs. 50,400/= for Tanzanian students or USD 60 for non-Tanzanian students as a

contribution towards students joining NHIF. A non-Tanzanian student under postgraduate program is required to pay USD 75. This amount is paid directly to the Institute's Bank Account. Students with NHIF or other health insurance membership cards are not required to pay the contribution. However, the ID for a health insurance membership is required before registration as evidence of payment for this contribution. Every student is required to pay TShs 5000/= or USD 5 for non-Tanzanians for student relief fund whereby the generated fund will be used as per DIT relief fund policy.

4.1.6 Accommodation in DIT Hostels

Ordinary Diploma (NTA Level 4-6) government sponsored students seeking accommodation in the Institute's hostels are required to bring with them: plates, cups, spoons, forks, bed sheets, pillows, mosquito nets and blankets. Every student shall pay in advance the prescribed accommodation fees before being granted institute's accommodation.

4.2. Specific Information on Students Sponsorship

Students pursuing Ordinary Diploma (NTA level 4-6) programs may join the Institute under government sponsorship or as privately sponsored candidates. Whereas students pursuing Bachelor degree are encouraged to apply for scholarship, loan from Higher Education Students Loan Board (HESLB) or third party. The fee structures for government, private sponsored students pursuing Ordinary Diploma (NTA level 4-6) programs, students pursuing Bachelor degree Programs and students pursuing Master program are as shown in Table 4.1, 4.2 and 4.3, respectively.

Table 4.2 (a) Fees /costs direct payable to the Institute for Government Sponsored Diploma Student (NTA Level 4-6)

S/N	Description	1st Year (NTA 4)	2nd Year (NTA 5)	3rd year (NTA 6)
1	Tuition fee	130,000.00	130,000.00	130,000.00
2	Registration fee	10,000.00	10,000.00	10,000.00
3	DIT Examination fee	60,000.00	60,000.00	60,000.00
4	Student's identity card	10,000.00	10,000.00	10,000.00
5	Library membership fee	10,000.00	10,000.00	10,000.00
6	National Health Insurance Fund (NHIF)*	50,400.00	50,400.00	50,400.00
7	DIT students union organization fee	10,000.00	10,000.00	10,000.00
8	Caution money	10,000.00	-	-
9	Student NACTE fee	5,000.00	15,000.00	15,000.00
10	Student relief fund**	5,000.00	5,000.00	5,000.00
11	Sports & games	5,000.00	5,000.00	5,000.00
12	Costs for industrial visits costs & supervision	15,000.00	15,000.00	15,000.00

**To be paid by all students with no health insurance or invalid health insurance.*

*** Generated funds to be used as per the DIT student relief fund policy*

Table 4.2 (b) Fees /costs direct payable to the Institute for Private Sponsored Students (NTA Level 4-6)

S/N	DESCRIPTION	Tanzanian1st Year (NTA 4)	Non-Tanzania USD	Tanzanian 2nd Year (NTA 5)	Non-Tanzania USD	Tanzanian 3rd Year (NTA 6)	Non-Tanzanian (USD)
1	**Tuition fee**	**950,000.00**	**1,000.00**	**950,000.00**	**1,000.00**	**950,000.00**	**1,000.00**
2	Registration fee	10,000.00	40.00	10,000.00	40.00	10,000.00	40.00
3	DIT examination fee	60,000.00	75.00	60,000.00	75.00	60,000.00	75.00
4	Student's identity card	10,000.00	10.00	10,000.00	10.00	10,000.00	10.00
5	Library membership fee	10,000.00	50.00	10,000.00	50.00	10,000.00	50.00
6	National Health Insurance Fund (NHIF)/Medical Contribution*	50,400.00	60.00	50,400.00	60.00	50,400.00	60.00
7	DIT students union organisation fee	10,000.00	20.00	10,000.00	20.00	10,000.00	20.00
8	Caution money	10,000.00	50.00	-	-	-	-
9	Student NACTE fee	15,000.00	10.00	15,000.00	10.00	15,000.00	10.00
10	Student relief fund**	5,000.00	5.00	5,000.00	5.00	5,000.00	5.00
11	Sports & games	5,000	10.00	5,000.00	10.00	5,000.00	10.00
12	Costs for industrial visits costs & supervision	15,000.00	15.00	15,000.00	15.00	15,000.00	15.00
		1,150,400.00	1,355.00	1,140,400.00	1,295.00	1,140,400.00	1,295.00

**To be paid by all students with no health insurance or invalid health insurance.*

*** Generated funds to be used as per the DIT student relief fund policy*

Table 4.2 (c) Costs direct payable to the Students (NTA LEVEL 4-6)

S/N	Description	1st Year(NTA 4)	2nd Year (NTA 5)	3rd Year (NTA6)
1.	Books & Stationeries	**150,000.00**	**150,000.00**	**150,000.00**
2.	Meals	952,000.00	952,000.00	952,000.00
2	Accommodation*	595,000.00	595,000.00	595,000.00
3	Industrial Practical Training (IPT) expenses	600,000.00	600,000.00	-
4	Transport allowance to attend IPT	40,000.00	40,000.00	-
5	Field/industrial visit (study tour) cost	40,000.00	40,000.00	40,000.00
6	Final year project	-	-	200,000
7	Books & stationeries	**150,000.00**	**150,000.00**	**150,000.00**
TOTAL COSTS		**2,377,000.00**	**2,377,000.00**	**1,937,000**

*The costs for accommodation is the minimum indicative price for students securing accommodation other than DIT hostel

N.B. The Institute reserves the right to change or modify fees and costs rate from time to time

Table 4.2 (d) Fees /costs direct payable to the Institute by B.Eng. /B.Tech. (NTA level 7-8) for Private Sponsored Students

S/N	DESCRIPTION	1st Year		2nd Year		3rd Year	
		Tanzanian (Tshs)	Non-Tanzania USD	Tanzanian (Tshs)	Non-Tanzania USD	Tanzanian (Tshs)	Non-Tanzanian USD
1	Tuition fee*	1,350,000.00	2,000.00	1,350,000.00	2,000.00	1,350,000.00	2,000.00
2	Registration fee	10,000.00	40.00	10,000.00	40.00	10,000.00	40.00
3	DIT Examination fee	60,000.00	100.00	60,000.00	100.00	60,000.00	100.00
4	Student's identity Card	10,000.00	10.00	10,000.00	10.00	10,000.00	10.00
5	Library Membership fee	10,000.00	50.00	10,000.00	50.00	10,000.00	50.00
6	National Health Insurance Fund (NHIF)/Medical Contribution**	50,400.00	75.00	50,400.00	75.00	50,400.00	75.00
7	DIT Students Union Organization fee	10,000.00	20.00	10,000.00	20.00	10,000.00	20.00
8	Caution money	10,000.00	30.00	-	-	-	-
9	TCU/NACTE fee	20,000.00	10.00	20,000.00	10.00	20,000.00	10.00
10	Student Relief Fund***	5,000.00	5.00	5,000.00	5.00	5,000.00	5.00
11	Sports & games	5,000.00	10.00	5,000.00	10.00	5,000.00	10.00
12	Costs for industrial visits costs &	15,000.00	15.00	15,000.00	15.00	15,000.00	15.00

	supervision						
Total		**1,555,400.00**	**2,315.00**	**1,545,400.00**	**2,335.00**	**1,545,400.00**	**2,335.00**

*Student benefiting from HESLB facility will be required to pay first part of the fees which is not covered by the HESLB

**For Non-NHIF or non-health insurance Member

*** Generated funds to be used as per the DIT student relief fund policy

Table 4.2 (e) Costs direct payable **to the B.Eng./BTech. Students (NTA level 7-8) for Private Sponsored Students**

S/N	DESCRIPTION	1st Year (NTA 7(1))		2nd Year (NTA 7(2))		3rd Year (NTA 8)	
		Tanzanian (TSHS)	Non-Tanzania (USD)	Tanzanian (TSHS)	Non-Tanzania (USD)	Tanzanian (TSHS)	Non-Tanzanian (USD)
1	Industrial Practical Training (IPT)	700,000.00	700.00	700,000.00	700.00	-	-
2	Transport fare to attend IPT*	40,000.00	40.00	40,000.00	40.00	-	-
3	Industrial/field visits costs	40,000.00	40.00	40,000.00	40.00	40,000.00	40.00
4	Book/Stationery costs	150,000.00	150.00	150,000.00	150.00	150,000.00	150.00
5	Meals costs	952,000.00	960.00	952,000.00	960.00	952,000.00	960.00
6	Accommodation**	595,000.00	600.00	595,000.00	600.00	595,000.00	600.00
7	Final year project fee	-	-	-	-	300,000.00	300.00
Total Costs		**2,477,000.00**	**2,490.00**	**2,477,000.00**	**2,490.00**	**2,037,000.00**	**2050.00**

*IPT rate per day TShs 10,000 x 56 days

**Variable depending on IPT place/location
N.B. The institute reserves the right to change or modify fees and cost rate from time to time.
It is the responsibility of the student to ensure that fees and other costs are remitted timely

Table 4.2 (f). Master of Engineering in Maintenance Management (MEng MM), Master of Technology in Computing and Communications (MTCC) and Master of computational science and engineering (MCSE) Programmes (NTA Level 9)

Fees/cost payable to the institute by MEng MM, MTCC and MCSE Student /Sponsor (NTA level 9)

S/N	DESCRIPTION	1st Year (NTA 9)		Semester III Dissertation (NTA 9)	
		Tanzanian (TShs)	Non-Tanzania (USD)	Tanzanian (TShs)	Non-Tanzania (USD)
1	Tuition fees	3,100,000.00	2,950.00	750,000.00	750.00
2	Registration fees	50,000.00	50.00	50,000.00	50.00
3	DIT examination fees	200,000.00	200.00	200,000.00	200.00
4	DIT identity card	10,000.00	10.00	10,000.00	10.00
5	Library membership	30,000.00	50.00	-	-
6	DITSO contribution	10,000.00	10.00	10,000.00	10.00
7	Caution money	10,000.00	10.00	-	-
8	National health insurance Fund (NHIF)*	50,400.00	50.00	50,400.00	50.00
9	Graduation fees	-	-	50,000.00	50.00
11	NACTE/TCU fee	20,000.00	20.00	20,000.00	20.00

12	Students relief fund**	5,000	5.00	5,000.00	5.00
Total costs		**3,490,400.00**	**3.365.00**	**1,145,400.00**	**1,145.00**

*****To be paid by the non-NHIF member or the non-health insurance member
** Generated funds to be used as per the DIT student relief fund policy

Table 4.2 (g). Costs payable direct to the M.Eng MM, MTCC and MCSE (NTA Level 9) students by Sponsors/Parents/Guardians

S/N	DESCRIPTION	1st Year (NTA 9)		Semester III Dissertation (NTA 9)	
		Tanzanian (TShs)	Non-Tanzanian (USD)	Tanzanian (TShs)	Non-Tanzanian (USD)
1	Book and stationary	650,000.00	650.00	50,000.00	50.00
2	Dissertation production costs*	-	-	250,000.00	250.00
3	Living and facilitation costs allowance*	3,600,000.00	3,600.00	1,800,000.00	1,800.00
4	Research costs*	-	-	2,000,000.00	2,000.00
Total costs		**4,250,000.00**	**4,250.00**	**4,100,000.00**	**4,100.00**

*Minimum indicative costs

NB: All students under 'students exchange training Programs' (occasional students) will pay their fees on a Semester
The Institute reserves the right to change or modify fees and cost rate from time to time.
It is the responsibility of the student to ensure that fees and other costs are remitted timely

Table 4.2(h) Fees structures for Master of Engineering in Sustainable Energy Engineering Programme (MESEE 19) 2021/2022.

S/N	Item	1st year		2nd year	
		Tanzanians (TZS)	Non Tanzanians (USD)	Tanzanians (TZS)	Non Tanzanians (USD)
1	**Tuition Fees**	**3,200,000.00**	**2,950.00**	**2,917,000.00**	**2,355.00**
2	Registration fees	50,000.00	50.00	50,000.00	50.00
3	DIT examination fees	200,000.00	200.00	200,000.00	200.00
4	DIT identity card	10,000.00	10.00	10,000.00	10.00
5	Library membership	30,000.00	50.00	-	-
6	Caution money	10,000.00	10.00	-	-
7	Graduation fees	-	-	50,000.00	50.00
8	NACTE/TCU fee	20,000.00	20.00	20,000.00	20.00
9	**Student relief fund	5,000.00	5.00	5,000.00	5.00
10	DITSO contribution	10,000.00	20.00	10,000.00	20.00
11	National Health Insurance Fund **(NHIF)***	50,400.00	50.00	50,400.00	50.00
	Total costs	**3,585,400.00**	**3,365.00**	**3,312,400.00**	**2,760.00**

nsurance or invalid health insurance students only of a respective academic year.

Table 4.2(h) Fees payable by Parents/ Gordian/Sponsor Master of Engineering in Sustainable Energy Engineering Programme

S/N	Description	1st year		2nd year	
		Tanzanian (TZS)	Non Tanzanian 1st year (USD)	Tanzanian (TZS)	Non Tanzanian (USD)
1	*Book and stationery	900,000.00	800.00	450,000.00	400.00
2	*Dissertation production costs		-	250,000.00	500.00
3	*Living and facilitation costs allowance	3,600,000.00	3,600.00	3,600,000.00	3,600.00
4	*Research costs	-	-	3,000,000.00	3,000.00
Total costs		**4,500,000.00**	**4,400.00**	**7,300,000.00**	**7,500.00**

*Minimum indicative costs

NOTE THAT

(a) The Institute reserves the right to change or modify fees and costs rate from time to time

(b) It is the responsibility of the student to ensure that fees and other costs are remitted timely

(c) Fees once paid are non-refundable.

(d) Total amount required for the 1st year can be paid in two installments. At least 50% of the tuition fee plus other cost should be paid as condition to registration at the 1st semester and the remaining fees is paid in the 2nd semester of an academic year.

(e) You can consult the DIT postgraduate Coordinator for advice on payment schedule.

4.3 SPECIAL FACULTY/COURSE REQUIREMENTS FOR B.ENG (NTA 7-8) PROGRAMME

Faculty/course requirements enable students to realize curriculum and participate effectively in both theoretical and practical studies in accordance with requirements of the curriculum. Cost for this item varies from one course to another depending on the respective curriculum requirements. The corresponding cost implications are outlined in Table 4.6. Course requirement fund is recommended to be paid directly to the Institute.

Table 4.3 Special Faculty/Course requirements for Bachelor Degree Programs. NTA Level 7-8

PROGRAMME	Costs (TShs)
Civil Engineering	350,000.00
Computer Engineering	220,000.00
Electrical Engineering	200,000.00
Mechanical Engineering	350,000.00
Electronic and Telecommunication Engineering	265,000.00
Laboratory Sciences	350,000.00
Oil and Gas Engineering	350,000.00
Mining Engineering	350,000.00

All students under 'students exchange programs' (Occasional students) will pay their fees on a Semester Basis

4.4 FINAL PROJECT/RESEARCH REQUIREMENTS

B.Eng. Students are required to undertake Senior Project I and II in the 5th and 6th semesters of their study respectively in accordance with the requirements of curriculum. The cost of undertaking the projects, amount to TSh. 300,000.00 or USD 300.00 for non-Tanzanians, where it is directly paid by the sponsor or third part to the student and the Institute respectively. For Master of Engineering in Maintenance Management (Meng MM), Master of Technology in Computing and Communications(MTCC) and Master of Computational Science and Engineering (MCSE) Programs costs for research is TSh. 2,000,000.00 (Tanzanians) or USD 2,000.00 (for non-Tanzanians) and for Master of Engineering in Sustainable Energy Engineering (MEngSEE) Programme is Tshs 3,000,000.00 for Tanzanians and USD 3000 for non-Tanzanians.

4.5 TUITION FEE AND OTHER FEES PAYABLE TO THE INSTITUTE

All private sponsored students are required to produce verifiable evidence of sponsorship from the respective organizations, parents/guardians, on the first day of each academic year. Sponsors are required to pay full tuition and other fees payable directly to the Institute before the respective students are registered to embark on studies. All fees and other payments payable to the Institute should be paid through any branch, CRDB Bank DIT, A/C No. 0150408417800 except DITSO and NHIF fee are paid through any branch, NBC bank DIT, A/C No.01113005481. Original Bank pay in slips should be presented before registration. Fees once paid will not be refunded.

DIT Bankers: CRDB, Vijana Branch – DSM A/C No. 0150408417800.

For Master Degree Programs payment should be made through the NBC account with the following bank details:

Bank Account: **Dar es Salaam Institute of Technology**
Account Number: **011103005389**
Bank: **NBC** (any Branch)

However, even in special cases where payment by installment is allowed, no student is registered for the final examination at the end of the semester or awarded a certificate by the Institute unless he/she has fully paid the relevant dues. Please note that, students must themselves collect from the Institute accounts office profoma invoices for the money due to be paid directly to the Institute. Profoma invoices for master degree candidates can be collected from ICB office, Block B ground floor.

4.5.1 Additional costs for other services

(i) Table 4.3.1 Hostel Charges per academic year as additional

PROGRAMME	Tanzanian	Non Tanzanian
	TShs	USD
Block I	50,000.00	500
Block II	50,000.00	
Block III	50,000.00	
Block IV	120,000.00	
Block V	120,000.00	
Chang'ombe Hostel	100,000.00	

(ii) Table 4.3.2 Other Additional Costs

SN	PROGRAMME	Tanzanian	Non Tanzanian
		TShs	USD
1	Application Fees for OD/B.Eng. (NTA Level 4-6,NTA Level 7-8)	10,000.00	10.00
2	Application fees for M.Eng (NTA level 9)	30,000.00	30.00

3	Replacement of lost ID card	10,000.00	20.00
4	DIT academic transcripts	15,000.00	15.00
5	DIT academic statement of results (8 copies)	10,000.00	10.00
		2,500/= for additional copy	2.5 for additional copy
6	Replacement of a lost/damaged DIT academic certificate*	25,000.00	25.00
7	Replacement of a lost/ damaged DIT academic transcript*	15,000.00	15.00
8	Certification of academic copies of certificate as true copy of the original certificate	2,500/= per copy	USD 2,5 per copy
9	Appeal for examination results (Nonrefundable)	10,000/= per module for NTA lLevel 4-6	10 per module for NTA Level 4-6
		15,000/= per modules for NTA lLevel 7-8	15 per modules for NTA Level 7-8
		20,000/= per module for NTA lLevel 9	20 per module for NTA Level 9

N.B: - DIT Hostel accommodation and meals is subject to availability of space

***Per Certificate after attending all the required procedures**

NB A retake student has to pay the tuition fee in full if the modules he/she retakes spread over both semesters of an academic year. If the module/modules he/she retakes are in a single semester of an academic year, he/she has to pay fifty percent (50%) of the tuition fee.

CHAPTER FIVE

EXAMINATION REGULATIONS

During each semester students are required to sit for examinations in accordance with the Institutes regulations. In fulfilling these requirements, NTA Levels 4-9 students are required to observe the Institute's examination regulations under clause 1.0 (statutory Examinations Powers) as approved by the DIT Council.

5.1 Statutory Examinations Power

The Dar es Salaam Institute of Technology (DIT) is empowered to make regulations governing the conduct and grant of awards as stipulated under Section 25 of the Dar es Salaam Institute of Technology Act No. 6 of 1997.

5.2 Primacy of Institute Examination Regulations

The Institute examination Regulations take precedence in respect of the conduct and administration of examination over any other regulations, including those of external or professional bodies, unless variation is specifically permitted by the DIT Council.

5.3 Examination regulations and their applications

5.3.1 The examination regulations detail courses of action to be taken by DIT on all matters related to examinations and awards.

5.3.2 These examinations regulations apply to programmes leading to the qualifications National Technical Awards Levels 4 – 9.

5.4 Cognizance of Examination Regulations

By registering as DIT student every student is deemed to be cognizant of, and to have agreed to abide by, the examination rules set out in these regulations.

5.5 Examinations

5.5.1 Examinations include continuous assessment (tests, assignments, seminars presentations, practical, dissertations or any other form of assessment specified in the study guides, issued at the beginning of Semester) and end of Semester Examinations including practical where appropriate.

5.5.2 There shall be a written and, where the course demands, a practical examination during each end of semester for a course taught.

5.5.3 Timing of examinations shall be between 08.00 am and 09.00 pm any day of the week including weekends. Approved public holidays and other days when the Institute is closed are excluded.

5.6 Registration for modules

5.6.1 In the First Semester of any programme of study candidates shall register for studies and modules in their respective Departments during the orientation week.

5.6.2 For second and following semesters students shall provisionally register for modules in the first two weeks of the semester.

5.6.3 Elective modules shall be registered at the Department offering the course and endorsed by the programme administering Department. The registration of elective modules shall be accomplished in the tenth week of the current semester before the semester in which the module(s) is offered.

5.6.4 A candidate may be allowed to add or drop an elective module within the first two weeks of the semester subject to the approval of the head of the programme administering department.

5.6.5 A candidate shall be examined all modules registered for and required to pass.

5.6.6 For an elective module to be offered the minimum number of students shall be ten (10) in NTA levels 4-8 and five (5) students for NTA level 9.

5.7 Eligibility for Examinations

5.7.1 Candidates eligible for examinations shall be those fulfilling Institute registration, course eligibility requirements, and full payment of fees.

5.7.2 No candidate shall be eligible for any examination in any module unless:

a) the candidate is registered;

b) The Head of Department has been satisfied that the candidate has undertaken and completed the module by attendance of at least 80% of the lectures and practical.

c) A candidate with compelling reasons is granted Permission to absent herself/himself from class by the Head of Department.

5.7.3 Permission for postponement of end of Semester Examinations for compelling reasons shall be granted by the while postponement of continuous assessment component for compelling reasons shall be granted by the respective Head of Department.

5.8 Performance Threshold

5.8.1 Examinations components

Examinations shall have two components that are assessed separately namely continuous assessment and end of Semester examinations. The candidates shall be required to pass both of them. Postgraduate students' dissertation is the 3rd examination component for NTA 9 and this shall be conducted and assessed in accordance to procedures stipulated in the DIT Postgraduate guidelines.

5.8.2 Weighting of Assessment components

The overall score shall be 100% and shall be composed of Continuous Assessment and end of Semester Examination components. Weighting of assessment components unless specified otherwise at the beginning of the semester shall be CA 60% and FE 40%. This weighting is aimed at efficient implementation of the Teaching Factory concept, where by more emphasis is put into hands-on training during the semester session. Components of CA per Module are described in Table 5.1.

Table 5.1: Components of CA per Module

Category	**Weight**
Class room tests (two tests)	15
Practical/Presentation	15
Individual Assignments	15
Group Assignment/Homework	15
TOTAL CA	**60**

5.8.3 Passing score

The passing score for each assessment component out of 100% at the respective NTAs levels shall be:

a) 50% for continuous assessment, for end of semester examination and for semester overall assessment for NTA levels 4 – 5.

b) 45% for continuous assessment, for end of semester examination and for semester overall assessment for NTA level 6.

c) 40% for continuous assessment, for end of semester examination and for semester overall assessment NTA levels 7 – 8.

d) 50% for continuous assessment, for end of semester examination and for semester overall assessment in NTA level 9 offered by coursework and dissertation.

5.8.4 Industrial Practical Training (IPT)

All industrial practical training modules for NTA Levels 4, 5 and 7 shall be carried out after the second semester of the respective academic year. The log books will be marked and IPT results shall be compiled for the first semester of the next academic year. IPT shall be conducted and assessed in accordance to procedures stipulated in the DIT IPT guidelines.

5.8.5 Students' Projects

5.8.5.1 Coverage

Project Data Collection and Project Data Analysis are covered in Semester I and II, respectively, for both NTA levels 6 and 8 candidates.

i) Project Data Collection module addresses the project proposal with preliminary data collection and is carried out in semester I in both NTA 6 and 8.

ii) Project Data Analysis module covers the data collection, organization, analysis and the final report done in semester II in both NTA 6 and 8.

5.8.5.2 Projects Evaluation

Students Projects (Project Data Collection and Project Data Analysis modules) shall be assessed like other module(s);

a) Evaluation of the Projects shall be done as guided in the Project guidelines for B. Eng and OD programs (Section 5.1).

b) A student failing in "Project Data Collection" module in semester I cannot proceed to "Project Data Analysis" module in semester II; he/she shall have to re-take the whole Project when next offered.

c) A student failing in "Project Data Analysis" module in semester II shall be required to re-take the whole Project when next offered. The score given to Project Data Collection in that case shall be nullified.

5.8.6 Dissertation

Dissertation module for NTA 9 shall be conducted and assessed according to the DIT Postgraduate guidelines.

5.9 Absence from Examination

5.9.1 Any candidate who absents oneself from a scheduled examination without Registrar permission shall be deemed to have absconded from the examination and shall be discontinued from studies.

5.9.2 A candidate allowed to be absent (authorized absence) from the End of Semester examination(s) shall have to sit for the respective examination(s) when next offered.

5.9.3 All cases of postponement of tests shall be approved by the respective head of department.

5.9.4 All cases of postponement of examinations shall be approved by the Registrar.

5.9.5 All cases of postponement of studies shall be approved by the DPARC through the Registrar.

5.9.6 A candidate who absents oneself from any continuous assessment or fails to submit assignment(s) given during the course work without compelling reasons shall be considered to have attempted such assignment(s) and shall be awarded a zero score.

5.10 Dates and duration of examinations

5.10.1 Dates and times of conducting continuous assessments shall be determined and indicated by the respective Lecturer(s)/Instructor(s) in the course outlines or study guides or otherwise at the beginning of the Semester.

5.10.2 Continuous assessment for all modules shall comprise of at least two individual assessments; which can be in the form of classroom tests, individual assignments, practical etc. that is done individually depending on the nature of module. Other assessments like group assignments, projects and others can be used as a compliment of the continuous assessment. The individual assessments shall take 75% (25% classroom tests, 25% practical and 25% individual assignments) and group assessments shall take 25% of total marks for continuous assessment per module.

5.10.3 Dates for the end of semester examinations shall be published in the Institute academic calendar approved by the Academic Committee of the Council.

5.10.4 Duration for end of semester theory examinations shall be at least two hours for NTAs 4 – 5, two and half hours for NTA 6 and three hours for NTAs 7 - 9.

5.11 Administrative Organs

5.11.1 Academic Board

There shall be an Academic Board of the Institute.

a) Responsibilities:

(a) The Academic Board shall receive and deliberate all academic matters (Examinations results, examination appeals, irregularities, examination reports and students' performance) and make recommendations to the Academic Committee

of the Council for approval.

(b) In addition, the Academic Board shall receive and deliberate academic policies and regulations and make recommendations to the Academic Committee of the Council for approval.

b) Composition:

(i) Principal: - Chairperson.

(ii) Deputy Principal (Academic Research and Consultancy): - Secretary.

(iii) Registrar.

(iv) Campus Directors.

(v) Heads of Academic Departments.

(vi) Two Student representatives (NTAs levels 4 – 6 and NTAs levels 7 – 8) nominated by the DIT Students Organization (DITSO).

(vii) Dean of students.

5.11.2 Irregularities Committee of the Academic Board

There shall be Irregularities Committee of the Academic Board hereinafter called Irregularities Committee.

a) Responsibilities:

i) The Irregularities Committee shall receive irregularities cases, deliberate, investigate and recommend action to be taken by the Registrar subject to approval by the Academic Board.

ii) The Academic Board and/or Irregularities Committee shall have powers to summon any academic staff, invigilator or

students for questioning, if deemed necessary.

b) Composition

Composition of the Irregularities Committee shall be decided by the Registrar.

5.11.3 Academic Appeals Committee of the Academic Board

There shall be Academic Appeals Committee of the Board of the Institute. Except where unfair marking in the conduct of any examination is alleged, no appeal shall be entertained in respect of on any other grounds.

(a) Responsibilities

The Academic Appeals Committee of the Academic Board shall receive appeals (appeals not related to unfair marking), investigate, discuss and make recommendations to the Academic Board of the Institute.

(b) Composition

(i) Registrar – Chairperson.

(ii) Secretary of the Academic Staff Association (ASA) – Secretary.

(iii) Head(s) of Department(s) of which the appealing student(s) belong(s).

(iv) Two Students representatives nominated by DITSO.

(v) Dean of students.

5.11.3.1 Appeals related to unfair marking

For appeals related to unfair marking the Registrar shall forward the appeal to the respective departments that offer the module. The Head of Department shall appoint expert(s) that shall determine the validity or re-mark the scripts and the department shall give its recommendations to the Academic Board.

5.11.3.2 Appeals not related to unfair marking

Appeals not related to unfair marking shall be forwarded to the Academic Appeals Committee of the Board that shall determine the validity of the appeal and shall give its recommendations to the Academic Board.

Procedures for Appeal

i. Appeal shall be lodged to the Registrar through the Heads of the respective Departments using appeal forms within seven (7) working days from the date of the official publication of results, unless directed otherwise by the Principal.
ii. All appeals must be accompanied by evidence of payment of a non – refundable appeal fee prescribed per module by the Principal at the beginning of each academic year. The appeal fee can be in either Tanzanian Shillings or US Dollar.
iii. The decision of the Council shall be final and no further appeals shall be entertained.

5.11.4 Academic Committee

There shall be Academic Committee of the Institute.

(a) Responsibilities:

i) The Academic Committee shall receive, deliberate and approve reports and recommendations of the Academic Board.
ii) The Academic Committee shall approve deliberations of the Academic Board and table to the Council for noting.

(b) Composition:

The composition of the Academic Committee shall be decided by the Council or other relevant instrument or law governing the Institute.

5.12 Examination Irregularities and Penalties

5.12.1 An Examination is any structured assessment activity designed to determine the extent to which each individual learner (candidate) has acquired the intended learning outcomes and skills. An examination irregularity is any offence; act or omission, or any event; act or omission, which may undermine or threaten to undermine the integrity, credibility, security or the fairness of the examination and assessment process. Examination irregularities vary depending on the nature of the examination in question.

5.12.2 Examination irregularities involved in Written Examinations, Tests and Quizzes:

a) BEFORE the examination starts; examination irregularities shall include, but are not limited to, the following:

(i) Fraudulently accessing or attempting to access examination questions or marking scheme before the examination is due.

(ii) Writing of examination related materials OR any unauthorized materials on one's body, clothing, shoes and/or the examination room setting such as walls, desks, chairs, floor, roof etc.

(iii) Going to an examination room or sitting with an intention of attempting the examination in a different room other than allocated.

b) DURING the examination; examination irregularities shall include, but are not limited to, the following:

(i) Possession and/or use of unauthorized materials such as written or printed materials, purses, electronic equipment including cell-phones, pagers and any other device (other than an approved device) capable of storing or receiving text or restricted information.

(ii) Unauthorised communication with any other person within or outside the examination room.

(iii) Attempting or facilitation of copying of other candidate's work.

(iv) Borrowing or exchanging materials such as calculators, rulers, question papers, answer books and pens among candidates.

(v) Writing on the examination question paper.

(vi) Going out of the examination room; temporarily or otherwise, without authorization or permission of the invigilator for the examination.

(vii) Staying out of the examination room for an unduly long stay, without authorization or permission of the invigilator for the examination.

(viii) Impersonation in writing or attempting to write examination.

(ix) Submitting/attempting to submit answer sheet(s) used not in the examination room.

(x) Causing disturbance in/near the examination room through but not limited to the following: trespassing, making/causing noise, assaulting the invigilator or another candidate, using abusive and/or threatening language.

(xi) Forged identification documents in relation to eligibility to sit for semester examinations, including but not limited to: Identity cards, Bank payment slips and Examination permits.

c) AFTER the examination ends; examination irregularities shall include, but are not limited to, the following:

(i) If the submitted examination answers booklets of two or more candidates are identical or reasonably identical as concluded by the module Instructor/Lecturer.

(ii) Unauthorised alteration of examination marks/grades, contents of examination answer booklets and contents of examination attendance sheets; this includes alterations in both electronic and hard copy forms.

(iii) Fraudulently accessing or attempting to access written examination answer booklets.

5.12.3 Examination irregularities involved in writing of Dissertations, IPT LOGBOOKS and Practical/Project/Industrial Visit Reports:

a) Submission of a plagiarized Assignment, Project report, IPT logbook contents, Dissertation or any other academic work. Plagiarism is presenting someone else's work or ideas as your own, with or without their consent, by incorporating it into your work without proper acknowledgement or crediting the original source.
b) Submission of forged reports such as Industrial Supervisor reports.

5.12.4 All cases of alleged examination irregularities as described under sections 12.2, 12.3 and 12.4 of these regulations, shall be referred to the Head of respective Department immediately which, through the Irregularities Committee, shall investigate and submit recommendations to the Institute Academic Board. Any candidate who shall be proved to have committed the described examination irregularity shall be DISCONTINUED from studies subject to approval of the Academic Committee and endorsement by the Council.

5.13 Release of Examination Results

5.13.1 Approval of Examination Results

The results of candidates in every examination shall be provisionally approved by the Institute's Academic Board and thereafter approved by the Academic Committee. The results approved by the Academic Committee shall be the final results; no further amendments shall be entertained. The results approved by the Academic Committee will be tabled to the Council for noting.

5.13.2 Right and Discretion of the Institute

(a) The issue of results and awards shall be entirely at the discretion of the Academic Committee of the Institute.

(b) The Institute, subject to the approval of the Council, shall amend the classification of, withhold or nullify an award of any candidate in proved cases of irregularity or any other forms of fraud, or to revoke, any certificate it has already awarded, and to require the awarded certificate to be returned to the Institute.

5.13.3 Release of Examinations Results and Candidates Responsibilities

a). Candidates shall be informed where and how to get their results as directed by the Academic Committee.

b). The Institute shall not, except in its absolute discretion, communicate with candidates or parents, or any other person claiming to act on behalf, on matters related to examination results.

c). Candidates shall be responsible for maintaining an awareness of their academic performance and dates of normal, supplementary and re-take examinations.

d). No mass action by students shall be entertained in academic matters as per regulations.

5.13.4 The Timing and Means of Release of examination results

(a) Examination provisional and final results shall be published immediately after the approval of the Institute's Academic Board and Academic Committee, respectively. The results may be posted on departmental notice boards and shall bear a certification of the Registrar. The Institute may also use other means including its own website and tools such as the electronic platform and/or through student's individual account of the existing Online Students Information System (OSIM). Only registered students will access their results.

(b) In the event Institute releases examination results by publishing in the news media, notice-boards or its official website, only examination numbers/ registration numbers shall be used. Under no circumstances shall names or any other identification known to a third party shall be used for releasing the results to the general public.

5.14 Preservation of Examination Scripts

(a) Examination scripts shall be preserved for a maximum of three (3) years after publication of results and shall be disposed off in a manner as may be determined by the Council.

(b) No appeal for remarking of examination script(s) will be entertained after three (3) years since the publication of results.

5.15 Academic Audit Units

Academic Audit Unit for programmes leading to the awards of NTA Levels 4 to 8 shall be one academic year. For (NTA 9) programme by coursework and dissertation, the academic Audit Unit shall be one year for the coursework and six months for dissertation.

5.16 Progression from one Academic Audit Unit to Another

5.16.1 A candidate in NTA levels 4-8 getting a GPA less than 1.8 shall be discontinued from studies. A candidate in NTA 9 programme by coursework and dissertation, getting overall GPA less than 2.5 in the coursework shall be discontinued from studies.

5.16.2 A candidate in the NTA 4-9 and General Course failing continuous assessment of some modules in that academic year shall NOT be allowed to sit for the final examination (FE) of the respective module(s) but shall be required to retake the module when next offered.

5.16.3 A student progressing from first year to second year (3 years Bachelor program) or from first year to third year (4 years Bachelor program) of NTA 7 but failing CA(s) of some modules may CARRY the modules with failed CAs provided that the number of CARRY modules does not exceed two (2).

5.16.4 A student failing CA and required to RETAKE the module shall be assigned grade F in the respective module. The grade (F) shall be used for the purpose of calculating the overall semester GPA and hence decide on the annual verdict of the candidate (Discontinuation or Retake).

5.16.5 A candidate in the NTA 4-9 and General course failing CA of a CARRY/RETAKE module(s) due to failed CA shall be discontinued from studies.

5.16.6 A candidate in the NTA 4-9 and General Course resuming from the postponement shall be required to be assessed in the same way as the entire cohort. He/she will also be required to find a combination of modules to complete his/her programme. In case of the programme has changed then he/she will be required to join a related programme.

Notwithstanding clause 16.4, the student will be required to continue pursuing the programme he/she enrolled initially.

5.16.7 A candidate in the NTA 4-8 and General Course RETAKING/CARRY OVER some modules shall be required to study the same modules when next offered and pass the respective modules in both CA and FE.

5.16.8 A candidate in the NTA 4-9 and general course failing FE of a CARRY/RETAKE module(s) shall be required to supplement the failed FE only once. No student shall be allowed to carry/retake the same module at the same NTA level more than once.

5.16.9 A SPECIAL examination candidate shall be assigned a dummy grade A for the purpose of the calculating overall GPA. If qualifies for special examination be allowed to sit for special examination and be awarded the actual marks obtained in the course work and semester examinations, respectively.

(b) A RETAKING/CARRY OVER examination candidate shall be awarded the actual marks obtained but shall be awarded the minimum passing grade obtained in the course work and semester examinations, respectively.

5.16.10 A candidate in NTA 4-8 getting a GPA of 1.8 or above but failing some modules in that academic audit unit shall be required to supplement the failed modules and pass before being promoted to the next academic audit unit.

5.16.11 A candidate in NTA level 9 getting a GPA of 2.5 or above but failing some modules in that academic audit unit shall be required to supplement the failed modules and pass before being promoted to the next academic audit unit.

5.16.12 A candidate in the NTA 4-8 and General Course failing in a supplementary examination shall be required to retake the respective module when next offered, but only once for the NTA level registered for provided that the candidate attains a GPA of at least 2.0 and passes at least 50% of the total credits.

5.16.13 A student in NTA 9 programme shall be allowed to carry-over modules failed during supplementary examinations provided that his/her overall coursework GPA is not less than 2.8. The carry-over module shall be cleared within the 12 months of the next academic year. The highest grade for NTA levels 4-9 supplementary examinations shall be the lowest pass mark for the respective NTA Levels.

5.17 Progression From One Level to the Next Level of Award

5.17.1 For promotion to the next level of award candidates shall be required to pass all prescribed modules for the current level through first sitting, supplementary or re-take/carry-over.

5.17.2 A candidate shall be allowed to proceed to the next level of award after passing all prescribed modules at the current level.

5.17.3 A candidate who does not meet requirements for level progression may be recommended for a lower level of award for which has fulfilled the requirements for the award. A student shall graduate after attaining the levels of award he/she is registered for. However, if for some reasons a candidate is unable to reach the final stage he/she may request for certificate/ transcript for the level of award successfully attained provided that the application for graduation participation is done at least six (6) months before the respective graduation date.

5.18 Special Examinations (First Sitting)

Candidates requesting to sit for special first sitting examinations shall do so at the permission of the Registrar.

5.19 Postponement of Studies

5.19.1 Permission for postponement of studies shall be granted by the Deputy Principal Academic, Research and Consultancy (DPARC) through Registrar and in consultation with the sponsor.

5.19.2 The maximum duration for postponement of studies for a particular NTA level, for whatever reasons, shall be two academic years.

5.19.3 No one shall be allowed to postpone more than once in one level of award except for compelling medical grounds, certified by medical specialist of a recognized medical institution/hospital.

5.20 Conditions for the Award

A candidate shall qualify for the award registered for if:

5.20.1 He/She has successfully completed all modules for the award and achieved a minimum cumulative Grade Point Average (GPA) equivalent to pass;

5.20.2 He/She has passed all industrial practical training modules; and

5.20.3 He/She has passed senior projects (where applicable).

5.20.4 He/She has paid required fees.

5.20.5 He/She has fulfilled all requirements established by the Council.

5.21 Classification of Awards

i) A Five – Point and Six-Point Systems shall be used in averaging the final grades in awards classified by the Institute at NTAs Levels 4-5 and NTAs Levels 6-9, respectively.

ii) Grade point (GP) for a module shall be calculated as a product of letter grade points achieved in the module (Table 5.2) and credits of the module i.e Σ (Letter Grade points × Credit). Ranges of scores for different grades and levels of studies are given in Table 5.2.

Table 5.2: Ranges of Scores for Different Grades

NTAs Level 4-5			NTAs Level 6			NTAs Level 7-8		
Grade	**Definition**	**Score Range**	**Grade**	**Definition**	**Score Range**	**Grade**	**Definition**	**Score Range**
A	Excellent	80 – 100	A	Excellent	75 - 100	A	Excellent	70 - 100
			B+	Well Above Average (Very Good)	65-74	B+	Well Above Average (Very Good)	60-69
NTAs Level 4-5			**NTAs Level 6**			**NTAs Level 7-8**		
Grade	**Definition**	**Score Range**	**Grade**	**Definition**	**Score Range**	**Grade**	**Definition**	**Score Range**
B	Above Average (Good)	65 – 79	B	Above Average (Good)	55-64	B	Above Average (Good)	50-59
C	Average (Satisfactory)	50-64	C	Average (Satisfactory	45-54	C	Average (Satisfactory)	40-49
D	Below Average (Poor)	40-49	D	Below Average (Poor)	35-44	D	Below Average (Poor)	35-39
F	Failure	0-39	F	Failure	0-34	F	Failure	0-34

5.22 Procedure for Classification of Degrees

(a) Classification of Awards for NTAs Level 4-5	
Class of Awards	Cumulative GPA
First Class	3.5 – 4.0
Second Class	3.0 – 3.4
Pass	2.0 – 2.9
(b) Classification of Awards for NTAs Level 6-8	
Class of Awards	Cumulative GPA
First Class	4.4 – 5.0
Upper Second Class	3.5 – 4.3
Lower Second Class	2.7 – 3.4
Pass	2.0 – 2.6
(c) Classification of Awards for NTA Level 9	
Class of Awards	Cumulative GPA
First Class	4.4 – 5.0
Second class	3.5 – 4.3
Pass	3.0 – 3.4

Table 5.3: Ranges of Scores for different Grades for NTA level 9 by Coursework and dissertation

Range of Marks (100%)	Grade	Grade point	Definition
70-100	A	5	Excellent
60-69	B+	4	Very Good
50-59	B	3	Good
40-49	C	2	Poor
35-39	D	1	Very poor
0-34	F	0	Failure

5.23 Procedure for Calculating Grade Point Average (GPA)

5.23.1 Modules considered in computing GPA

All core modules shall be included in calculating GPA. However, where a candidate takes elective modules above the minimum credits required, elective modules with highest grades required in order to satisfy the minimum number of credits shall be used in calculating the GPA. The remaining elective modules shall also be included in the transcript.

5.23.2 Computation of the Semester GPA (SGPA)

The computation of the Semester GPA (SGPA) will be based on the following formula:

$$\text{GPA FOR A GIVEN SEMESTER} = \frac{\sum(\text{Grade points x Credit})}{\sum \text{Credits}}$$

where grades and credits are for the entire semester.

5.23.3 Computation of the Annual GPA (AGPA)

The computation of the Annual GPA (AGPA) will be based on the following formula:

$$\text{GPA FOR A GIVEN ACADEMIC YEAR} = \frac{\sum(\text{Grade points x Credit})}{\sum \text{Credits}}$$

where grades and credits are for the entire academic year.

5.23.4 Computation of the Cumulative GPA (CGPA)

The computation of the Cumulative GPA (CGPA) will be based on the following formula:

$$\text{GPA FOR A GIVEN PROGARAME} = \frac{\sum(\text{Grade points x Credit})}{\sum \text{Credits}}$$

where grades and credits are for the academic programme.

Grade Points Computation for NTA 4-5

Range of Marks	Grade	Grade point	Equation For The Grade Point
80 – 100%	A	4.0	$\frac{\Sigma \text{ (Letter Grade points} \times \text{Credit)}}{\Sigma \text{ Credits}}$
65 – 79 %	B	3.0	
50 – 64 %	C	2.0	
40 – 49 %	D	1.0	
0 – 39%	F	0	

Grade Points Computation for NTAs 6

Range of Marks	Grade	Grade point	Equation For The Grade Point
75 – 100%	A	5.0	$\frac{\Sigma \text{ (Letter Grade points} \times \text{Credit)}}{\Sigma \text{ Credits}}$
65 – 74 %	B+	4.0	
55 – 64 %	B	3.0	
45 – 54 %	C	2.0	
35 – 44%	D	1.0	
0 – 34%	F	0	

Grade Points Computation for NTAs 7-9

Range of Marks	Grade	Grade point	Equation For The Grade Point
70 – 100%	A	5.0	$\frac{\Sigma \text{ (Letter Grade points} \times \text{Credit)}}{\Sigma \text{ Credits}}$
60 – 69%	B+	4.0	
50 – 59 %	B	3.0	
40 – 49 %	C	2.0	
35 – 39%	D	1.0	
0 – 34%	F	0	

5.23.5 Precision for Computations of Cumulative Grade Points

The order of precision of Grade Points Computation shall be as follows:

i. Computations of Cumulative Grade Points shall be made to the fourth

decimal place.

ii. Cumulative Grade Points shall be rounded off to three decimal places.

iii. For award classification purposes, final Grade Points shall be truncated to the first decimal place.

5.24 Institute Approved Awards

Upon completion of studies the Institute shall award successful candidates the following Institute awards as approved by the National Council for Technical Education (NACTE):

(a) NTA level 4 – Basic Technician Certificate.

(b) NTA level 5 – Technician Certificate.

(c) NTA level 6 – Ordinary Diploma.

(d) NTA level 7 – National Higher Diploma.

(e) NTA level 8 – Bachelor Degree.

(f) NTA level 9 – Master Degree.

5.24.1 Issuance of Academic Certificate

(a) The Institute shall award Academic certificates to successful candidates as approved by the Council of the Institute.

(b) The Institute may correct issued certificate and re-issue the corrected certificate if it is satisfied that there is a need to do so. The Principal shall prescribe the cost to be paid by the bearer of the certificate if the error to be corrected is caused by the bearer.

5.24.2 Replacement of Lost Academic Certificates

The Institute may issue another copy in case of loss of the original certificate on condition that:

(a) The applicant produces a sworn affidavit,

(b) The certificate so issued shall be marked "COPY", across it;

(c) The replacement certificate shall not be issued until 12 months after reporting the loss to the Institute;

(d) The applicant must produce evidence that the loss has been adequately publicly announced, including a written report from the Police;

(e) A fee prescribed by the Principal at the beginning of the academic year shall be charged, for the copy of the certificate issued.

5.24.3 Issuance of Transcript/Statement of results

The Institute may issue transcripts statement of results at a cost prescribed by the Principal at the beginning of the academic year.

5.25 Other Postgraduate guidelines

In addition to examination regulations, postgraduate students are required to comply with DIT postgraduate guidelines.

5.26 Amendments

Amendments on examinations regulations shall be done from time to time as deemed necessary by the Academic Committee.

CHAPTER SIX

PROFILE OF ACADEMIC DEPARTMENTS

6.1. DEPARTMENT OF CIVIL ENGINEERING

The department offers Ordinary Diploma (OD) at NTA level 6 and Bachelor of Engineering Degree (B. Eng) at NTA Level 8. The department also offers Master degree programme of Engineering in Maintenance Management (NTA 9) by coursework and dissertation. Students admitted for OD may exit at NTA level 4 and 5 with the award of Basic Technician Certificate (BTC) and Technician Certificate (TC), respectively. Successful students who complete Ordinary Diploma course are awarded an Ordinary Diploma at NTA level 6. While those for engineering degree courses may exit at NTA level 7 and awarded a Higher National Diploma (HD). Successful students who complete NTA level 8 are awarded Bachelor of Engineering Degree in Civil Engineering while successful students in NTA 9 will be awarded Master of Engineering in Maintenance Management.

To support the above programs, the department possesses adequate physical and human resources this include lecturers, classrooms, laboratories and workshops. It has thirty-eight 38 qualified teaching staff members and five technical supporting personnel.

6.1.1 Programs offered by Civil Engineering Department

(a)BASIC TECHNICIAN CERTIFICATE (BTC) IN CIVIL ENGINEERING (NTA LEVEL 4)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 04111	Algebra	6
GST 04112	Basic technical communication skills	6
ITT 04113	Computer Fundamentals and Basic Information Processing	6
CORE MODULES		
CET 04111	Construction Equipment and Machinery	6

CET 04112	Woodwork and Painting Practices	9
CET 04113	Introduction to Concrete Technology	6
CET 04114	Introduction to Technical Drawing	6
CET 04116	Linear Surveying	9
	Total	**60**

Semester II:

Module Code	**Module Title**	**Credit**
FUNDAMENTAL MODULE		
GST 04214	Trigonometry, Vectors and Complex numbers	6
COT 04216	Spreadsheet and Database Fundamentals	6
MET 04218	Arc Welding Processes	9
CORE MODULES		
CET 04211	Basic building maintenance	9
CET 04212	Basic Soil Mechanics	9
CET 04213	Introduction to Architectural Drawing	9
CET 04214	Masonry and Plumbing Practices	12
	Total	**60**

Total Credits at NTA Level 4: 120 (Minimum credits required at level 4: 120)

(b) TECHNICIAN CERTIFICATE (BTC) IN CIVIL ENGINEERING (NTA LEVEL 5)

Semester I

Module Code	**Module Title**	**Credit**
FUNDAMENTAL MODULE		
GST 05111	Differentiation and Integration	6
GST05112	Research Methods for Technicians	3
ITT 05114	Programming Fundamentals for Technicians	6
CORE MODULES		
CET 05111	Building and Civil Engineering Materials	6
CET 05112	Buildings Construction	9
CET 05113	Hydraulics and Fluid Mechanics	6

Module Code	Module Title	Credit
CET 05114	Land Surveying	9
CET 05115	Measurement of Building Works	8
CET 05116	Industrial Practical Training	10
	Total	**63**

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 05213	Probability and Statics for Technicians	5
GST 05214	Technical writing and Presentations	2
CORE MODULES		
CET 05211	Architectural Design and Drawing	9
CET 05212	Project for Survey	9
CET 05213	Road Construction and Maintenance	9
CET 05214	Soil Mechanics	9
CET 05215	Structural analysis	9
CET 05216	Water Supply and Sanitation	9
	Total	**66**

Total Credits at NTA Level 5: 129 (Minimum credits required at level 5: 120)

(c) ORDINARY DIPLOMA (OD) IN CIVIL ENGINEERING (NTA 6)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 06101	Conics and Differential Equation	4
GST 06102	Engineering Study Skills	2
GST 06103	Formalizations, Internationalization and E-Business	2
CSET 06101	Basic of Computer Programming	2
SLT P 06101	Electromagnetism	2
GST 06102	Engineering study skills	2
CORE MODULES		

Module Code	Module Title	Credit
CET 06101	Building Service and Maintenance	9
CET 06102	Elementary Structure Design	9
CET 06103	Route and Traffic Engineering	9
CET 06104	Structural Steel Design	10
CET 06105	Quantity Survey	9
CET 06106	Labour Based Technology	9
CET 06107	Project Data Collection	10
CET 06211	Industrial Practical Training	10
	Total	**96**

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 06204	Complex Number, Numerical methods and series	4
GST 06205	Technical Writing	2
GST 06206	Business Planning	2
CSET 06201	Computer programming and Data structure	2
SLTP 06202	Heat and Thermodynamics	2
CORE MODULES		
CET 06208	Reinforced Concrete design	10
CET 06209	Soil Mechanics and Foundations	9
CET 06210	Construction Management	9
CET 06211	Structural Timber Design	9
CET 06212	Pavement Design	9
CET 06213	Transportation Engineering	10
CET 06214	Project Data Analysis	10
	Total	**78**

Total Credits at NTA Level 6: <u>155</u> (Minimum credits required at level 6: 120

(d). BASIC TECHNICIAN CERTIFICATE IN MINING (BTC) ENG. (NTA LEVEL 4)

SEMESTER I

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 04101	Algebra	5
GST 04102	Basic Technical Communication Skills	2
SLTP 04101	Statics and Dynamics	3
GST 04103	Entrepreneurship Concepts and Context	3
CSET 04101	Computer Basics and Word Processing and Spreadsheet	2
MET 04103	Gas Welding Processes	9
CORE MODULES		
CET 04103	Introduction to Technical Drawing	9
MMT04101	Introduction to Mining	6
EET 04104	Electrical Installation & Drafting	12
MMT 04102	Fundamental of Drilling Practices	9
MMT 04103	Mine Safety and Regulations	6
MMT 04104	Drilling Skills Practices	6
MMT 04105	Introduction to Geology	6
EET 04102	Principles of DC Network	12
	Total	**90**

Semester II:

Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 04204	Trigonometry and Vectors	5
GST 04205	Communication Skills	2
GST 04206	Small Business Development	3
CSET 04204	Spread Sheet and Database	2
MET 04208	Welding Processes	9
SLTP 04202	Gravitational and Simple Harmonic Motion	3
CORE MODULES		
MMT 04205	Fundamentals of Structural Geology	6
MMT 04206	Explosive and Blasting Techniques	9

Code	Module Title	Credit
SLTP 04214	Basic chemistry Techniques	3
MMT 04207	Basic Surface Mining Practices	6
MMT 04208	Basic of Rock Properties for Drilling and Blasting	9
CET 04209	Mechanics	6
	Total	**63**

Total Credits of the equivalent NTA Level 6: 153 (Minimum credits required at level 6 : 120)

(e). TECHNICIAN CERTIFICATE (TC) IN MINING ENGINEERING –NTA LEVEL 5

Semester I

Module Code	Module Title	Credit
	FUNDAMENTAL MODULE	
GST 05101	Fundamental rules of Counting, Matrices and Differentiation	5
GST 05102	Business Communication	2
CSET 05101	Presentation and Internet	2
GST 05103	Business Start-up and Management	3
SLT 05101	Strength of Materials and Rotational Dynamics	3
	CORE MODULES	
MMT 05101	Introduction to Occupational Health and Safety	5
CET 05103	Measurement of Building Works	8
CET 05104	Building and Civil Engineering Materials	6
MMT 05102	Mining Environment and Ventilation	6
MMT 05103	Mining Techniques Practices	6
CET 05106	Hydraulics and Fluid Mechanics	6
MMT 05104	Industrial Practical Training	10
CET 05101	Land Surveying	9
CET 05105	Structural Analysis	9
ETT 04201	Telecommunication Principles	9
	TOTAL	**89**

Semester II

Module Code	Module Title	Credits
FUNDAMENTAL MODULE		
GST 05204	Integration, Statistics and Probability	5
GST 05205	Communication and Technical Presentations	2
GST 05206	Business Financial management and Accounting	3
GST 05207	Research Methods for Technicians	3
CORE MODULES		
MMT 05201	Occupational Health and Safety	5
MMT 05202	Surface Mining Survey	9
MMT 05203	Maintenance Management	6
MMT 05204	Mine supervision	6
MMT 05205	Material Handling & Transportation Systems	9
CET 05208	Architectural Design and Drawing	9
	Total	**60**

Total Credits at NTA Level 5: 133 (Minimum credits required at level 5: 120)

(f) ORDINARY DIPLOMA IN MINING ENGINEERING –NTA LEVEL 6

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 06101	Conics and Differential equation	4
GST 06102	Engineering Study Skill	2
GST 06103	Formalisation, Internationalisation and E- Business	2
CSET 6101	Basics of Computer Programming	2
SLT 06101	Electromagnetism	2
CORE MODULES		
MMT 06101	Underground Mining Methods and Practices	9
MMT 06102	Underground Mining Survey	6
MMT 06103	Principles of Geomechanics	9
CET 06105	Mineral Processing Techniques	9
CET 06104	Structural steel design	10
MMT 06104	Project data Collection	10

Module Code	Module Title	Credits
MMT 05210	Industrial Practical Training	10
CET 06105	Quantity Survey	9
CET 06105	Elementary Structural Design	9
TOTAL		**93**

Semester II

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 06204	Complex Number, Numerical methods and series	4
GST 06205	Technical Writing	2
GST 06206	Business Planning	2
CSET 06201	Computer programming and data structure	2
SLT 06201	Heat and Thermodynamics	2
CORE MODULES		
CET 06211	Structural Timber Design	9
MMT 06201	Introduction to Engineering Management	6
MMT 06202	Introduction to Mineral Economics	6
MMT 06203	Environmental Management in Mining	6
MET 06210	Industrial Refrigeration and A/C	9
MMT 06204	Final Project Reporting	10
MMT06205	Geochemical Monitoring	6
ELECTIVE MODULES		
MED 103	Industrial Management and Law	6
CET 309	Road construction	6
Total		**76**

Total Credit at NTA Level 6: 169 (Minimum credits required at level 6: <u>120.)</u>

(g) GENERAL COURSE PROGRAMME FOR B.ENG (CIVIL ENGINEERING)

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		

CSET 04101	Computer Basics and Word Processing	2
EET 04104	Electrical Installation and Draughting	12
GST 04102	Basic Technical Communication Skills	2
GST 04103	Entrepreneurship Concepts and Context	3
MET 04103	Gas Welding Processes	9
SLTP 04101	Static and Dynamics	3
CORE MODULES		
CET 04101	Linear Surveying	9
CET 04102	Road Drainage and Maintenance	6
CET 04103	Introduction to Technical Drawing	9
CET 04104	Basic Soil Mechanics	6
CET 06106	Labour Based Technology	9
CET 04105	Introduction to Civil Engineering Materials	6
CET 04106	Basic Construction Practices	6
CET 05105	Structural Analysis	9
	Total	**91**

Semester II

Module Code	**Module Title**	**Credits**
FUNDAMENTAL MODULES		
CSET 04204	Spreadsheet and Database	2
GST 04205	Communication Skills	2
GST 04206	Small Business Development	3
MET 04208	Welding Processes	9
SLTP 04202	Gravitation and simple harmonic motion	3
CORE MODULES		
CET 04102	Road Drainage and Maintenance	6
CET 04206	Basic Construction Practices	6
CET 04207	Basic Building Construction	9
CET 04208	Introduction to Architectural Drawing	9
CET 04209	Mechanics	5
CET 04210	Maintenance and Construction Techniques	9

Module Code	Module Title	Credits
CET 04211	Industrial Practical Training	10
CET 05210	Soil Mechanics	9
	Total	**82**

(h) HIGHER DIPLOMA IN CIVIL ENGINEERING (NTA LEVEL 7)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07101	Calculus	6
GSU 07105	Computing Using Mathematical Software	6
GSU 07106	Technical Communication Skills	6
CSEU 07102	Computer Programming Fundamentals	9
CORE MODULES		
CEU 07101	Basic Civil Engineering Materials	6
CEU 07102	Building Construction	6
CEU 07103	Engineering Geology	6
CEU 07104	Land Surveying	6
CEU 07105	Measurement of Building and Civil Works	6
CEU 07106	Strength of Materials	6
Total		**63**

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07202	Advanced Calculus	6
CSEU 07207	Fundamentals of Object Oriented Programming	6
CORE MODULES		
CEU 07201	Basic Structural Theory	6
CEU 07202	Buildings Planning and Drawing	9

Module Code	Module Title	Credit
CEU 07203	Civil Engineering Materials	6
CEU 07204	Concrete Technology	6
CEU 07205	Control Surveying	9
CEU 07206	Fluid Mechanics	6
CEU 07207	Labour Based Road Engineering	6
Total		**54**

Semester III

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07303	Differential Equations and Complex Variables	6
CORE MODULES		
CEU 07301	Construction Management	9
CEU 07302	Industrial Practical Training	12
CEU 07303	Open Channel Hydraulics	6
CEU 07304	Quantity Surveying	6
CEU 07305	Reinforced Concrete Design	6
CEU 07306	Soil Mechanics	6
CEU 07307	Structural Analysis	6
CEU 07308	Traffic Engineering	6
Total		**63**

Semester IV

Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07404	Probability and statistics	6
GSU 07407	Research Methods for engineers	6
CORE MODULES		
CEU 07401	Construction of Multi-storey Structures	9
CEU 07402	Contract Planning and Administration	6
CEU 07403	Engineering Hydrology	6

CEU 07404	Reinforced Concrete Design and Detailing	6
CEU 07405	Route Design	6
CEU 07406	Soil Technology	6
CEU 07407	Water Supply	9
	Total	**60**

Total Credits at NTA Level 7 is 243, (Minimum credits required at level 7 is 240)

(i) BACHELOR OF ENGINEERING IN CIVIL ENGINEERING (NTA 8)

Semester I

Module Code	Module Title	Credits
CORE MODULES		
CEU 08101	Bridge Design and Construction	9
CEU 08102	Construction Technology Services	6
CEU 08103	Engineering Economics	9
CEU 08104	Geographical Information System	6
CEU 08105	Highway Engineering materials	9
CEU 08107	Industrial Practical Training	12
CEU 08108	Project Data Collection	18
	Total	**75**

Semester II

Code	Module Title	Credit
CORE MODULES		
GSU 08201	Entrepreneurship for Engineers	3
CEU 08201	Foundation Engineering	9
CEU 08202	Industrial Building Construction	6
CEU 08204	Masonry and Retaining Wall Design	9
CEU 08207	Project Data Analysis	18
CEU 08208	Structural Timber design	6
Total		**51**

Total Credits at NTA Level 8(Structural Engineering) is 126 (Minimum credits required at this level: 120)

(j) HIGHER DIPLOMA IN OIL AND GAS ENGINEERING NTA LEVEL 7

Semester I

Module Code	Module Title	Credit
CORE MODULES		
GSU 07101	Calculus	6
GSU 07105	Computing Using Mathematical Software	6
CSEU 07101	Object Oriented Programming	9
GSU 07106	Technical Communication Skills	6
CORE MODULES		
CMU 07101	Petroleum Geosciences	6
CMU 07102	Petrophysics	6
CMU 07103	Oil and Gas Drilling	6
CMU 07104	Inspection and Maintenance of Drilling Equipment	6
CMU 07105	On shore and offshore safety	6
CEU 07105	Strength of Material	6
Total		**63**

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07202	Advanced Calculus	6
CSEU 07201	Data Structure and Programming	9
CORE MODULES		
CMU 07206	Well completion and Oil and Gas Production	9
CMU 07207	Material handling and supply	6
CMU 07208	On shore and Offshore environmental management	6
MEU 07215	Welding Technology in oil and Gas	6
CEU 07210	Basic Structural Theory	6
CEU 07211	Fluid Mechanics	6
CMU 07210	Semester II Project	3
CMU 07211	Industrial Practical Training (IPT)	12

Module Code	Module Title	Credit
Total		69

Semester III

Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07303*	Differential Equations and Complex Variables	6
CORE MODULES		
CMU 07312	Control Surveying	6
CMU 07313	Oil and Gas Pipe laying and construction	6
CMU 07314	Oil and Gas processing plant operations	9
CMU 07315	Safety in Oil and Gas Processing Plant	6
CMU 07316	Oil and Gas distribution system	6
CMU 07317	Inspection and Maintenance of Oil and Gas Processing Facilities	6
CEU 07316	Construction Management	6
CMU 07318	Downstream Operations Practices	6
Total		**57**

Semester IV

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07404	Probability and statistics	6
GSU 07407	Research Methods for Engineers	3
CORE MODULES		
CMU 07419	Intercultural skills	6
EEU 07408	Electrical Power plant Systems	9
CMU 07421	Liquefied Natural Gas plant operations	6
CMU 07422	Occupational Health and Safety in oil and gas	9
CMU 07423	Semester IV Project	6
CMU 07424	Inspection and Maintenance of downstream plants	6
CMU 07425	Industrial Practical Training (IPT)	12
	Total	**63**

Total Credits at NTA Level 7 is 255, (Minimum credits required at level 7 is 240)

(k) BACHELOR DEGREE IN OIL AND GAS ENGINEERING (NTA 8)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
MEU 08103	Laws for Engineers	6
MEU 07303	Finance and Human Resources Management	6
CORE MODULES		
CMU 08101	Industrial Practical Training (IPT)	12
CMU 08102	Petroleum Economics	9
CMU 08103	Project Data Collection	18
CMU 08104	Reservoir Engineering	9
CEU 08105	Geographical Information System	6
CSEU 08104	Real Time System Design	6
Total		72

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 08201	Entrepreneurship for Engineers	6
CORE MODULES		
CMU 08201	Project data Analysis	18
CMU 08202	Waste Management	6
CEU 08204	Foundation Engineering	9
MEU 07404	Engineering Operations Management	6
EEU 08206	Renewable Energy Technologies	9
Total		54

Total Credits at NTA Level 8: 126 (Minimum credits required at level 8: 120)

(l) MASTER OF ENGINEERING IN MAINTENANCE MANAGEMENT (NTA 9)

Semester I

Module Code	Module Title	Credits
CORE MODULES		
MMG 09111	Leadership Principles and Human Resource Management	9
MMG 09112	Maintenance Project Management	12
MMG 09113	Maintenance Organization and Planning	15
CCG 09104	Advanced Research Methodology	12
	Total	**48**
ELECTIVE MODULES		
MMG 09114	Electrical Workshop Maintenance	12
MMG 09115	Building Maintenance Management	12
MMG 09116	Fluid Handling Systems Maintenance	12
Total		**36**

Semester II

Code	Module Title	Credits
CORE MODULES		
MMG 09211	System Engineering and Life Cycle Management	12
MMG 09212	Computerized Maintenance Management System	12
MMG 09213	Risk and Safety Management	12
	Total	**36**
Elective Modules		
MMG 09214	Energy Management	12
MMG 09215	Power Transmission and Distribution Lines Maintenance	12
MMG 09216	Road Infrastructure Maintenance	12
MMG 09217	Water and Sanitation Infrastructure Maintenance	12
MMG 09218	Power Plant Maintenance	12
MMG 09219	Industrial Equipment Maintenance	12
Total		**60**

Semester III

Code	Module Title	**Credits**
MMG 09311	Dissertation	**60**

Total Credits at NTA 9 is 240; Minimum credits required at NTA 9 are 180.

6.1.2 List of Academic Staff in the Department of Civil Engineering Lecturers and Head of Department

Lecturer and Head of Department

S.J. Mbawalla, FTC-Civil Eng. (DTC-Dar), ADE-Civil Eng. (DTC-Dar), MSc-Geotechnics (UP-Pretoria), PhD-Geotechnical Eng. (UP-Pretoria)

Senior Lecturers

A.S. Oberlin, ADE-Public Health Eng. (UCLAS-Dar), MSc-Urban Environmental Mgt. (HIS&WUR-Rotterdam), PhD-Environment Mgt. (WUR-Wageningen)

F.P. Malembeka, PhD (Engineering)(Kyoto University Japan), MSc. Water Resource Eng. (UDSM), BSc.Civil & Water Resources Engineering (UDSM).

Lecturers

S.T. Kazumba, BSc-Civil Eng. (UDSM-Dar), MSc-Water Resources Eng. (UDSM-Dar), PhD-Water Resources Mgt. (GU-Gifu)

J.L. Malisa, BSc-Civil Eng. (UDSM-Dar), MSc-Water Resources Eng. (UDSM-Dar), PhD-Water Resources Eng. (UDSM/NTNU-Dar)

J.F. Musagasa, BSc-Civil Eng. (UDSM-Dar), MSc-Highway Eng. (UDSM-Dar), PhD-Environ. Geotechnics (FAMU-FSU-USA)

A.M. Thomas, BSc-Civil Eng. (UDSM-Dar), MSc-Water Resources Eng. (UDSM-Dar), PhD-Environmental Eng. (CQU-Chongqing)

R.M. Mkemai, BSc-Mining (UDSM-Dar), MSc-Mining & Geotechnical Eng. (LULEA-Norrbotten), PhD-Oil and Natural Gas Eng. (CUG-Wuhan)

Assistant Lecturers

I.M. Kanuti, FTC-Civil Eng. (DTC-Dar), MSc-Highway Eng. (SUB-Minsk)

P.G. Mfaume, BSc-Geology (UDSM-Dar), MSc-Geology (UDSM-Dar)

A.L. Ndibalema, AD-Building Economics (ARU-Dar), AT-Roads Maintenance Mgt. (RWTH-Aachen), MSc-Facilities Management (LMU-Leeds)

M.Z. Kaswa, FTC-Civil Eng. (DTC-Dar), ADE-Telecoms Eng. (DIT-Dar), PGD-Scientific Computing (UDSM-Dar), MSc-GIS (UP-Portsmouth)

Y.N. Ngoma, MSc-Structural Eng. (MMI-Mogilev), PGD-Geology (ITC-Delft)

M.F Kongola, BSc-Mining Eng. (UZA-Lusaka), MSc-Mining Eng. (UE-Exeter)

J.S. Nyaronyo, BSc-Mineral Processing (UDSM-Dar). MSc-Env. Tech. Mgt (ARU-Dar)

J.Z. Chacha, BEng-Civil Eng. (DIT-Dar), MSc-Civil Structural Eng. (GU-Wales)

S.P. Mbise, BSc-Civil Eng. (UDSM-Dar), MSc-Civil Eng. (UDSM-Dar)

J.A. Tibiika, BSc-Mineral Processing Eng. (UDSM-Dar), MSc-Petroleum Eng. (NTNU-Trondheim)

Z.N. Mkindi, BSc-Mining Eng. (UDSM-Dar), MSc-Petroleum Eng. (NTNU-Trondheim)

A.A. Towo, B-Architecture (ARU-Dar), M-Architecture (ARU-Dar)

A.J. Cheru, BSc-Mining Eng. (UDSM-Dar), MSc-Petroleum Eng. (NTNU-Trondheim)

A.J. Rujweka, BSc-Civil and Water Resources Eng. (UDSM-Dar), MSc-Water Resources Eng. (KUL&VUB-Leuven & Brussels)

F.M. Matata, BSc-Civil and Transportation Eng. (UDSM-Dar), MSc-Civil Eng. (UNF-Florida)

A.M. Barabara, OD-Mining Eng. (DIT-Dar), BEng-Civil Eng. (DIT-Dar), MSc-Sustainable Energy System Mgt. (Hanze-UAS-Groningen)

N.A Cosmas , BSc-Architecture(USTO-MB-Algeria), M-Architecture(USTO-MB-Algeria)

M. Salu, B-architecture (Tianjin-China), MEng-Architecture (Chongging-China).

Chief Instructor 1

G.Y. Bambaza, BSc-Civil Eng. (UDSM-Dar),MEM(UDSM-Dar),

Principal Instructors I

J.L. Kato, BSc-Civil Eng. (ARU-Dar)

A.E. Nungu, FTC-Civil Eng. (DTC-Dar), AC-Woodwork (DSD-Berlin), ADE-Civil Eng. (DIT-Dar)

Principal Instructors II

P.M.C. Njovu, FTC-Civil Eng. (DTC-Dar), BEng-Civil Eng. (MIST-Mbeya)

*W.E. Shiyo, BSc-Civil Eng. (UDSM-Dar), MSc-Civil Eng. (FSU-Florida)

Senior Instructor II

P.G. Mzava, BSc-Civil & Water Resource Eng. (UDSM-Dar),MSc Civil Eng(KSU—USA)

Principal Technician II

A.H. Hemed, FTC Civil Eng. (DTC-Dar), AD-Information Technology (BTEC-Soft-Tech-Dar)

Senior Technician I

C.P. James, FTC-Civil Eng. (DIT-Dar)

Laboratory Technician Grade I

M.M Magoli, FTC-Civil Eng. (TCA-Arusha), AC-Woodwork (DSD-Berlin)

Z.P. Mtunya, OD-Mineral Processing Eng. (MRI-Dodoma)

G.P Mtenga, OD-Mineral Processing Eng. (MRI-Dodoma)

Workshop Technician Grade I

B.P. Munishi, OD-Civil Eng. (DIT-Dar)

6.2. DEPARTMENT OF COMPUTER STUDIES

This Department offers Computer Engineering, Information Technology and Multimedia & Film Technology at Ordinary Diploma (NTA Level 4 – 6), Bachelor of Engineering (NTA Level 7 - 8), Master of Computational Science and Engineering (NTA Level 9) and Master of Technology in Computing and Communications (NTA Level 9) programme. It also provides services to other academic Departments in teaching computer related modules. This department has adequate facilities as well as 42 qualified teaching staff and 1 technical supporting personnel. The teaching facilities as well as staffing level in terms of numbers and qualifications are constantly improved to support the above programmes.

(A).BASIC TECHNICIAN CERTIFICATE (BTC) IN COMPUTER ENGINEERING (NTA LEVEL 4)

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 04111	Algebra	**6**
GST 04112	Technical Communication Skills	**6**
CORE MODULES		
ITT 04111	Computer Basics and Application	14
ITT 04112	Database Fundamentals	9

COT 04113	Computer Workshop Technology	9
COT 04118	Computer System Maintenance and Repair	9
ETT 04121	Basic Electronics	12
Total Credits		**65**

Semester II

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 04214	Trigonometry, Vectors and Complex Numbers	6
SLTP 04211	Basic Mechanics	3
GST 05215	Technical Writing and Presentation	6
CORE MODULES		
COT 04214	Computer System Architecture and Organization	9
ITT 04213	Programming Fundamentals	9
COT 04216	Computer Electronics Technology	9
COT 04215	Computer Networking	14
Total Credits		**56**

Total Credits at NTA 4 Computer Engineering: 126. (Minimum credits required at NTA 4: -120)

(B) TECHNICIAN CERTIFICATE (TC) IN COMPUTER ENGINEERING (NTA LEVEL 5)

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 05111	Engineering Mathematics for Technicians	9
CORE MODULES		
ITT 05111	Event Driven Programming	12
ITT 05112	Operating Systems	9
COT 05111	Network Administration	12
COT 05112	Peripheral Systems Maintenance and Repair	9
COT 05113	Industrial Practical Training	10

Total Credits	**61**

Semester II

Module Code	**Module Title**	**Credits**
	FUNDAMENTAL MODULES	
GST 05214	Statistics and Probability for Technicians	6
	CORE MODULES	
COT 05214	Computer Aided Design Fundamentals	10
ITT 05213	Fundamentals of Data Structures and Algorithms	9
COT 05214	Microprocessor Technology	12
ITT 05215	Database Management	12
COT 05216	Fundamentals of Embedded Systems	12
ITT 05216	Fundamental of System Analysis and Design	12
Total Credits		**73**

Total Credits at NTA 5: 134 (Minimum credits required at NTA 5: 120).

(C) ORDINARY DIPLOMA (OD) IN COMPUTER ENGINEERING (NTA LEVEL 6)

Semester I

Module Code	**Module Title**	**Credits**
	FUNDAMENTAL MODULES	
GST 06112	Startups Business Development	6
	CORE MODULES	
COT 06115	Project Conceptualization	10
COT 06111	Software Engineering Fundamentals	9
ITT 06112	Web Application Development & Hosting	12
COT 06118	Machine Learning	6
COT 06112	Automation and Control	9
COT 06113	Mobile Devices Maintenance and Repair	7
COT 06117	Industrial Practical Training	10
Total Credits		**69**

Semester II

Module Code	Module Title	Credits
	CORE MODULES	
ITT 06218	Cyber Security and Privacy	9
ITT 06214	Mobile Applications Development	9
COT 06210	Industrial Automation System	9
COT 06216	Project Realization	10
COT 06214	Digital Signal Processing	9
COT 06219	Artificial Intelligence	9
GST 06214	Startups Business Management	6
Total Credits		**61**

Total Credits at NTA 6: 130 (Minimum credits required at NTA 5: 120).

(d). BASIC TECHNICIAN CERTIFICATE (BTC) IN INFORMATION TECHNOLOGY (NTA LEVEL 4)

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 04111	Algebra	6
GST 04112	Technical Communication Skills	6
CORE MODULES		
ITT 04111	Computer Basics and Application	14
ITT 04112	Database Fundamentals	9
COT 04113	Computer Workshop Technology	9
COT 04115	Computer systems Maintenance and Repair	9
ITT 04114	Open Source Operating System Administration	12
Total Credits		**65**

Semester II

Module Code	Module Title	Credits

FUNDAMENTAL MODULES		
GST 04214	Trigonometry, Vectors and Complex Numbers	6
GST 04215	Technical writing and presentation	6
CORE MODULES		
COT 04215	Computer systems architecture and organization	9
ITT 04213	Programming Fundamentals	9
COT 04211	Computer Networking	14
ITT 04212	Information Technology Project Management	12
Total Credits		**56**

Total Credits at NTA 4 : 121. (Minimum credits required at NTA 4:-120)

(e). TECHNICIAN CERTIFICATES (TC) IN INFORMATION TECHNOLOGY (NTA LEVEL 5)

Semester I

Module Code	**Module Title**	**Credits**
FUNDAMENTAL MODULES		
GST 05111	Engineering Mathematics for Technicians	6
CORE MODULES		
ITT 05111	Event Driven Programming	9
ITT 05112	Operating Systems	9
COT 05111	Network Administration	10
MFT 05114	Multimedia Fundamentals	9
ITT 05113	High Performance Computing	9
ITT 05116	Industrial Practical Training	10
Total Credits		**61**

Semester II

Module Code	**Module Title**	**Credits**
FUNDAMENTAL MODULES		
GST 05214	Statistics and Probability for Technicians	6
CORE MODULES		
ITT 05217	Cloud Computing	9

ITT 05213	Fundamentals of Data Structures and Algorithms	9
COT 05214	Computer Aided Design Fundamentals	9
COT 05214	Microprocessor Technology	10
ITT 05215	Database Management	10
ITT 05216	Fundamental of System Analysis and Design	9
Total Credits		**62**

Total Credits at NTA 5: 134 (Minimum credits required at NTA 5: 120).

(f) ORDINARY DIPLOMA PROGRAMME (OD) IN INFORMATION TECHNOLOGY (IT) (NTA LEVEL 6)

Semester I

Module Code	Module Title	Credit
	FUNDAMENTAL MODULES	
GST 06109	Fundamentals of Accounting Applications	6
	CORE MODULES	
ITT 06111	Project Conceptualization	10
COT 06112	Software Engineering Fundamentals	9
ITT 06112	Web Application Development and Hosting	12
MFT 06117	Multimedia Applications Production	10
ITT 06115	Emerging Technologies	10
ITT 06113	Industrial Practical Training	10

Semester II

Module Code	Module Title	Credit
	FUNDAMENTAL MODULES	
GST 06214	Startup Business Management	6
	CORE MODULES	
ITT 06214	Mobile Applications Development	9
ITT 06213	Customer Relationship Management	8
ITT 06216	Fundamentals of e-commerce	9
ITT 06217	Project Realization	10

Module Code	Module Title	Credit
ITT 06218	Cyber Security and Privacy	9
ITT 06219	Surveillance Technologies	10
Total Credits		**61**

Total credits at NTA 6: 133 (Minimum credits required at this level 120)

(g) BASIC TECHNICIAN CERTIFICATE (BTC) IN MULTIMEDIA AND FILM TECHNOLOGY (NTA LEVEL 4)

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST04111	Algebra	6
GST 04112	Basic Technical Communication Skills	6
ETT 04114	Basics of Electronics	12
CORE MODULES		
ITT 04111	Computer Basics and Office Applications	14
MFT 04111	Graphics Design	12
MFT 04112	2D Animation	12
ITT 04112	Database Fundamentals	9
TOTAL		**69**

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 04213	Trigonometry and Vectors	6
GST 04212	Technical Writing and Presentation	6
CORE MODULES		
MFT 04211	3D Animation Fundamentals	12
MFT 04212	Photography and Digital Imaging	9
MFT 04213	Lighting for Multimedia Production	12
ITT 04213	Programming Fundamentals	12

Module Code	Module Title	Credit
TOTAL		**57**

Total credits at NTA 4: 126 (Minimum credits required at NTA 4:120)

(H) TECHNICIAN CERTIFICATE (TC) IN MULTIMEDIA AND FILM TECHNOLOGY (NTA LEVEL 5)

Semester I

Module Code	Module Title	Credits
CORE MODULES		
ITT 05111	Event Driven Programming	12
MFT 05111	Multimedia Equipment and Devices Maintenance and Repair	9
MFT 05112	Screen Writing and Storyboarding	6
MFT 05113	Advanced 3D Animation	12
ITT 05112	Fundamentals of Operating Systems	12
MFT 05114	Industrial Practical Training	10
TOTAL		**61**

Semester II

Module Code	Module Title	Credits
CORE MODULES		
MFT 05211	Research Methods	10
MFT 05212	Motion Graphics	9
MFT 05213	Sound Production	12
MFT 05214	Video and Film Production	12
MFT 05215	Game Design	12
ITT 05215	Fundamentals of System Analysis and Design	9
TOTAL		**64**

Total credits at NTA 4: 123 (Minimum credits required at NTA 4:120)

(I) ORDINARY DIPLOMA (OD) IN MULTIMEDIA AND FILM TECHNOLOGY (NTA LEVEL 6)

Semester I

Module Code	Module Title	Credits

CORE MODULES		
MFT 06111	Data Communication for Multimedia	12
MFT 06112	Music Production	12
ITT 06214	Mobile Applications Development	9
MFT 06113	Game Development	12
MFT 06115	Project Conceptualization	10
ITT 06112	Web Application Development & Hosting	12
MFT 06116	Industrial Practical Training	10
TOTAL		**77**

Semester II

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 06213	Entrepreneurship	6
CORE MODULES		
MFT 06211	Project Realization	10
MFT 06212	Media Law and Ethics	12
MFT 06214	Multimedia Advertisement Production	12
MFT 06114	Visual Effects	12
TOTAL		**52**

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Total credits at NTA 6: 122 (Minimum credits required at NTA 6: 120)

(j) HIGHER DIPLOMA IN COMPUTER ENGINEERING NTA LEVEL 7

Semester I

Module Code	Module Title	Credit
FUNDAMENTALS MODULES		
GSU 07111	Basics of Technical Communication skills	6
ETU 07112	Fundamentals of analogy electronics	9
CORE MODULES		
COU 07101	Computer basics and Office application	9
COU 07102	Programming fundamentals	12
COU 07103	Computer Networking	9
Total Credits		**45**

Semester II

Code	Module Title	Credit
FUNDAMENTALS MODULES		
GSU 07212	Algebra and Application of Integrals	6
ETU 07113	Fundamentals of digital electronics	9
CORE MODULES		
COU 07201	Web Design and hosting	9
COU 07202	Microprocessor Technologies	9
COU 07203	Industrial Practical Training	12
COU 07204	Computer Maintenance and Repair	9
Total Credits		**54**

Semester III

Module Code	Module Title	Credits
FUNDAMENTALS MODULES		
GSU 07314	Calculus	6
GSU 07313	Technical Communication Skills	6
ETU 07321	Analogue Electronics	9
ETU 07323	Instrumentation and Measurements	9
CORE MODULES		
COU 07301	Operating Systems	9
COU 07302	Microprocessor and Computer Architecture	9
COU 07303	Computer Programming	9
COU 07304	Data Communication and Networking	9
ELECTIVE MODULES		
COU 07305	Multimedia Systems	6
COU 07306	Decision Support and expert systems	6
Total Credits		**72**

Semester IV

Module Code	Module Title	Credit
FUNDAMENTALS MODULES		
GSU 07415	Probability and Statistics	6
ETU 07422	Digital Electronics	9

CORE MODULES		
COU 07401	Database Concepts and Design	9
COU 07402	Computer Engineering Drawing	6
COU 07403	System Analysis and Design	9
COU 07404	Object Oriented Programming	9
COU 07405	Geographical Information System	6
COU 07406	Industrial Practical Training	12
ELECTIVE MODULES		
COU 07408	Electronic Commerce	6
COU 07409	Computer Graphic and Visualization	6
Total		**66**

Semester V

Code	**Module Title**	**Credit**
FUNDAMENTALS MODULES		
GSU 07516	Numerical methods and matrices	6
ETU 07523	Sensor networks	9
CORE MODULES		
COU 07501	Cyber security	9
COU 07502	Database programming and Administration	9
COU 07503	Web Application Development	9
COU 07504	Data structure and Algorithms	9
COU 07505	Software Engineering	9
COU 07506	Digital Signal Processing	6
	Elective Modules	
EEU 07518	Principles of Electrical Machine	6
COU 07507	Human computer interface and Interactive Devices Design	6
ETU 07508	Electronics design and digital fabrication	6
Total		**72**

Semester VI

Module Code	**Module Title**	**Credit**
FUNDAMENTAL MODULES		
GSU 07617	Research Methods for Engineers	6

ETU 07621	Industrial Automation	9
CORE MODULES		
COU 07601	Digital image processing	6
COU 07602	Mobile Application Development	9
COU 07603	Network Management and Administration	9
COU 07604	ICT Project Management	6
COU 07605	Artificial Intelligence and Machine Learning	9
	ELECTIVE MODULES	
COU 07607	Computer Game Design	6
GSU 07618	Accounting for Managers	6
Total		**54**

Total Credits at NTA 7: 300 (Minimum credits required at NTA 7: 240)

(k) BACHELOR OF COMPUTER ENGINEERING (NTA LEVEL 8)

Semester I

Module Code	Module Title	Credits
	FUNDAMENTALS MODULES	
MEU 08107	Industrial Engineering Design	6
	CORE MODULES	
COU 08101	Management Information Systems	8
COU 08102	Embedded Systems Design	9
COU 08103	Real Time System Design	9
COU 08104	Data Mining and Analytics	9
COU 08105	Project Conceptualization	10
COU 08106	Industrial Practical Training	12
Total		**63**

Semester II

Module Code	Module Title	Credits
	FUNDAMENTALS MODULES	
GSU 08203	Entrepreneurship and Innovation Management	6
EEU 08201	Engineering Professionalism and Ethics	6
	CORE MODULES	
COU 08201	High Performance Computing	9

Module Code	Module Title	Credits
COU 08202	Industrial Robotics	9
COU 08203	Blockchain Technology	9
COU 08204	Project Realization	15
	ELECTIVE MODULES	
EEU 08206	Renewable Energy Technologies	9
ETE 08223	Radar and Navigation Aids Systems	9
Total		**54**

Total Credits at NTA 8: 144 (Minimum credits required at NTA 8: 120)

(L). MASTER OF TECHNOLOGY IN COMPUTING AND COMMUNICATIONS (MTCC) NTA LEVEL 9

Semester I

Module Code	Module Title	Credits
	CORE MODULES	
CCG 09101	Linear Algebra and Computational Statistics	12
CCG 09102	Parallel Computing	12
CCG 09103	Programming for Computational Science and Engineering	12
CCG 09104	Advanced Research Methodology	12
	Total Credits	48

ELECTIVE MODULES

Module Code	Module Title	Credits
CCG 09105	Embedded Systems	12
CCG 09106	Intelligent Systems	12
CCG 09107	Numerical Methods	12
CCG 09108	Optical Broadband Networks and Architecture	12
	Total Credits	**48**

Semester II

Module Code	Module Title	Credits
	CORE MODULES	
CCG 09209	Big Data Analytics	12
CCG 09210	Business Administration	12
	Total Credits	**24**

ELECTIVE MODULES

Module Code	Module Title	Credits
CCG 09211	Automation and Industrial Control	12
CCG 09212	Blockchain Technology	12
CCG 09213	Computational Cyber Forensic	12
CCG 09214	Internet of Things (IoT)	12
CCG 09215	Mathematical Modelling, analysis, and simulation	12
CCG 09216	Wireless and Mobile Broadband Communication Systems	12
	Total Credits	**72**

(M) MASTER IN COMPUTATIONAL SCIENCE AND ENGINEERING (MCSE) NTA LEVEL 9

Semester III

Code	Module Title	Credits
	CORE MODULES	
CEMG 09201	Leadership Principles and human resources management	9
CSCG 09309	Higher Performance System Integration	9
SCSG 09311	Advance Research Methods	6
	Total Credits	24

ELECTIVE MODULES

Code	Module Title	Credits
EECG 09301	Computation Electromagnetics	9
CECG 09302	Advance Computational Fluid Dynamics	9
GSCG 09306	Computational Finance	9
LTCG 09301	Computational Biology	9
CSCG 09310	Computational Cyber Forensic	9
	Total Credits	**45**

Modules

Code	Module Title	Credits
CSCG 09312	Dissertation	50
	Total Credits	**50**

Total credits at this level NTA 9 is 251, (Minimum credits required at this level is 180)

6.2.2 List of Academic Staff in the Department of Computer Studies

Lecturer and Head of Department

F. Mwalongo, BSc. (Comp. Sc.) (UDSM), MSc (Comp. Applications) (India), PhD (Comp. Sc.) (Germany)

Senior Lecturers

D.S. Simbeye, B.Eng. (Electronics) (Russia), MEng (Russia), PhD (China)

V. A. Ndume, Adv. Dip. (Comp.) (IFM), PGD (Comp.) (UDSM), MSc (Comp.) (UDSM), PhD (NMAIST)

Lecturers

D.H. Kisanga, Cert. (Comp. Tech.) (Japan), BSc. (Ed.) (UDSM), MEng. (Comp.) (China), PGC (Res. Practice) (UK), PhD (UK)

S. Kimbi, BSc. (Comp.) (UDSM), MSc (Comp.) (Sweden), MBA (Mzumbe), PhD (NM-AIST), CISA, CISM

E. Tongora, BSc (Comp. Syst. & NW) (Poland), MSc (Comp. Syst. & NW) (Poland), PhD (Poland).

M. Masoud, Bsc.(Comp. Sc.) (IUA-Sudan), MSc (Comp. Sc.)(UDOM), PhD (Comp. Sc.)(UDOM), OCP, MCT

J. Y. Challo, Cert. (Comp. Tech.) (Japan), BSc. (Ed.) (UDSM), MEng. (Comp.) (China)

G. Tesha, Cert (Music Prod) (Thailand), FTC (Comp.) (DIT), BEng (Telecoms) (DIT), MEng (Comm.) (China), PhD (Info. & Comm. Eng.) (China)

G. Sanga, BSc (in Comp. Sc) (UDSM), MEng (Comp. Sc. & Technology) (China), PhD (Computer Science) (China)

S. M. Wambura, BEng (Comp. Des. & Tech.) (Russia), MEng (Comp. Des. &Tech.) (Russia), PhD (Computer Science) (China)

Assistant Lecturers

P.L. Ng'imba, BSc. (Electronics) (UDSM), MSc. (Multimedia Eng.) (UK)

*I. Hassan, BSc IT (Malaysia), PGD (Mobile Computing) (Pune-India), MSc IT (Malaysia)

D.H. Clement, FTC (Comp.) (DIT), BSc. (UDSM), MSc. (China)

N. Maganga, BSc. (Comp.), MSc. (Comp.) (UDSM)

J. J. Nnko, BEng&Tech. (Comp.) (Russia), MEng (Comp.) (Russia), MSc. (Info. Sys.) (Russia)

R. Jesse, B.Eng. (Comp) (DIT), MSc (Software Eng.) (China)

*T. Isakwisa, BSc. (Comp.) (UDSM), MEng. (Comp.) (Japan)

N.D. Kimario, Dip. (Comp. Eng) (DIT), BEng. (Comp.) (DIT), MSc (Electrical. Eng & Comp. Sc.) (Japan)

*J. B. Nyansiro, BSc (Electronics) (UDSM), MSc (IT Management) (Australia)

A. Kajirunga, B.Eng. (Comp.) (SJUIT), MSc (ICSE.) (NM-AIST)

R. Israel, Bsc. (Comp. Sc.) (UDSM), MSc (IT & Management) (India)

*H.D. Shimwela, B. Eng. (Comp.) (Russia), MSc (Comp.) (South Korea)

N.M. Mwasaga, MSc (Comp.) (Ukraine)

C. Budoya, BSc (UDSM), MSc (Comp.) (UDSM)

H. S. Fimbombaya, BEng (Comp.) (Russia), MSc (Digital Comm.) (UK), PhD (Telecomm) (UDSM)

J. Diwa, FTC (DIT), BSc(ICT) (OUT), PGDE Dip in Ed (UDSM), MCSE (DIT)

E. Kondela, BEng (Comp.) (Russia), MEng. (China)

*A. Mbilinyi, BEng. (Comp. Eng.) (DIT), MSc (Info. Sc.) (Japan)

M. Mwalimu, Adv. Dip. (Comp Sc.) (IFM), MSc (IT & Management) (India)

M. Khalfani, FTC (Comp.) (DIT), B. Eng (Comp.) (DIT), CNSS (HYD-INDIA), MSc. (Info Security) (IAA)

J.A Chakumba BSc (Information System & Networking Eng) (SJUIT), PGD-Education (UDSM), MSc (Information & Communication Technology) (OUT)

H. Alexander, B.Eng. (Comp.) (SJUIT), MSc. (Embedded and Mobile Systems) (NM-AIST)

Tutorial Assistants

*V.E. Kannole, BSc. (Comp.) (IFM)

*R. Angotike, O.Dip (Comp. Eng) (DIT), BEng (Comp. Eng.) (DIT)

S.S Msonde BSc (Information Communication Technology with Management) (Mzumbe)

Senior Instructors

D. Madaha, Adv. Cert. (Comp. Eng) (China), MEng. (Comp. Eng) (China).

L. Champuku, BSc. (Comp. Sc.) (IFM), PGD (Adv. Computing) (Pune-India), MCSE. (Comp.) (DIT), OCP (Oracle), ITIL (IBM)

H.F. Msechu, B.Tech (IT) (SJCET), PGD (Adv. Computing) (Pune-India)

H. Mohamed, FTC (Comp Eng) (DIT), Adv. Cert. (Comp. Eng) (China), MEng. (Comp. Eng) (China).

Instructors

C.C. Ngirwa, BSc. (Comp. & Info. Security) (UDOM), MSc. (Software Eng) (NANKAI UNV CHINA)

*O.O. Mwambe, BSc. (Comp.) (Ukraine)

Technicians

** R. Mndeme, Bsc. (Comp. Sc) (SJUIT)

*On study leave

** on contract

6.3. DEPARTMENT OF ELECTRICAL ENGINEERING

The department offers NTA Ordinary Diploma (level 4-6) in Electrical Engineering, Biomedical Equipment Engineering, and Renewable Energy Technology. It also offers (NTA level 7-8) Bachelor of Engineering program. The department has adequate resources which include laboratory and teaching facilities, twenty (20) qualified teaching staff members with various qualifications and one (1) competent and experienced technician. Details of the courses are provided below.

(a). BASIC TECHNICIAN CERTIFICATE IN ELECTRICAL ENGINEERING-(NTA LEVEL 4)

Semester I

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 04111	Algebra	6
GST 04112	Basic Technical Communication Skills	6
COT 04114	Computer Fundamentals and Basic Information Processing	12
	CORE MODULES	
MET 04111	Basic Technical Drawing	9
ETT 04111	Basic Electronics	9
EET 04111	Electrical Installation and Draughting	12
EET 04112	Principles of DC Networks	9
	Total Credits	**63**

Semester II

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 04214	Trigonometry, Vectors and Complex Numbers	6
SLT 04216	Basic Mechanics	3
	CORE MODULES	
EET 04211	Analogue Electronic Control Circuits	12
EET 04212	DC Machines	9
EET 04213	Electrical Engineering Materials	9
EET 04214	Electrical Measurement and Instrumentation	9
EET 04215	Principles of AC Networks	9
	Total Credits	**57**

Total Credits at NTA 4: 120 Minimum credits required at NTA 4: 120

(b). TECHNICIAN CERTIFICATE IN ELECTRICAL ENGINEERING (NTA LEVEL 5)

Semester I

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 05111	Differentiation and Integration	6
GST 05112	Research Methods for Technicians	3
COT 05117	Programming Fundamentals for Technicians	6
SLT 05117	Applied Mechanics	3
	CORE MODULES	
EET 05111	Computer Aided Electrical Drawing	6
EET 05112	Digital Electronic Control Circuits	9
EET 05113	Industrial Practical Training	10
EET 05114	Electrical Power Generation	6
EET 05115	Sensors and Transducers	9
EET 05116	Transformers and Induction Machines	9
	Total Credits	**67**

Semester II

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 05213	Statistics and Probability for Technicians	6
GST 05214	Technical Writing and Presentations	6
COT 05213	Fundamental Data Structures and Algorithms for Technicians	6
	CORE MODULES	
EET 05211	Control Engineering	9
COT 05214	Microprocessor Technology	9
EET 05213	Electrical Power Utilization	9
EET 05214	Industrial Electronics	9
EET 05215	Special Electrical Machines	9
	Total Credits	63

Total Credits at NTA 5: 130 Minimum credits required at NTA 5: <u>120</u>

(c). DIPLOMA IN ELECTRICAL ENGINEERING NTA (LEVEL 6)

Semester I

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 06111	Conics and Differential Equations	6
GST 06112	Small Business Development	6

	CORE MODULES	
EET 06111	Electric Drives	9
EET 06112	Electrical Machines Re-winding	9
EET 06113	Electrical Systems Simulation	9
EET 06114	Industrial Practical Training	10
EET 06115	Power Transmissions and Distribution	6
EET 06116	Project Conceptualization	10
	Total Credits	**65**

Semester II

Module Code	**Module Title**	**Credits**
	FUNDAMENTAL MODULES	
GST 06213	Series and Numerical Methods	6
GST 06214	Business Financial Management	6
	CORE MODULES	
COT 06211	Industrial automation System	12
EET 06211	Electrical Maintenance Management	6
EET 06212	Power Systems Protection	6
EET 06213	Project Realization	10
EET 06214	Renewable Energy Systems	6
EET 06215	Professional Ethics	6
	Total Credits	**58**

Total Credits at NTA 6: 123 Minimum credits required at NTA 6: 120

(d). BASIC TECHINICIAN CERTIFICATE IN BIOMEDICAL EQUIPMENT ENGINEERING (NTA LEVEL 4)

Semester I

Module Code	**Module Title**	**Credits**
	FUNDAMENTAL MODULES	
GST 04111	Algebra	6
GST 04112	Basic Technical Communication Skills	6
COT 04114	Computer Fundamentals and Basic Information Processing	12
	CORE MODULES	
ETT 04111	Basic Electronics	9
MET 04111	Basic Technical Drawing	9
EET 04111	Electrical Installation and Draughting	9
EET 04112	Principles of DC Networks	9
BET 04111	Human anatomy and Physiology	6
BET 04112	Introduction to Biomedical Engineering and Hospital Safety	3
	Total Credits	**69**

Semester II

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 04214	Trigonometry, Vectors and Complex Numbers	6
SLT 04216	Basic Mechanics	3
	CORE MODULES	
EET 04211	Analogue Electronic Control Circuits	12
EET 04212	DC Machines	9
EET 04214	Electrical Measurement and Instrumentation	9
EET 04215	Principles of AC Networks	9
BET 04211	Diagnostic Medical Equipment	6
BET 04212	Laboratory Medical Equipment	6
	Total Credits	**60**

Total Credits at NTA 4: 132 Minimum credits required at NTA 4: 120

(e). TECHNICIAN CERTIFICATE IN BIOMEDICAL EQUIPMENT ENGINEERING (NTA LEVEL 5)

Semester I

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 05111	Differentiation and Integration	6
GST 05112	Research Methods for Technicians	3
COT 05117	Programming Fundamentals for Technicians	6
SLT 05117	Applied Mechanics	3
	CORE MODULES	
EET 05112	Digital Electronic Control Circuits	9
EET 05116	Transformers and Induction Machines	9
BET 05111	Biomedical Sensors and Transducers	9
BET 05112	Industrial Practical Training	10
BET 05113	Intensive Care Unit Equipment	6
BET 05114	Optician and Dentistry Equipment	6
	Total Credits	**67**

Semester II

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 05213	Statistics and Probability for Technicians	6
GST 05214	Technical Writing and Presentations	6
COT 05213	Fundamental Data Structures and Algorithms for Technicians	6
	CORE MODULES	

COT 05214	Microprocessor Technology	12
EET 05212	Electrical Power Utilization	9
EET 05213	Industrial Electronics	9
EET 05211	Control Engineering	9
BET 05211	Theatre Medical Equipment	3
	Total Credits	**60**

Total Credits at NTA 6: 127 Minimum credits required at NTA 5: 120

(f). DIPLOMA IN BIOMEDICAL EQUIPMENT ENGINEERING (NTA LEVEL 6)

Semester I

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 06111	Conics and Differential Equations	6
GST 06112	Small Business Development	6
	CORE MODULES	
EET 06113	Electrical Systems Simulation	9
MET 06111	HVAC & Refrigeration Machinery	9
BET 06111	Industrial Practical Training	10
BET 06112	Medical Imaging Equipment	9
BET 06113	Radiotherapy, Lithotripter and Dialysis Machines	6
BET 06114	Project Conceptualization	10
	Total Credits	**65**

Semester II

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GST 06213	Series and Numerical Methods	6
GST 06214	Business Financial Management	6
	CORE MODULES	
EET 06215	Professional Ethics	6
BET 06211	Biomedical Computer Networks and Data Communications	9
BET 06212	Biomedical Equipment Maintenance Management	9
BET 06213	Medical Device Standards	9
BET 06214	Project Realization	10
	Total Credits	**55**

Total Credits at NTA 6: 120 Minimum credits required at NTA 6: 120

(g). BASIC TECHNICIAN PROGRAMME IN RENEWABLE ENERGY TECHNOLOGY (NTA –Level 4)

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
SLTP04101	Statics and Dynamics	3
GST 04102	Basic Technical Communication Skills	2
GST 04103	Entrepreneurship Concepts and Context	3
GST 04101	Algebra	5
CSET 04101	Computer Basics and Word Processing	2
CORE MODULES		
MET 04104	Workshop Technology	9
MET 04101	Basic Technical Drawing	9
EET 04102	Principles of DC Networks	12
EET 04104	Electrical Installation and Draughting	12
EERT 04107	Renewable Energy Market Policies	6
	Total Credits	**63**

Semester II

	Module Title	Credits
FUNDAMENTAL MODULES		
SLTP04202	Gravitation and Simple Harmonic Motion	3
GST 04205	Communication Skills	2
GST 04206	Small Business Development	3
GST 04204	Trigonometry and Vectors	5
CSET 04201	Spreadsheet and Database	2
CORE MODULES		
EET 04202	Principles of AC Networks	9
EET 04203	Electrical Measurement and Measuring Instruments	12
EET 04205	Electrical Engineering Materials	9
EERT 04208	Energy Storage Systems	6
EERT 04209	Alternative Sources of Energy	6

	Total Credits	57

Total credits at NTA 4 is 120, Minimum credits required at NTA 4 is 120.

(h). TECHNICIAN PROGRAMME IN RENEWABLE ENERGY TECHNOLOGY (NTA –Level 5)

Semester I

Module Code	**Module Title**	**Credit**
FUNDAMENTAL MODULES		
GST 05101	Fundamental Rules of Counting, Matrices and Differentiation	5
GST 05102	Business Communication	2
GST 05103	Business Start Up and Management	3
SLTP05101	Strength of Materials and Rotational Dynamics	3
CSET 05101	Presentation and Internet	2
CORE MODULES		
EERT 05101	Industrial Practical Training	10
EERT 05107	Energy Utilization and Management	9
EERT 05108	Solar Energy	9
EET 05101	DC Machines	12
EET 05102	Industrial Electronics	9
EET 06106	Elements of Power Electronics	9
	Total Credits	**73**

Semester II

Module Code	**Module Title**	**Credit**
FUNDAMENTAL MODULES		
GST 05204	Integration, Statistics and Probability	5
GST 05205	Communication and Technical Presentations	2
GST 05206	Business Financial Management and Accounting	3
GST 05207	Research Methods for Technicians	3
SLTP 05202	Fluid Mechanics	3
CSET05201	Computer Aided Design	2

CORE MODULES		
EET 05201	AC Machines	12
EET 05205	MATLAB	3
EERT 05208	Photovoltaic System Design	9
EERT 05203	Energy Systems Instrumentation	6
EERT 05209	Hydropower Technology	9
	Total Credits	**57**
ELECTIVE MODULES		
EERT 05109	Green Building Technology and Design	3
EERT 05209	Solar Heating Systems	3
	Total Credits	**6**

Total credits at NTA 4 is 130, Minimum credits required at NTA 4 is 120.

(i). ORDINARY DIPLOMA PROGRAMME IN RENEWABLE ENERGY TECHNOLOGY (NTA –Level 6)

Semester I

Module	Module Title	Credit
FUNDAMENTAL MODULES		
GST 06101	Conics and Differential Equations	5
GST 06102	Engineering Study Skills	2
SLTP06101	Electromagnetism	3
GST 06103	Formalizations, Internationalization and E-Business	3
CSET 06101	Basic Computer Programming	2
CORE MODULES		
EERT 06101	Industrial Practical Training	10
EERT 06112	Geothermal Energy	6
EERT 06107	Sustainable Energy Systems	6
EERT 06113	Bio Energy Technologies	9
EERT 06100	Project Data Collection	10
EET 06206	Special Electrical Machines	9
	Total Credits	**62**

Semester II

Module	Module Title	Credits

Code		
FUNDAMENTAL MODULES		
GST 06204	Complex Number, Numerical Methods and Series	4
GST 06205	Technical Writing	2
SLTP06202	Heat and Thermodynamics	2
GST 06206	Business Planning	2
CSET 06201	Computer Programming and Data Structure	2
CORE MODULES		
EERT 06215	Hybrid Renewable Electric Systems	9
EERT 06216	Maintenance in Renewable Energy Systems	9
EERT 06217	Wind Systems Installation	9
EERT 06200	Renewable Energy Project	10
EERT 06201	Power Electronics Circuits	6
EERT 06214	Low Cost Rural Distribution Systems	3
	Total Credits	**61**
ELECTIVE MODULES		
EERT 06213	Biogas Reactor Construction	3
	Total Credits	**3**

Total credits at NTA 4 is 123, Minimum credits required at NTA 4 is 120.

(j). GENERAL COURSE PROGRAMME FOR BENG (ELECTRICAL ENGINEERING)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST G6107	Algebra and Application of Integrals	4
CSET G4101	Computer Basics and Word Processing	2
CORE MODULES		
MET G4104	Workshop Technology	9
MET G4101	Basic Technical Drawing	9
EET G4104	Electrical Installation and Draughting	12
EET G4202	Principles of AC Networks	9
EET G5203	Electrical Measurements and Measuring Instruments	12
EET G5102	Industrial Electronics	9

	Total Credits	**66**

Semester II

Module Code	**Module Title**	**Credit**
	CORE MODULES	
EET G5202	Electronic Control Circuits	9
EET G5204	Electrical Instrumentation	9
EET G5206	Computer Aided Electrical Drawing	3
EET G6105	Control Engineering	12
EET G6205	Electrical Maintenance and Repair	6
EET G5200	Industrial Practical Training	10
	Total Credits	**49**

(k). HIGHER NATIONAL DIPLOMA IN ELECTRICAL ENGINEERING-NTA 7

Semester I

Module Code	**Module Title**	**Credit**
	FUNDAMENTAL MODULES	
GSU 07101	Calculus	6
CSEU 07102	Computer Programming Fundamentals	9
GSU 07106	Technical Communication Skills	6
	CORE MODULES	
ETU 07101	Analogue Electronics	9
ETU 07104	Instrumentation and Measurements	9
EEU 07101	Electrical Circuit Analysis	9
EEU 07102	Electrical Engineering Drawing	9
EEU 07103	Electrical Power Plants	6
EEU 07104	Principles of Electrical Machines	6
	Total Credits	**69**

Semester II

Module Code	**Module Title**	**Credit**
	FUNDAMENTAL MODULES	
GSU 07202	Advanced Calculus	6
CSEU 07203	Microprocessors	9
CSEU 07205	Object Oriented Programming	12
MEU 07204	Industrial Management	6
	CORE MODULES	
EEU 07201	Control Engineering Analogue Analysis	6
EEU 07202	DC Machines	12
EEU 07203	Electrical Engineering Materials	6
EEU 07204	Electrical Networks and Transients	9
EEU 07205	Electrical Power Transmission and Distribution	6
	Total Credits	**72**

Semester III

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07303	Differential Equations and Complex Variables	6
MEU 07303	Finance and Human Resource Management	6
CSEU 07303	Data Structure and Computer Programming	12
CORE MODULES		
ETU 07103	Digital Electronics	9
EEU 07301	A. C. Machines	12
EEU 07302	Electrical Power Systems Modelling	6
EEU 07303	Engineering Electromagnetics	6
EEU 07304	Industrial Practical Training	12
EEU 07305	Power Electronics Devices	9
	Total Credits	**78**

Semester IV

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07404	Probability and Statistics	6
MEU 07404	Engineering Operations Management	6
GSU 07407	Research Methods for Engineers	6
CORE MODULES		
CSEU 07402	Industrial automation	9
EEU 07401	Active and Passive Filter Design	6
EEU 07402	Control Engineering Analogue Design	9
EEU 07403	Fault Analysis and Power Systems Stability	9
EEU 07404	Special Electrical Machines	9
	Total Credits	**60**

Total Credits at NTA 7: 279. Minimum credits required at NTA 7: 240.

(I). BACHELOR OF ENGINEERING IN ELECTRICAL ENGINEERING (NTA 8)

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
CSEU 08104	Real Time System Design	6
EEU 08106	Engineering Project Management	6
CORE MODULES		
EEU 08101	Control Engineering Digital Analysis	6
EEU 08102	Electric Drives	12
EEU 08103	Industrial Practical Training	12
EEU 08104	Power Electronics Design	9
EEU 08105	Project Conceptualization	18
	Total Credits	**69**

Semester II

Module Code	Module Title	Credits
	FUNDAMENTAL MODULES	
GSU 08201	Entrepreneurship for Engineers	3
EEU 08201	Engineering Professionalism and Ethics	6
	CORE MODULES	
EEU 08202	Control Engineering Digital Design	9
EEU 08203	High Voltage Engineering	6
EEU 08204	Power System Protection	9
EEU 08205	Project Realization	18
	Total Credits	**51**
	ELECTIVE MODULES	
CSEU 08201	Embedded System Design	9
EEU 08206	Renewable Energy Technologies	9
	Total Credits	**18**

Total Credits at NTA 8: 129 Minimum credits required at NTA 8: 120

(m) MASTER OF ENGINEERING IN SUSTAINABLE ENERGY ENGINEERING (MENGSEE) (NTA 9)

Semester I

Module Code	Module Title	Credits
	CORE MODULES	
CSCG 09311	Advanced Research Methods	6
SLSG 09101	Modern Energy Services	6
EESG 09101	Sustainable Conventional Energy Systems	12
EESG 09102	Sustainable Energy Technologies and Management	6
CEMG 09101	Leadership Principles and Human Resource Management	9
CEMG 09112	Financial Management	6
	Total Credits	**45**
	ELECTIVE MODULES	
MESG 09101	Natural Gas Power Plants	9
EESG 09103	Advanced Power Electronics	9
	Total Credits	**18**

Semester II

Module Code	Module Title	Credits
	CORE MODULES	
SLSG 09201	Energy and Environment	6

EESG 09201	Energy Efficiency	9
EESG 09202	Energy Storage Systems	6
ETSG 09201	ICT for Sustainable Energy Systems	9
GSCG 09204	Mathematical Models, Analysis and Simulation	6
	Total Credits	**36**
	ELECTIVE MODULES	
EESG 09203	Geothermal Energy Systems	6
EESG 09204	Power System Analysis, Operation and Control	9
	Total Credits	**15**

Semester III

Module Code	Module Title	Credits
	CORE MODULES	
MESG 09301	Integrated Energy Resources and Project Management	9
EESG 09301	Integrated Renewable Energy Systems	9
EESG 09302	Solar Energy Systems	6
EESG 09303	Wind Energy Systems	6
	Total Credits	**30**
	ELECTIVE MODULES	
CESG 09301	Hydro Power Plants	9
EESG 09304	Power Systems Dynamics and Stability	9
	Total Credits	**18**

Dissertation

EESG 09305	Dissertation	50
	Total Credits	**50**

6.3.2 List of Academic Staff in the Department of Electrical Engineering

Lecturer and Head of Department

G. G. Moshi, B.Sc. (UDSM), MSc EE & RE Sys (UK), PhD (POLIMI)

Senior Lecturers

M. A. Kusekwa, MSc, Eng. (Sofia), PhD. Electrical Power Eng. (RSA) P. Eng (T) C Eng. (T), MIET

R. C. Kiiza, BSc. Eng. (UDSM), MSc Eng (UDSM), PhD (KTH - Sweden), P. Eng. (T)

Lecturers

S.F.M. Karugaba, BSc. Eng (UDSM), MS Electrical Eng. (USA), PhD Eng. (USA), G. Eng (T), MIEEE (USA)

M. Juma, FTC Electrical Eng. (KTC), B. Eng (DIT), MSc. (Electrical) (China), PhD. Electr. Power Sys. (UDSM)

C. Msigwa, Msc (Russia), PhD. Electr. Power Sys. (UDSM)

Assistant Lecturers

A. H. Abel FTC. Eng (DTC,) BSc (UDSM), MSc (UDSM)

J. F. Mushi, FTC. Eng (MTC), ADE. Eng. (DIT), MSc (China)

A. Liwondo, ADE (DIT), MEng. MM (DIT)

H. Libani, FTC Electrical Eng. (ATC), B. Eng (DIT), MSc. (UDSM)

*E. Michael, FTC Electrical Eng. (MTC), B. Eng Electrical (DIT), P. Eng (T)

*D. A. Kisinga, BSc (UDSM), MSc (UDSM)

E. Machiwa, BENG. (London-UK), MENG.(Ottawa-Canada)

Tutorial Assistants

*T. M. Mahamudu, BSc (UDSM)

*S. S. Tumaini, BEng. (DIT)

*H. Manga, Diploma in Biomedical Equipment Eng. (DIT)

Instructor I

F. Joseph, B.Sc. Eng. (UDSM)

D. Bahebe, FTC (Electrical Eng.) (DIT), B. Eng (DIT)

N. S. Nassoro, Dip Electrical Eng. (MUST), B. Eng Electrical Eng. (DIT)

M. John, B. Eng (SJUIT)

Technician

Z. Mshalu, FTC Electrical Eng. (MTC)

*On study Leave

6.4. DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

The department offers Ordinary Diploma and Bachelor of Engineering (NTA level 4-8) programs in Electronics and Telecommunications Engineering and Ordinary Diploma in Communication System Technology (NTA level 4-6). The department has adequate resources to run its programs, which include well-equipped laboratories and classrooms, 28 teaching staff and 1 technical support staff members.

6.4.1 Programs offered by the department of Electronics & Telecommunications Engineering.

(a) BASIC TECHNICIAN CERTIFICATE IN ELECTRONICS AND TELECOMMUNICATIONS ENGINEERING (NTA LEVEL 4)

Semester I

Module Code	Module Title	Credits
	CORE MODULES	
ETT 04111	Basic Electronics	12
ETT 04112	Electronics Drawing	9
ETT 04113	Electrical Circuits and Installation	9
ITT 04111	Computer Basics and Application	14
	FUNDAMENTALS MODULES	
GST 04121	Algebra	6
GST 04122	Basic Technical Communication Skills	6
MET 04121	Basics of Technical Drawing	9
	Total	65

Semester II

Code	Module Title	Credits
	Core Modules	
ETT 04213	Electronic Workshop Practice	10
ETT 04214	Electronics Measurements	12
ITT 04213	Programming Fundamentals	9
COT 04215	Computer Networking	14

Fundamentals Modules		
GST 04224	Trigonometry, Vectors and Complex Numbers	6
GST 04212	Technical Writing and Presentation	6
SLTP 04216	Basic Mechanics	3
	Total	60

(b) TECHNICIAN CERTIFICATE IN ELECTRONICS AND TELECOMMUNICATION ENGINEERING (NTA LEVEL 5)

Semester I

Module Code	Module Title	Credits
Core Modules		
ETT 05111	Radio Transmission Systems	12
ETT 05112	Electromagnetics	6
ETT 05113	Practical Electronic Circuits	12
ETT 05114	Fundamentals of Analogue Electronics	10
ETT 05115	Industrial Practical Training	10
Fundamentals Modules		
GST 05121	Engineering Mathematics for Technicians	9
	Total	59

Semester II

Module Code	Module Title	Credits
CORE MODULES		
ETT 05211	Telecommunication Practice	12
CST 05212	Fiber Optic Communications	12
ETT 05212	Electronic Systems Repair	12
ETT 05213	Fundamentals of Digital Electronics	10
ETT 05214	Radar and Navigation Aids	9
FUNDAMENTALS MODULES		
GST 05212	Statistics and Probability for Technicians	6
	Total	61

(c) ORDINARY DIPLOMA IN ELECTRONICS AND TELECOMMUNICATION ENGINEERING (NTA LEVEL 6)

Semester I

Module Code	Module Title	Credits
CORE MODULES		
ETT 06111	Electronics Products Fabrication	12
ETT 06112	Power Electronics	10
ETT 06113	Project Conceptualization	10
ETT 06114	Television and Video Technology	12
ETT 06115	Industrial Practical Training	10
FUNDAMENTAL MODULE		
GST 06111	Small Business Development	6
	Total	60

Semester II

Module Code	Module Title	Credits
CORE MODULES		
ETT 06211	Electronic Communications Laboratory	12
ETT 06212	Control Systems and Automation	12
ETT 06213	Project Realization	10
ETT 06214	Satellite Communication Systems	12
ITT 06218	Cyber Security and Privacy	9
FUNDAMENTAL MODULES		
GST 06211	Business Financial Management	6
	Total	61

(d) BASIC TECHNICIAN CERTIFICATE IN COMMUNICATION SYSTEM TECHNOLOGY (CST) (LEVEL 4)

Semester I

Module Code	Module Title	Credits
CORE MODULES		
ETT 04111	Basic Electronics	12

ETT 04113	Electrical Circuits and Installation	9
ITT 04111	Computer Basics and Applications	14
FUNDAMENTALS MODULES		
GST 04121	Algebra	6
GST 04122	Basic Technical Communication Skills	6
ITT 04112	Database Fundamentals	9
MET 04121	Basics of Technical Drawing	9
	TOTAL	65

Semester II

Module Code	Module Title	Credits
CORE MODULES		
CST 04211	Fundamentals of Communication Systems	9
CST 04212	Electronic Measurements	12
CST 04213	Electronics Workshop Technology	10
FUNDAMENTALS MODULES		
SLT 04216	Basic Mechanics	3
GST 04212	Technical Writing and presentation	6
GST 04211	Trigonometry, Vectors and Complex Numbers	6
ITT 04213	Programming Fundamentals	9
	TOTAL	55

(e) TECHNICIAN CERTIFICATE IN COMMUNICATION SYSTEM TECHNOLOGY (CST) (LEVEL 5)

Semester I

Module Code	Module Title	Credits
Core Modules		
CST 05111	Wireless Communications	12
CST 05112	Industrial Practical Training	10
ETT 05112	Electromagnetics	6
ETT 05114	Fundamentals of Analogue Electronics	10
CST 05113	Electronics Equipment Repair & Maintenance	12
Fundamentals Modules		
GST 05121	Engineering Mathematics for Technicians	9
	TOTAL	59

Semester II

Module Code	Module Title	Credits
CORE MODULES		
CST 05211	Communication Systems Laboratory	12

CST 05212	Fiber Optic Communications	12
CST 05213	Industrial Automation	12
ETT 05213	Fundamentals of Digital Electronics	10
FUNDAMENTALS MODULES		
GST 05212	Statistics and Probability for Technicians	6
ITT 05215	Database Management	12
	TOTAL	64

(f) ORDINARY DIPLOMA IN COMMUNICATION SYSTEM TECHNOLOGY (CST) (LEVEL 6)

Semester I

Module Code	Module Title	Credits
CORE MODULES		
CST 06111	Data Communication and Networking	12
CST 06112	Project-Conceptualization	10
CST 06113	Industrial Practical Training	10
CST 06114	Audio and Video Systems	12
FUNDAMENTALS MODULES		
ITT 06112	Web Application Development and Hosting	12
GST 06122	Small Business Development	6
	TOTAL	62

Semester II

Module Code	Module Title	Credits
Core Modules		
CST 06211	Cellular Mobile Communication Systems	12
ITT 06218	Cyber Security and Privacy	9
CST 06212	Project Realization	10
ETT 06215	Satellite Communication Systems	12
Fundamentals Modules		
ITT 06214	Mobile Applications Development	9
GST 06224	Business Financial Management	6
	TOTAL	58

(g) HIGHER NATIONAL DIPLOMA IN ELECTRONICS AND TELECOMMUNICATION ENGINEERING (LEVEL 7)

Semester I

Module Code	Module Title	Credits
CORE MODULES		

ETU 07121	Practical Electronic Circuits	12
ETU 07122	Fundamentals of Analogue Electronics	10
ETU 07123	Electronics Product Fabrication	12
ETU 07124	Power Electronics	10
FUNDAMENTALS MODULES		
COU 07101	Computer Basics and Office Application	9
GSU 07111	Basics of Technical Communication skills	6
COU 07102	Programming Fundamentals	12
	Total	71

Semester II

Code	Module Title	Credits
CORE MODULES		
ETU 07221	Electronics Measurements	9
ETU 07222	Fundamentals of Communication Systems	9
ETU 07223	Telecommunications Practice	9
ETU 07224	Fundamentals of Digital Electronics	9
ETU 07225	Electronic Communications Laboratory	12
ETU 07226	Industrial Practical Training	10
	Total	58

Semester III

Code	Module Title	Credits
CORE MODULES		
ETU 07321	Analogue Electronics	12
ETU 07322	Digital Electronics	12
ETU 07323	Instrumentation and Measurements	9
FUNDAMENTAL MODULES		
GSU 07312	Engineering Mathematics	9
COU 07303	Computer Programming	9
GSU 07313	Technical Communication Skills	6
EEU 07308	Principles of Electrical Machines	6
	Total	63

Semester IV

Code	Module Title	Credits
CORE MODULES		
ETU 07421	Nano Electronics	9
ETU 07422	Wave propagation and Antenna	9
ETU 07423	Communication Switching Systems	9
ETU 07424	Data Communications and Computer Networking	9

Code	Module Title	Credits
FUNDAMENTAL MODULES		
COU 07401	Database Concepts and Design	9
GSU 07412	Advanced Engineering Mathematics	9
ELECTIVE MODULES		
COU 07404	Object Oriented Programming	9
COU 07405	Geographical Information System	6
	Total	60

Note: The total number of credits includes only one elective module which is mandatory for students.

Semester V

Module Code	Module Title	Credits
CORE MODULES		
ETU 07521	Electronic Design and Fabrication	12
ETU 07522	Engineering Electromagnetics	12
ETU 07523	Industrial Practical Training	12
COU 07506	Digital Signal Processing	6
FUNDAMENTAL MODULES		
GSU 07512	Business Management in ICT	6
GSU 07504	Probability and Statistics	6
ELECTIVE MODULES		
COU 07503	Web Application Development	9
COU 07501	Cyber security	9
	Total	63

Note: The total number of credits includes only one elective module which is mandatory for students.

Semester VI

Module Code	Module Title	Credits
CORE MODULES		
ETU 07621	Industrial Automation	12
COU 07605	Artificial Intelligence and Machine Learning	9
ETU 07622	Television Engineering	9
ETU 07623	Sensor Networks	12
ETU 07624	Very Large-Scale Integration (VLSI)	9
FUNDAMENTAL MODULE		
GSU 07616	Research Methods for Engineers	6
	Total	57

(h) BACHELOR IN ELECTRONICS AND TELECOMMUNICATION ENGINEERING (LEVEL 8)

Semester I

Code	Module Title	Credits
FUNDAMENTAL MODULES		
ETU 08121	Engineering Laws and Standards	6
CORE MODULES		
ETU 08122	Cellular and Mobile Communication	9
ETU 08123	Fibre Optics Communication and Sensing	9
ETU 08124	Industrial Practical Training	12
ETU 08125	Project Conceptualization	12
COU 08102	Embedded Systems Design	9
ELECTIVE MODULES		
COU 08104	Data Mining and Analytics	9
COU 08103	Real Time System Design	9
	Total	66

Note: The total number of credits includes only one elective module which is mandatory for students.

Semester II

Code	Module Title	Credits
FUNDAMENTAL MODULES		
GSU 08211	Entrepreneurship and Innovation Management	6
CORE MODULES		
ETU08221	Project Realization	12
ETU08222	Radar and Navigation Aids Systems	9
ETU08223	Broadcasting Engineering and Acoustics	9
ETU 08224	Satellite Communication Technology	9
COU 08202	Industrial Robotics	9
	Total	**54**

6.4.2 List of Academic Staff in the Department of Electronics and Telecommunications Engineering

Lecturer and Head of Department

P.E. Pesha, BSc. Electronic Science & Comm. (UDSM), MSc. Eng. Electronics (Stellenbosch, RSA), PhD Eng. (Cape Town, RSA), Registered ICT Professional (NAS), IEEE Member

Senior Lecturer

K.A. Greyson, FTC Eng. (DTC), ADE Eng. (DIT), PGD (Temple - USA), MSc Telecom Eng. (UDSM), PhD (Surenaree, Thailand), IEEE Member

A. Manyele, Dip.TV & VCR tech. (Canada), BSc. Applied Physics (UDSM), MSc. Seismology (Norway), PhD (UDSM)

Lecturers

G. Rugumira, FTC- Telecommunication Engineering (DTC), ADE-Electronics and Telecommunication (DIT), MEng-Communication and Information Systems (China), PhD-Information and Communication Engineering (China)

J.A. Msumba, FTC Eng (DTC), ADE (DIT), BSc. (Hons)- Electronics (University of Pretoria), MSc – Electronics (University of Pretoria- RSA), PhD Electronic Eng. (University of Kwazulu- Natal- RSA), Certificate in Wireless Telephone- UP-Motorola- RSA

P. F. Mmbaga, ADE. Electronics and Telecoms (DIT, Tanzania), MSc. Comm. and Information Systems (XJTU, China), PhD in Eng. Optical Comm. (University of Edinburgh, UK), Certified Fibre Optic Technician (FOA, USA), IEEE Member

J.W. Matiko, FTC Eng (DIT), BEng (DIT), MSc. Lund (Sweden), PhD, (UK)

M. E. Mkiramweni, BEng. Electronic Information (Beijing, China), MEng. Information & Telecom. (Beijing, China), PhD in Eng. Information & Comm. (Xi'an, China)

Assistant Lecturers

N.G. Nzowa, FTC Eng. (DTC), MSc. Eng. (USSR)

J. Ally, BSc Electronic Science & Comm. (UDSM), MSc Telecom Eng. (China)

P. Haule, FTC (DTC), Beng. (DIT), MSc. Comm. (Warwick, UK)

*R. Lihakanga, FTC (DIT), Beng. (DIT), MSc. (Glamorgan, UK), Grad. Eng. (T) Grad IET

A. O. Mfinanga, FTC Eng (DTC), ADE Eng (DIT), PGD (UDSM), MSc. (UDSM)

A. J. Mohamed, FTC (TCA), BEng (DIT), MSc. (UDSM)

*J. Hossea, BEng. Electronics & Telecom. (ST. Joseph, Tanzania), MEng. Electronic and Photonic (Thailand)

I. Kamanga, BSc. Telecom (UDSM), MSc (China)

N. Ignasi, Diploma in Education (Klerruu Teachers' college), BEng Electronics & Telecom. (DIT), MSc (Russia)

J. Lyimo, Trade Test Grade III-Electrical Installation (VETA), ADE-Electronics and Telecommunication Engineering (DIT), PGD- Electronics Engineering and information Technology (UDSM), MSc-Electronics Engineering and Information Technology (UDSM)

J. Mashurano, FTC ENG (MTC), BEng (SJUIT), MSc (China)

F. Lello, BEng Electronics & Telecom. (DIT) Graduate Eng. (T), MSc (China)

M.J. Shundi, FTC Electronics & Telecom (DIT), BEng Electronics & Telecom (DIT), MEng. Information & Communication Engineering (China)

M.P. Masele, BSc Informatics (SUA), ME in Information and Communication Engineering (HEU – China)

A. S. Yusuph, BEng Electronics & Telecom (DIT), Master of Comm. Management (KIST-Rwanda)

*J. N. Bakunda, BSc. Telecom UDSM, MEng. Electrical Eng. (Thailand)

Tutorial Assistants

*F. Kulwa, BEng Electronic & Telecom. (DIT), MSc. (China)

A. Phillipo, BSc. Telecommunications Engineering (UDOM)

Senior Instructor II

D. Urassa, ADE Electronic & Telecom (DIT), PGD (UDSM), Grad Eng. (T)

Instructor II

M.D Shirima, OD ETE (DIT), BEng. Electronics & Telecom (DIT)

E. Kajange, BEng Electronics & Telecom (DIT)

Laboratory Technicians II

N. Isaack, OD ETE (DIT)

* On study leave

** contract

6.5. DEPARTMENT OF MECHANICAL ENGINEERING

Mechanical engineering is the prime mover of any nation development. Nothing can be manufactured without the involvement of mechanical engineering. Due to fast increase of manufacturing, mining and gas industries, the well qualified technicians and engineers are highly needed. These personnel can be obtained from Dar es Salaam Institute of Technology at the department of mechanical engineering.

The department offers Ordinary Diploma and Bachelor of Engineering (NTA level 4-8) in mechanical engineering. The department has adequate physical resources to include classrooms, laboratories and workshops. In addition, the department has 21 teaching staff and 6 technical supporting Staff.

6.5.1 Programs offered by Mechanical Eng. Department

(a). BASIC-TECHNICIAN CERTIFICATE IN MECHANICAL ENGINEERING- NTA LEVEL 4

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 04111	Algebra	6
CSET 04113	Computer Fundamentals and Basic Information Processing	12
GST 04112	Basic Technical Communication skills	6
CORE MODULES		
MET 04111	Basics of Technical Drawing	9
MET 04112	Gas Welding Processes	9
MET 04113	Statics	6
MET 04114	Thermodynamics and Power Plant	6
MET 04115	Workshop Technology	9
Total		**63**

Semester II

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 04214	Trigonometry, Vectors and Complex Numbers	6

CORE MODULES		
MET 04211	Arc Welding Processes	12
MET 04212	Dynamics	6
MET 04213	Fundamentals of Engineering Drawing	6
MET 04214	Metal Cutting and Machine Tools	12
MET 04215	Petrol/Gas Engine	12
EET 04219	Principles of DC and AC Networks	9
Total		**63**

Total Credits at NTA 4: 126 (Minimum credits required at NTA 4: 120)

(b). TECHNICIAN CERTIFICATE IN MECHANICAL ENGINEERING NTA LEVEL 5

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 05111	Differentiation and Integration	6
GST 05112	Research Methods for Technicians	3
CORE MODULES		
MET 05111	Basic Machine Elements	6
MET 05112	Computerized Engineering Drawing	9
MET 05113	Diesel Engine	6
MET 05114	Engineering Measurements and Instrumentation	6
MET 05115	Industrial Practical Training: Artisan Level	10
MET 05116	Materials Technology	6
MET 05117	Strength of Materials	6
EET 05117	Principles of DC and AC Machines	6
Total		**64**

Semester II

Module	Module Title	Credits
FUNDAMENTAL MODULES		
GST 05213	Probability and Statistics for Technicians	6

GST 05214	Technical Writing and Presentations	6
CORE MODULES		
MET 05211	Automotive Electricity, Electronics and Diagnosis	9
MET 05212	Automotive Transmission and Suspension	6
MET 05213	Computer Aided Design	9
MET 05214	Fluid Mechanics	6
MET 05215	Machining Elements	6
MET 05216	Machining Process	9
MET 05217	Metal Forming	9
	Total	**66**

Total Credits at NTA 5: 130 Minimum credits required at NTA 5: 120

(c). NTA LEVEL 6 DIPLOMA IN MECHANICAL ENGINEERING

Semester I:

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 06111	Conics and Differential Equations	6
GST 06112	Small Business Development	6
GST 06115	Algebra and Application of Integrals	4
CORE MODULES		
MET 06111	HVAC and Refrigeration Machinery	9
MET 06112	Pneumatics, Hydraulics and Automation	12
MET 06113	Production Technology	9
MET 06114	Project Conceptualization	12
MET 06115	Industrial Practical Training: Technician Level	10
Total		**68**

Semester II

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 06213	Series and Numerical Methods	6

GST 06214	Business Financial Management	6
CORE MODULES		
MET 06211	Code of Conduct and Ethics	6
MET 06212	Foundry Technology	12
MET 06213	Industrial Control Systems	9
MET 06214	Operations, Maintenance and Safety	9
MET 06215	Project Realization	12
Total		**60**

Total Credits at NTA 6: 128 Minimum credits required at NTA 6: 120

(d). GENERAL COURSE PROGRAMME IN MECHANICAL ENGINEERING

Semester I

Module Code	Module Title	Credits
GST G6115	Algebra and Application of Integrals	6
ITT G 4111	Computer Basics & Applications	12
MET G 4111	Basics of Technical Drawing	9
MET G4113	Statics	6
MET G4112	Gas Welding Processes	9
MET G4115	Workshop Technology	9
MET G4215	Petrol/Gas Engine	12
MET G4212	Dynamics	6
MET G5114	Engineering Measurements and Instrumentation	6
MET G6214	Operations, Maintenance and Safety	9
Total		**84**

Semester II

Module Code	Module Title	Credits
MET 05112	Computerized Engineering Drawing	9
MET 05116	Materials Technology	6
MET 05216	Machining Process	9

MET 05117	Strength of Materials	6
MET 05212	Automotive Transmission and Suspension System	6
MET 05215	Machine Element	6
MET 04114	Thermodynamics and Power Plant	6
MET 04211	Arc Welding Processes	12
MET 04215	Industrial Practical Training	10
Total		**73**

Total Credit at GCP: 157 (Minimum credits required at GCP:120)

(e). HIGHER DIPLOMA IN MECHANICAL ENGINEERING – NTA LEVEL 7

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
ETU 07101	Analogue Electronics	9
GSU 07101	Calculus	6
CSEU 07102	Computer Programming Fundamentals	9
GSU 07105	Computing using Mathematical Software	6
EEU 07101	Electrical Circuit Analysis	9
EEU 07104	Principles of Electrical Machines	6
GSU 07106	Technical Communication Skills	6
CORE MODULES		
MEU 07101	Engineering Drawing	6
MEU 07102	Materials Technology	6
MEU 07103	Strength of Materials	6
MEU 07104	Systems Reliability and Plant Maintenance	6
Total		**75**

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07202	Advanced Calculus	6
ETU 07103	Digital Electronics	9
CORE MODULES		

MEU 07201	Basic Computer Aided Drafting	9
MEU 07202	Engineering Thermodynamics	6
MEU 07203	Fluid Mechanics	6
MEU 07204	Industrial Management	6
MEU 07205	Machine Elements Design	6
MEU 07206	Mechanics of Machines	6
MEU 07207	Metal Cutting Processes	6
MEU 07208	Welding Technology and Powder Metallurgy	9
Total		**69**

Semester III

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07303	Differential Equations and Complex Variables	6
CORE MODULES		
MEU 07301	Computer Aided Drafting Application	9
MEU 07302	Engineering Vibrations	6
MEU 07303	Finance and Human Resources Management	6
MEU 07304	Industrial Energy Management	6
MEU 07305	Industrial Practical Training	12
MEU 07306	Material Handling Design	9
MEU 07307	Solid Mechanics	9
	Total	**63**

Semester IV

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07404	Probability and Statistics	6
GSU 07407	Research Methods for Engineers	6
CORE MODULES		
MEU 07401	Automotive Engineering	6
MEU 07402	Computer Aided Design (CAD)	6

MEU 07403	Dynamics of Mechanical Structure	6
MEU 07404	Engineering Operations Management	6
MEU 07405	Fluid Power and Control	6
MEU 07406	Heat Transfer	6
MEU 07407	Industrial Design Engineering	6
MEU 07408	Principles of Engineering Design	6
Total		**63**

Total Credits at NTA7: 270 Minimum credits required at NTA 7: 240

(f). BACHELOR OF MECHANICAL ENGINEERING – NTA LEVEL 8

Semester I

Module Code	Module Title	Credit
MEU 08101	Computer Aided Engineering	6
MEU 08102	Industrial Practical Training	12
MEU 08103	Laws for Engineers	6
MEU 08104	Power Plant	6
MEU 08105	Production Engineering	6
MEU 08106	Project Conceptualization	18
MEU 08108	System and Control Engineering	6
Total		**60**
ELECTIVE MODULES		
MEU 08107	Refrigeration and Air Conditioning	6
MEU 08109	Renewable Energy Technologies	6
EEU 08107	Power Electronics	6
Total		**78**

NB: *Student must select at least one elective module*

Semester II:

Module Code	Module Title	Credit
	FUNDAMENTAL MODULE	
GSU 08201	Entrepreneurship for Engineers	3
	CORE MODULES	
MEU 08201	Automation and Robotics	6

MEU 08202	Computer Aided Manufacturing (CAM)	6
MEU 08203	Engine Technology	9
MEU 08204	Foundry and Forming Technology	9
MEU 08205	Project Realization	18
MEU 08206	Quality Assurance and Control	6
Total		**57**

Total Credits at NTA 8: 135 (Minimum credits required at NTA 8: 120)

6.5.2 List of Academic Staff in the Department of Mechanical Engineering

Lecturer and Head of Department

R. O. Kivugo, BSc Mechanical Engineering (UDSM), MSc. Mechanical Engineering (China), PhD Mechatronics (Italy, POLIMI). Reg. Eng (T), Member (IET)

Associate Professor(s)

C.T. Mgonja, FTC Eng. (TCA), MSc. Eng., PhD Welding Techn (Russia), Reg. Eng (T), Member (IET)

Senior Lecturer(s)

Eng. J. N. Mkilania, MSc. Eng (Bulgaria), Reg. Eng (T), MIET, PhD, Eng. Mgt (UDSM)
Eng. Dr. F. Sanga, BSc. Mechanical Engineering (UDSM), MSc. Mechanical Engineering PhD Engineering Innovation (SUA), Reg. Eng. (T) Member (IET)

Lecturers

A. Esebi, BSc. Mech Eng. (UDSM), MSc. Prod. Eng. (RSA), PhD, Sustainable Energy Science and Eng. (SESE) (NMIST)
F. Lujaji BSc. Mech. Eng. (UDSM) Msc. Eng. (RSA), PhD, Sustainable Energy Science and Eng. (SESE) (NMIST)

Assistant Lecturers

D. Mbunga, FTC (TCA), MSc Mech. Eng (FRG)
Eng. A. Kisioki, FTC (TCA), Beng Mech, (DIT), MSc Renewable Energy (UDSM)
E.L. Munuo, Cert. Mechatronics) (Japan), FTC Eng (DTC), ADE (DIT). MEng. Maint. Mngt. (DIT)

K. Kassian, FTC (MTC), Beng Mech (DIT), MEng. Maint. Mngt. (DIT)

*S. Loibangut, FTC (ATC), Beng Mech (DIT), MEng. Maint. Mngt. (DIT)

G. G. Mabala, Beng Mech (MUST), MSc Material Science and Eng. (NMIST)

M. A. Masanja, BSc Mech (UDSM), MSc

G. Mduma, BSc. Mech (UDSM), MSc. Mechatronics (China)

Tutorial Assistant

*G. Bosinge, FTC Mech (DIT), Beng Mech (DIT)

P. E. Maguha, Ordinary Diploma (NIT), Beng. Mech (NIT)

Principal Instructors I

Instructor I

H. Rashid, FTC (MTC) BEng Mech (DIT)

R. M. Nshatsi, BSc. Eng (UDSM)

Instructor II

**A. H. Katani, BSc Eng. (UDSM)

Principal Technician II

K.M. Salira, FTC Eng. (DTC)

Technician I

O. Mustara, OD (NIT) Automobile Engineering

Principal Artisan

B. Bwire, Trade Test Grade I (NVTC)

A.R. Gurti, Trade test Grade II (NVTC)

Artisan I

N.N. Msamwela, Cert Trade Test Grade I (NVTC)

**L. Namkoloma, Trade Test II (El. Installation) (NVTC), Trade Test I (Refr & Air Cond) (VETA)

P.A. Luhanda VETA Level III (Welding & Metal Fabrication (NVTA III)

* On study leave

** On contract

6.6 DEPARTMENT OF SCIENCE AND LABORATORY TECHNOLOGY

Department provides services to all academic departments in teaching physical science modules. The department has adequate classrooms and laboratory facilities. In addition, it has 32 academic staff members who are supported by 4 technicians. The department of Science & Laboratory Technology has four (4) training programs leading to the following qualifications;

(a) Ordinary Diploma in Science and Laboratory Technology (NTA 4-6)

(b) Ordinary Diploma in Food Science and Technology (NTA 4-6)

(c) Ordinary Diploma in Biotechnology (NTA 4-6)

(d) Bachelor of Technology in Laboratory Sciences (NTA 7-8).

(a). BASIC TECHNICIAN CERTIFICATE IN SCIENCE AND LABORATORY TECHNOLOGY- NTA LEVEL 4 (reviewed 2020).

Semester 1

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 04111	Algebra	6
GST 04112	Basic Technical Communication Skills	6
ITT 04116	Computer Basics and Work Processing	6
CORE MODULES		
SLT 04111	Introduction to Basic Principles of Physics	6
SLT 04112	Basic Experimental Chemistry	6
SLT 04113	Laboratory Equipment Maintenance	9
SLT 04114	Basic Biology Instrumentation	6
SLT 04115	Solutions and Bench Reagents	6
SLT04116	Basic Biological Principles	9
SLT 04117	Laboratory Safety	6
	TOTAL	66

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 04213	Trigonometry, Vectors and Complex numbers	6

ITT 04215	Spreadsheets and Database	6
CORE MODULES		
SLT 04211	Qualitative Analytical Chemistry	12
SLT 04212	Basic Electronics for Instrumentation	9
SLT 04213	Basic Biological Experiments	12
SLT 04214	Introduction to General Chemistry	6
SLT 04215	Principles of Physics	6
	TOTAL	57

Total credits at NTA 4: 123 (Minimum credits required at NTA 4: 120)

(b**). TECHNICIAN CERTIFICATE IN SCIENCE AND LABORATORY TECHNOLOGY (NTA LEVEL 5)**

Semester 1

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 05111	Differentiation and Integration	6
GST 05112	Research Methods for Technicians	3
CORE MODULES		
SLT 05111	Analytical measurements and Instrumentation	6
SLT 05112	Electrostatics & Current Electricity	9
SLT 05113	Inorganic chemistry Practical	12
SLT 05114	Applied Mechanics	6
SLT 05115	Plants and Animal Taxonomy	9
SLT 05116	Lab Layout and organization	9
SLT 05117	Industrial Practical Training	10
	TOTAL	70

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 05213	Probability and Statistics for Technicians	6
GST 05214	Technical Writing and Presentations	6
CORE MODULES		

SLT 05211	Magnetism and AC Theory	9
SLT 05212	Introduction to Physical Chemistry	9
SLT 05213	Applied Optics	6
SLT 05214	Biological Specimen Management	9
SLT 05216	Basic Environmental Management	6
	TOTAL	51

Total credits at NTA 5: 121 (Minimum credits required at NTA 5: 120)

(c). ORDINARY DIPLOMA TECHNICIAN CERTIFICATE IN SCIENCE AND LABORATORY TECHNOLOGY (NTA LEVEL 6)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 06111	Conics and Differential Equation	6
GST 06112	Small Business Development	6
CORE MODULES		
SLT 06111	Advanced Experimental Physics	9
SLT 06112	Modern Nuclear Physics	9
SLT 06113	Physical Chemistry	9
SLT 06114	Microbiology	9
SLT 06115	Physical Chemistry Practical	12
SLT 06116	Project Conceptualization	10
SLT 06117	Industrial Practical Training	10
	TOTAL	80

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 06213	Numerical Methods and Series	6
GST 06214	Business Planning	6
CORE MODULES		
SLT 06211	Basic Electronics	6

SLT 06212	Applied Experimental Physics	9
SLT 06214	Applied Organic Chemistry	9
SLT 06215	Project Realization	10
SLT 06216	Molecular Biology and Genetics	9
	TOTAL	55

Total credits at NTA 6: 135 (Minimum credits required at NTA 6: 120)

(d**) BASIC TECHNICIAN CERTIFICATE IN FOOD SCIENCE AND TECHNOLOGY- NTA LEVEL 4**

Semester 1

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 04111	Algebra	6
GST 04112	Basic Technical Communication Skills	6
ITT 04116	Computer Basics and Word Processing	6
CORE MODULES		
FST 04101	Food Science	12
SLT 04112	Basic Experimental Chemistry	6
FST 04103	Food Microbiology	12
SLT 04115	Solutions and bench Reagents	6
SLT 04117	Laboratory Safety	6
	TOTAL	60

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 04213	Trigonometry, Vectors and Complex numbers	6
ITT 04215	Spread Sheets and Database	6
CORE MODULES		
SLT 04201	Human Nutrition	12
SLT 04202	Food Chemistry	12
SLT 04203	Fruits and Vegetable Processing Technology	12
SLT 04211	Qualitative Analytical Chemistry	12

	TOTAL	60

Total credits at NTA 4: 120 (Minimum credits required at NTA 4: 120)

(e) TECHNICIAN CERTIFICATE IN FOOD SCIENCE AND TECHNOLOGY- NTA LEVEL 5

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 05111	Differentiation and Integration	6
GST 05112	Research Methods for Technicians	3
CORE MODULES		
FST 05101	Biotechnology	12
FST 05102	Principles of Food Technology	12
FST 05103	Industrial Practical Training	10
FST 05104	Cereals and Legumes Processing Technology	12
FST 05105	Food Engineering	12
	TOTAL	67

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 05213	Probability and Statistics for Technicians	6
GST 05214	Technical Writing and Presentations	6
CORE MODULES		
FST 05201	Food Analysis and Instrumentation	12
FST 05202	Food Hygiene	12
FST 05203	Roots and Tuber processing Technology	12
SLT 05216	Basic Environmental Management	6
	TOTAL	54

Total credits at NTA 5: 121 (Minimum credits required at NTA 5: 120)

(f) ORDINARY DIPLOMA IN FOOD SCIENCE AND TECHNOLOGY -NTA LEVEL 6

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 06111	Conics and Differential equation	6
GST 06112	Small Business Development	6
CORE MODULES		
FST 06101	Fish, Meat and Poultry Processing Technology	12
FST 06102	Food Packaging Technology	12
FST 06103	Food Quality Assurance	12
FST 06104	Project Conceptualization	10
FST 06105	Industrial Practical Training	10
	TOTAL	68

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 06213	Numerical methods and Series	6
GST 06214	Business Planning	6
CORE MODULES		
FST 06201	Forensic Sciences	9
FST 06202	Beverage Processing Technology	12
FST 06203	Diary Processing Technology	12
FST 06204	Project Realization	10
	TOTAL	55

Total credits at NTA 6: 123 (Minimum credits required at NTA 6: 120)

(g) **BASIC TECHNICIAN CERTIFICATE IN BIOTECHNOLOGY - NTA LEVEL 4.**

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 04101	Algebra	5

GST 04102	Basic Technical Communication skills	2
GST 04103	Entrepreneurship Concepts and Context	3
CSET 04101	Computer Basics and Word processing	2
CORE MODULES		
SLBT 04101	Basic Biotechnology Principles	12
SLBT 04102	Basic Cell Biology	12
SLT 04104	Basic Biology Instrumentation	9
SLT 04105	Solutions and Bench Reagents	6
SLT 04107	Laboratory Safety	6
SLT 04103	Use and Maintenance of Laboratory Equipment & Apparatus	9
	TOTAL	66

Semester II

Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 04204	Trigonometry and Vectors	5
GST 04205	Communication Skills	2
GST 04206	Small Business Development	3
CSET 04204	Spreadsheet and Database	2
CORE MODULES		
SLBT 04201	Microbiology	12
SLBT 04202	Applied Biotechnology Principles	12
SLFT 04204	Basic Organic Chemistry	9
SLT 04202	Qualitative Analytical Chemistry	9
	TOTAL	54

Total credits at NTA 4: 120 (Minimum credits required at NTA 4: 120)

(h) TECHNICIAN CERTIFICATE IN BIOTECHNOLOGY - NTA LEVEL 5

Semester I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 05101	Fundamental Rule of counting, Matrices and Differentiation	5
GST 05101	Business Communication	2

GST 05101	Business Start Up and Management	3
CSET 05101	Presentation and Internet	2
CORE MODULES		
SLBT 05101	Biosafety and Bio-ethics	12
SLBT 05102	Agricultural Biotechnology	12
SLBT 05103	Biotechnology Analytical Instruments and Measurements	12
SLBT 051O7	Industrial Practical Training	10
	TOTAL	58

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 05204	Integration, Statistics and Probability	5
GST 05205	Communication and Technical Presentation	2
GST 05206	Business Financial Management and Accounting	3
CSET 05205	Computer Aided design	2
CORE MODULES		
SLBT 05201	Industrial Biotechnology	9
SLBT 05202	Environmental Biotechnology	12
SLBT 05203	Biochemistry	12
SLT 05202	Introduction to Physical chemistry	9
SLT 05204	Biological Specimen Management	9
GST 05207 *	Research Methods for Technicians	3
	TOTAL	66

Total credits at NTA 5: 124 (Minimum credits required at NTA 5: 120)

(i) ORDINARY DIPLOMA IN BIOTECHNOLOGY -NTA LEVEL 6

Semester 1

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 06101	Conic and Differential Equation	4
GST 06102	Engineering Study Skills	2
GST 06103	Formalization, Internationalization and E-Business	2

CSET 06101	Basic Computer Programming	2
CORE MODULES		
SLBT 06101	Tissue Culture	12
SLBT 06102	Biostatistics	9
SLBT 06103	Proteomics	9
SLBT 06104	Research Techniques	9
SLBT 06105	Project Data collection	10
SLT 06108	Industrial Practical Training II	10
	TOTAL	69

Semester II

Code	Module Title	Credit
FUNDAMENTAL MODULES		
GST 06204	Complex number, Numerical methods and series	4
GST 06205	Technical writing	2
GST 06206	Business Planning	2
CSET 06201	Computer programing and Data structure	2
CORE MODULES		
SLT 06206	Molecular Biology and Genetics	9
SLBT 06207	Biotechnology and Genomics	12
SLFT 06203	Forensic Science	12
SLBT 06209	Project Report	10
	TOTAL	53

Total credits at NTA 6: 122 (Minimum credits required at NTA 6: 120)

(j) HIGHER DIPLOMA OF TECHNOLOGY IN LABORATORY SCIENCES - NTA LEVEL 7

Semester 1

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
GSU 07101	Calculus	6
GSU 07105	Computing using in mathematics soft ware	6
GSU 07106	Technical Communication Skills	6

CORE MODULES		
SLU 07101	Principles of Physics	6
SLU 07102	Cell Biology	9
SLU 07103	Advanced Organic Spectroscopy	6
SLU 07104	Laboratory Management and Maintenance	6
SLU 07105	Chromatographic Techniques	9
ETU 07101	Analogue Electronics	6
TOTAL		60

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
MEU 07212	Industrial Management	6
GSU 07202	Advanced Calculus	6
CSEU 07201	Data Structure and Computer Programming	6
CORE MODULES		
SLU 07201	General Microbiology	6
SLU 07202	Advanced Organic Chemistry	6
SLU 07203	Molecular Biology	9
MEU 07213	Fluid Dynamics	9
ETU 07206	Digital Electronics	6
EEU 07206	Control Systems Engineering Analogy	6
	TOTAL	60
ELECTIVE MODULES		
CSEU 07101	Object Oriented Programming	9
MEU 07211	Material Technology	6
ETU 07207	Electronic Circuits	6
SLU 07204	Fundamental of Physics	6

Semester III

Code	Module Title	Credit
FUNDAMENTAL MODULES		
MEU 07322	Finance and Human Resource Management	6
CSEU 07301	Data base Systems	9

GSU 07303	Differential Equations and Complex variables	6
CORE MODULES		
SLU 07301	Advanced Physical Chemistry	6
SLU 07303	Applied Organic Chemistry	6
SLU 07304	Advanced Laboratory Stores Management	6
SLU 07305	Computational Physics and Electronics	6
SLU 07306	Environmental Impact and Risk Assessment	3
SLU 07307	Electronic Polymers and Polymer based magnets	6
SLU 07308	Industrial Practical Training	12
	TOTAL	66

Semester IV

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
MEU 07428	Engineering Operation's Management	6
GSU 07404	Probability and Statistics	6
GSU 07407	Research Methods	3
CORE MODULES		
SLU 07401	Applied Thermodynamics	9
SLU 07402	Industrial Chemistry	6
SLU 07403	Nuclear Chemistry	6
SLU 07404	Biochemistry	9
SLU 07405	Industrial Microbiology	9
	TOTAL	54
ELECTIVE MODULES		
MEU 07105	Fluid Mechanics	3
SLU 07307	Metal Technology	3
SLU 07308	Waste Water Management	3
SCEU 07403	Industrial Automation	9

Total credits at NTA 7: 267 (Minimum credits required at NTA 7: 240)

(k) BACHELOR OF TECHNOLOGY IN LABORATORY SCIENCES- NTA LEVEL 8

Semester 1

Module Code	Module Title	Credit
FUNDAMENTAL MODULES		
MEU 08106	Law for Engineers	6
CORE MODULES		
SLU 08101	Thermal and Condensed Matter Physics	6
SLU 08102	Ecology	9
SLU 08103	Instrumental Analytical Chemistry and Quality Control	9
SLU 08104	Soil and Water Testing	6
SLU 08105	Project – Data Collection	18
SLU 08106	Industrial Practical Training	12
	TOTAL	66
ELECTIVE MODULES		
CSEU 07302	Microprocessors	9
SLU 08108	Automation in the Laboratory	3

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GSU 08201	Entrepreneurship for Engineers	3
CORE MODULES		
SLU 08201	Applied Biochemistry	9
SLU 08202	Synthetic Organic Chemistry	9
SLU 08203	Environmental Pollution and Mitigations	6
SLU 08204	Applied Electromagnetism	9
SLU 08205	Project	18
	TOTAL	54
ELECTIVE MODULES		
SLU 08206	Lubricants Chemistry	3
SLU 08207	Explosive and Propellants	3
SLU 08208	Wave Mechanics	3
EEU 08201	Renewable energy Technologies	6

Total credits at NTA 8: 137 (Minimum credits required at NTA 8: 120)

6.6.2 LIST OF ACADEMIC STAFF IN THE DEPARTMENT OF SCIENCE AND LABORATORY TECHNOLOGY

Lecturer and Head of Department

Dr. K.S. Mwaikono, FTC DIT, BSC FST (SUA), MSC – QAL (Portugal/Spain), PhD Health and Biomedical Sciences (NM-AIST), Post Doc. Bioinformatics (University of Cape Town

Associate Professors

E. Amri, BSc. Ed., MSc. Bot. (UDSM), PhD Bot, (UDSM)

L. N. Henry, B Ed. Sc., MSc, Chem. PhD Chem (UDSM)

P.D. Nsimama, BSc Ed., MSc. Physics (UDSM), PhD Physics (Bloemfontein, South Africa), Post doc. (Ilmenau, Germany)

Najat Mohamed, BSc (Ed), MSc (Physics) UDSM, PhD (Univ. Surrey UK)

Lecturers

A.G. Mmari, BSc. MSc. Physics (UDSM). MSc (Seismology) Norway), D. Tech Chemistry, PhD Physics (Rep. South Africa)

U. Mtaita, BSc. Ed. Med. (Ed), (UDSM)

C.C. Kimaro, BSc. Ed. (UDSM) MEng. Environ. (Holland)

Assistant Lecturers

C.A. Malisa BSc Ed (UDSM) MBA (UDSM)

M. Magage, BSc Ed (UDSM), MSc. (UDSM)

S.J. Dadi BSc Ed (UDSM), MSc Ed (UDSM)

*I. M. Suleiman, BSc (SUA) MSc. (MUHAS)

*E. Haule, BSc (SUA) MSc. (Spain)

*A. Ndabigaye, BSc- MBB (UDSM), MSc (NM-AIST)

M. Mkangara, BSc. Ed. (Open University), MSc (NM-AIST), Ph.D. (NM-AIST)

*P. Francis, BSc-Biotech. (SUA), MSc (MUHAS)

Tutorial Assistant

Z. Zuberi, BSc- MBB (UDSM)

Y. Chenyambuga, B. Sc. Ed (UDSM).

M. H. Sarwat, BSc. (SUA)

Omary Mohammed, Ordinary Dip Labtech (DIT),

L. Juma, BSc-Biotech. (SUA), MSc (MUHAS)

O. Mwakasyuka, Ordinary Dip Lab Tech. (DIT), BMLS (MUHAS), MMLS (MUHAS)

Instructors

F. Mwaimu, BSc Ed. (UDSM)

*C. S. Tarimo BSc-Microbial. (UDSM)

H. Ngulika FTC Lab Tech. (DIT), BSc-Biotech. (SUA)

V. R. Mwesiga, BSc Ed. MSc Physics (UDSM)

K. Masasi, BSc Ed. MSc Physics (UDSM)

L. Optat, BSc Ed. (UDSM), MSc Physics. (UDSM)

Laboratory Technicians

G. Damas, FTC Lab Tech. (DIT)

N. Laini, Ordinary Diploma Lab Tech. (DIT). Bachelor Lab Tech (DIT)

D.P. Chale, Ordinary Diploma Lab Tech. (Arusha Tech)

J Gegea, Ordinary Diploma Lab Tech. (DIT), BSc. (SJUT)

* On study leave

6.7 DEPARTMENT OF GENERAL STUDIES

This is an academic department that provides teaching services to all other academic departments in areas of Applied Mathematics, Research Methods, Communication Skills and Entrepreneurship. The department has 38 teaching staff members on full time basis.

6.7.1 Modules offered by General Studies Department

(a) BASIC TECHNICIANS CERTIFICATE (NTA LEVEL 4)

NON-ICT RELATED DEPARTMENTS (CE, EE, ME & LT)

	Module Code	Module Title	Credits
Semester I	GST 04111	Algebra	6
	GST 04112	Basic Technical Communication Skills	6
Semester II	GST 04214	Trigonometry Vectors and Complex Numbers	6

ICT RELATED DEPARTMENTS (CS & ETE)

	Module Code	Module Title	Credits
Semester I	GST 04121	Algebra	6
	GST 04122	Basic Technical Communication Skills	6
Semester II	GST 04223	Trigonometry and Vectors	6
	GST 04224	Trigonometry Vectors and Complex Numbers	6

(b) TECHNICIAN CERTIFICATE (NTA LEVEL 5)

NON-ICT RELATED DEPARTMENTS (CE, EE, ME & LT)

	Module Code	Module Title	Credits
Semester I	GST 05111	Differentiation and Integration	6
	GST 05112	Research Methods for Technicians	3
Semester II	GST 05213	Statistics and Probability	6
	GST 05205	Technical Writing Presentations	6

ICT-RELATED DEPARTMENTS (CS & ETE)

	Module Code	**Module Title**	**Credits**
Semester I	GST 05121	Differentiation and Integration	6
	GST 05122	Research Methods for Technicians	3
	GST 05223	Statistics and Probability	6
Semester II	GST 05224	Technical Writing Presentations	6

(c) ORDINARY DIPLOMA IN ENGINEERING NTA LEVEL 6

NON-ICT RELATED DEPARTMENTS (CE, EE, ME & LT)

	Module Code	**Module Title**	**Credits**
Semester I	GST 06111	Conics and Differential Equation	6
	GST 06112	Small Business Development	6
	GST 06115	Algebra and Application of Integrals	6
Semester II	GST 06213	Series and Numerical methods	6
	GST 06206	Business Financial Management	6

ICT-RELATED DEPARTMENTS (CS & ETE)

	Module Code	**Module Title**	**Credits**
Semester I	GST 06121	Conics and Differential Equation	4
	GST 06122	Small Business Development	6
Semester II	GST 06213	Series and Numerical methods	6
	GST 06206	Business Financial Management	6

(d) HIGHER NATIONAL DIPLOMA IN ENGINEERING NTA LEVEL 7

NON-ICT RELATED DEPARTMENTS (CE, EE, ME & LT)

	Module Code	**Module Title**	**Credits**
Semester I	GSU 07101	Calculus	6
	GSU 07105	Computing using Mathematical software	6
	GSU 07106	Technical Communication Skills	6
Semester II	GSU 07202	Advanced Calculus	6
	Semester III		

Semester III	GSU 07303	Differential Equations and Complex Variables	6
	Semester IV		
Semester IV	GSU 07404	Probability and Statistics	6
	GSU 07407	Research Methods for Engineers	6

ICT-RELATED DEPARTMENTS (CS & ETE)

	Module Code	**Module Title**	**Credits**
Semester I	GSU 07111	Basics of Technical Communication Skills	6
Semester II	GSU 07212	Algebra and Apllications of Integrals	6
	Semester III		
Semester III	GSU 07312	Engineering Mathematics	9
	GSU 07313	Technical Communication Skills	6
	GSU 07314	Calculus	6
	Semester IV		
Semester IV	GSU 07404	Advanced Engineering Mathematics	6
	GSU 07415	Probability and Statistics	6
	Semester V		
Semester V	GSU 07516	Numerical Methods and Matrices	6
	Semester VI		
Semester VI	GSU 07616	Research Methods for Engineers	6

(e) BACHELOR OF ENGINEERING (NTA LEVEL 8)

NON-ICT RELATED DEPARTMENTS (CE, EE,ME & LT)

Semester II	**Module Code**	**Module Title**	**Credit**
	GSU 08201	Entrepreneurship for Engineers	3

ICT-RELATED DEPARTMENTS (CS & ETE)

Semester I	**Module Code**	**Module Title**	**Credit**
	GSU 08111	Engineering Economics	9
	GSU 08112	Engineering Professionalism and Ethics	6
Semester II	**Module Code**	**Module Title**	**Credit**

	GSU 08211	Entrepreneurship and Innovation Management	6

(a) MASTER OF ENGINEERING (NTA LEVEL 9)

SEMESTER I

Module Code	Module Title	Credit
GSMG 9101	Statistics in Maintenance Management	12

(b) MASTER OF TECHNOLOGY IN COMPUTING AND COMMUNICATIONS (NTA LEVEL 9)

Semester I

Module Code	Module Title	Credit
CCG 09101	Linear Algebra and Computational Statistics	12
CCG 09104	Advance Research Methodology	12
CCG 09107	Numerical Methods	12

Semester II

Module Code	Module Title	Credit
CCG 09215	Mathematical Modeling, Analysis and Simulation	**12**

6.7.2 List of Academic Staff in the Department of General Studies

Lecturer and Head of Department

A.R. Mtafya, BSc. Ed.(UDSM), MSc Comp Sc.(China), PhD Comp Sc. (China)

Senior Lecturer(s)

E.C. Rutalebwa, BSc.Ed. (UDSM), MSc. Math (UDSM), MSc. Statistics (K.U. Leuven, Belgium), PhD Statistics (K.U. Leuven, Belgium)

Lecturer(s)

E. Mtisi, BSc. Ed.(UDSM), MSc math (UDSM) , MS Appl. Biostatistics (Harvard), PhD Math (UDSM)

T. Ngailo , Bed (Maths) (Tumaini), MSc. Maths (UDSM) , PhD (Maths) UDSM

G. Sanga, BSc. Ed.(UDSM), MSc (Math) (Stellenbosch, RSA) , PhD (Maths) UDSM

R. Ngeleja, BSc Edn. (UDSM), MSc. Maths (NM-AIST), PhD (Maths) (NM-AIST)

A. J. Nsanganzelu ADLTM (Dar), BCom(UDSM), CPA (T), MBA (Fin. Strategic Mgt) (Netherlands), PhD (Finance and Accounting) KIU, Uganda

Instructor II

**R.R. Elineema, BSc. Ed.(UDSM), MSc. Operational Research (Mexico)

Assistant Lecturers

A. Msangi, BA Ed.(UDSM), MA Linguistics (UDSM)

L. Gerson, BA Ed. (UDSM), MA Linguistics (UDSM)

H. Seleman BA Ed.(UDSM), MA (Linguistics) UDSM

*A. Mnabe, BA Statistics. (UDSM), MA (Statistics) UDSM

*F. Elias, BSc. Ed. (Dar), PGD Comp. Sc (UDSM), MSc (Maths) UDSM

M. Mihayo, BA Ed.(UDSM) MA (Linguistics) UDSM

*B. D. Rioba, BA Ed.(UDSM), MA (Linguistics) UDSM

M. Ryoba, B Sc (Ed) (UDSM), MSc. Maths (China)

B. Malisa, BSc (Ed) (UDSM), MSc. Maths (China)

S. K. Ndawia, Bed (Linguistics) (MMU), MA (Ed) (UDOM)

I. Mangula, BA (Ed) (SAUTI) MA (Linguistics) (UDOM)

U. Mwinuka, BA (Finance) IRDP), MEED (Mzumbe)

*T. Anthony. Bed (Maths) (Tumaini), MSc (Ed) (UDSM)

I. R. Kapungu, Bed. Math (Tumaini), MSCE (DIT)

*J. Chiwinga, Bed Math (Tumaini), MSc(Maths) (UDSM)

*P. Mwita, Bed (Maths) (SAUT), MA (Ed) (SAUT), MSc (NM-AIST)

R.R. Mungula, B.A Ecom (MNMA), MEED (UDSM)

M. Mgendi BSc (Ed) (UDSM), MSc (Maths) (AIMS-Tanzania)

M. Majogoro, BA. (CBE), MSc (Applied Economics and Business) (Mzumbe, Tz and CMR,

F. Kileo, BEd (Maths) (Iringa University), MSc Ed (Maths) (UDSM)

N. Macha, BA(Ed) (UDSM), MA (Development Studies) (UDSM)

N. Honda BSc. (Ed) (UDSM), Msc (Math) (Hungary)

Tutorial Assistants

Z. Salawa BSc Ed. (UDSM)

F. H. Mbelwa BA (Business Mgt) (Bangalore, India), MA (Int. Trade) (UDSM)

(UDSM)

D. Rutechura BA (Ed) (UDSM)

M. Masanga Bed(Linguistics) (UDSM)

Instructor II

C. Mrema, BEd (Maths) (Mwenge-SAUT)

F. I. Ngwembe Dip (Ed) (Korogwe), BEd (Maths), MSc (Maths) (Ruaha C.U)

G. Mwampiki BA (Ed)(UDSM)

W. Bega W. Bega,BEd (Maths) (Tumaini)

* On Study Leave,

** On Administration Duties

6.7.1 E-LEARNING PROGRAMME

(a) Objective of the E-Learning Programme

E-Learning programme at the Dar es Salaam Institute of Technology was established to:

- Provide flexible, innovative and high quality learning.
- Open access to Tanzania about worldwide eLearning courses.
- Encourage lifelong learning using World Wide Web.
- Designing and developing all DIT courses online.

(b) Courses and Services

To achieve these objectives of providing a wide range of services to Tanzanians and its partner organizations, the department plans to provide:

- Course Design and Development
- Virtual Campus
- Virtual Learning Space
- E-Community
- Research
- Staff Development

(a) Programme Coordinator

e-Learning Coordinator: Vacant

CHAPTER SEVEN

PROFILES OF ACADEMIC RELATED DEPARTMENTS

7.1 DEPARTMENT OF RESEARCH, PUBLICATIONS AND POSTGRADUATE STUDIES

The department of research and publications and Postgraduate studies (RP &PGs) was established purposely in order to implement the policies for research, publications and postgraduate studies The overall objective of the DIT research and publications department is to put in place a clear and comprehensive institutional framework, which is conducive for stimulating and sustaining research and publication activities and coordinate the establishment /conduction of postgraduate programs at the Institute. Specifically, the department has been established with the following objectives.

7.1.1 Objectives of Research and publications

a) To put in place an appropriate and comprehensive framework for executing, promoting and sustaining research and publication activities at the Institute
b) To promote research, innovations, technology development and publication activities among members of DIT.
c) To increase and effectively coordinate research and publication activities at the Institute.
d) To create mechanism for staff motivation, rewarding and development of confidence so that each member participates actively in research and publications.
e) To facilitate the development of the culture of job creation (entrepreneurship development).
f) To co-operate/collaborate with other Institutions in undertaking research activities.
g) To have in place a functional mechanism for promoting research and monitoring the progress of research and publication activities at the DIT.
h) To develop research acquisition strategic plan.
i) To enhance dissemination of knowledge.

j) To establish research and business links with public and private sector.
k) To conduct workshops, conferences, etc.
l) To be custodians of research reports and disseminate these reports, where appropriate, for academic and other use.
m) To coordinate acquisition of resources needed to conduct research.
n) To establish means to coordinate research resources and activities.
o) To establish mechanism for monitoring research funding and disbursement from different sources.
p) To develop and enhance research capability ~~and research.~~
q) To develop intellectual property right policy and be custodian of patents and copyrights at the Institute
r) To promote and support students' innovative ideas/projects to create more DIT graduates –based start-ups, and SMEs.

7.1.2 . Objectives of postgraduate studies

i) To Enhance the existing as well as develop new educational links with other institutions of higher education within and outside the country
ii) To coordinate the establishment of postgraduate programs in Civil Engineering, Mechanical Engineering, Electrical Engineering, Laboratory Technology, Electronics and Telecommunication Engineering, Computer Studies and such other disciplines as the Institute shall implement as per strategic plan.
iii) To coordinate teaching, examination and research carried out at postgraduate level.
iv) To promote implementation of research for postgraduate students
v) To collaborate with the quality control department of the institute to ensure a quality delivery of postgraduate programs.

7.2 The Institute Consultancy Bureau (ICB)

The Institute Consultancy Bureau (ICB) was established/transformed from former Research and Consultancy Bureau (RCB) to administer and coordinate consultancy and continuing education including pre-entry courses activities carried out by DIT.

Specifically, it was established with the following main objectives.

i. To coordinate and promote consultancy and continuing education and pre-entry course activities among members of the DIT
ii. To oversee the quality of consultancy and continuing education and pre-entry course services and related assignments undertaken by DIT
iii. To develop DIT's human capacity in consulting Skills
iv. To coordinate and facilitate multi-disciplinary consultancy activities being executed at the institute by staff members
v. To link DIT-consultancy and continuing education and pre-entry course activities with industries, national and international professional association.

OBJECTIVES:

7.2.1 The objective of the Bureau is to enhance the capability of Dar es Salaam institute of technology in order to contribute effectively to the industrial development of Tanzania through the provision of professional engineering consulting services, expert professional services and conduct and administer continuing professional development programs by using resources at the institute and hence generate revenue for the institute and its staff.

7.2.2 The specific objectives of the bureau shall be to:

ii. Promote and administer the implementation of consultancy policies and procedures for all commercial activities in the institute that fall under its jurisdiction.

iii. Enhance the capability of DIT to contribute effectively in the industrial development of Tanzania through the provision of consultancy, expert professional services and professional advancement (or development engineers and technologists.

iv. Enable the institute to generate funds to subsidies grants from the government and other donors for the institute to meet its financial needs.

v. Enables the staff in DIT to supplement their income thus enhancing staff retention.

vi. Optimize the use of DIT expertise and resource to solve engineering technology and related problems.

vii. Provide means for academic and other DIT staff to gain professional experience that shall be transferred to students and thereby improve quality of outputs

viii. Make available DIT training facilities to the general public through short term and medium course for the purpose of ensuring that engineers keep abreast with the rapidly advancing technology

ix. Acquire knowledge on new development and needs in the trade and adjust curriculum accordingly

x. Provide expert technical support to existing industry operations and to facilities developments of new industries and their products.

xi. Establish and offer regular professional development programs for the advancement of local engineering personnel in the industry.

xii. Facilitate establishment and enhancement of contracts and relations between DIT staff and industries.

xiii. Provide a platform through which DIT staff can transfer their knowledge and skills to industry and

xiv. Assist DIT staff to develop competencies in soliciting for jobs and in preparing winning proposals for consultancies and services

7.2.3 List of Staff in the Institute Consultancy Bureau (ICB)

Manager

J.Malisa, BSc. Eng (UDSM), MSc. Eng (UDSM), MSc, Eng. (UDSM), PhD (UDSM/NTNU)

Projects Coordinator

R. C. Kiiza, BSc. Eng. (UDSM), MSc Eng (UDSM), PhD (KTH - Sweden), P. Eng. (T)

7.2.4 Available Courses for 2021/2022

The following short-term courses have been planned for the academic year **2021/2022**. However, the list is not exhaustive as other pertinent tailor made courses can be designed to suit individual groups whenever need arises.

Laboratory Technology

COURSE TITLE	COURSE CONTENTS	DURATION	TUTION FEE (TSHS)
Advance Level Secondary School Practical(s)	Practical work in Physics, Chemistry and Biology	6 Weeks 2hrs/day	30,000/=
Ordinary Level Secondary School Practical(s)	Practical work in Physics, Chemistry and Biology.	6 Weeks 2hrs/day	25,000/=
Laboratory Organization and Management.	Introduction to laboratory organization and management, Laboratory inspection, Laboratory maintenance, stores and chemical storing, Laboratory safety and first aid, preparation of chemistry and biology bench reagent, General knowledge of all equipment and apparatus.	10 weeks 2hrs/day	260,000/=
Laboratory Instrumentation and Maintenance	Instrumentation, Maintenance and repair of scientific equipment, introduction to computer – Aided experiments and Analysis	10 weeks 2hrs/day	195,000/=
Chemistry Techniques	Mole concepts and its practical application, calculations of the mole concept, Standard solution, preparation of the standard solution from standard reagent	10 weeks 2hrs/day	234,000/=

Biology Techniques	Introduction to biology practical work, preparation of biological reagent, collection, preservatives and preservation of biological specimens, Microscopes: types, care and maintenance, Temporary and permanent preparation of hand cut section of plants, examination of prepared slides under microscopes, Practical on food test, Report writing.	10 weeks 2hrs/day	195,000/=
Physics Techniques	Experimental skills, experiment in mechanics, experiments in properties of matter, experiment in light, experiment in heat, experiment in electricity, report writing.	10 weeks 2hrs/day	169,000/=

Mechanical Engineering

COURSE TITLE	COURSE CONTENTS	DURATION	TUTION FEE (TSHS)
Introduction to Computer Aided Drafting (AutoCAD)	Starting the program Use of Drawing tools Modification of features Preparation of layers Preparation of Technical Drawing Dimensioning, Scaling, title block and plotting	4 Weeks 2hrs/day	120,000/=
Computer Aided Design (Modeling; Solid works, Pro Engineering, etc)	History, definition, field of applications Introduction to parametric software Modeling of parts Modeling of assembly Technical drawing from a model Animation and analysis Plotting	6 Weeks 2hrs/day	200,000/=
Advanced Computer aided Design (Solid Work, Cosmo works) (For Engineers and Project Managers)	Review of parts, assembly and drawing concepts Complete design exercise -Idea, Concept, Optimization -Analysis of developed model -Drawings	8 Weeks 2hrs/day	300,000/=

Project Management (MS Project)	Basic Introduction to Project Management Concept Defining a Project Defining a time line Resource, Assignment & Costs Tracking the work Assignment & Tutorials	8 Weeks 2hrs/day	300,000/=
Basic welding technology & Practice	Fundamental of Metallurgy, Basic Electrical principles, Manual metal arc welding	6 weeks 3hrs/day	240,000/=
Intermediate welding technology	Workshop safety, Welding Science, Metallurgy, Oxy-acetylene welding, Arc-welding Process, Arc-welding Practice, Oxy-acetylene welding practice.	9 weeks 3hrs/day	320,000/=
Modern welding	Modern welding Welding processes: Welding hazards & prevention. Welding Techniques Simple weld estimates	6 weeks 3hrs/day	200,000/=
Basic foundry technology	Tools and equipment for moulding, patterns and core. Casting techniques and finishing operations.	6 Weeks 3hrs/day	200,000/=
Industrial energy management	Data gathering and analysis, Electrical metering and tariffs, Insulation, Plant survey, Refrigeration and heat pump systems, Fuel fired equipment, Steam generation and	3 Weeks 3hrs/day	90,000/=
Advanced refrigeration and air condition	Advanced Psychometric, Central A/Conditioning System-Design, Construction and Maintenance. Duct design and construction, Cold room design and construction	6 weeks 3hrs/day	190,000/=
Intermediate refrigeration and air conditioning	Refrigeration systems, parts and construction repair of refrigerators and freezers Maintenance of refrigerators and system Psychometric Principles of operation of air conditioners Repair and service air conditioners	12 weeks 3hrs/day	280,000/=
Motor Vehicle Mechanics (General)	Engines – (Internal Combustion engine) Petrol, Transmission System (manual), Suspension System, Basic Auto-electrics (Simple)	12 weeks 3hrs/day	300,000/=

Auto-Electric	Battery Systems. Ignition system Charging System Starting, Light etc System Simple car Electronics Other accessories	6Weeks 3hrs/day	240,000/=
Electronic Fuel Injection	Basic electronics, Principles of Petrol fuel injection. Electronic fuel injection. ECU. Sensors and their function.	6 Weeks 3hrs/day	240,000/=
Diesel Engine (CIE)	Principles of operations. Injector pumps. Injector Nozzles. Governors. Phasing and calibration.	4 Weeks 3hrs/day	240,000/=

Electronics and Telecommunications Engineering

COURSE TITLE	COURSE CONTENTS	DURATION	TUTION FEE (TSHS)
Basic Electronics	Passive Electronic components: - Resistors, capacitors, inductors Active Electronic Components: - Diodes, transistors, Integrated circuits, diacs, triacs, thyristors	4 Weeks (60 hours)	250,000/=
Digital Electronics	Number systems, Logic gates and logic expressions, sequential logic circuits, logic families, Memories, Design and troubleshooting of digital circuits and systems	4 Weeks (60 hours)	200,000/=
Practical electronics	Direct and alternating current (DC and AC), Resistors(types, values and colour coding), capacitive and inductive Networks, Resistivity and conductivity, Semi-conductor diodes and their applications, Transistors and their applications, IC application, Amplifiers and oscillators, Common emitter, Field Effect transistors, logical fault finding	8 Weeks 2hrs/day	250,000/=
Television and radio repair	Basic electricity and Electronics, Devices and measuring Instruments, A.C circuit and tuned circuit, Radio waves propagation and bands, Amplifiers, Radio receiver operation principles, TV camera and picture tube operation, Principles of Audio and Video tape recording, Service equipment and application, Troubleshooting exercises in TV and Radio	12 Weeks 3hrs/day	400,000/=
Satellite Dish Design and Construction		4 Weeks (60 hours)	340,000/=
Maintenance of Electronic equipment and Instrument use	Voltmeter usage, Ammeter usage, ohmmeter usage, Oscilloscope usage, Diode testing, Transistor testing, IC testing, Amplifier trouble shooting.	10 Weeks (96 hours)	400,000/=
Communication System Design(CSD)	Integrated network design (Fibre, VSAT and WiFi Technology), Site knowledge/survey, Site implementation device and tools, Network implementation, Network maintenance, Field work.	4 Weeks (96 hours)	500,000/=

Electronic & Electrical equipment maintenance & repair	PA systems, Audio equipment, motors, ac, dc, TV systems, gymnastic equipment	4 weeks (96 hrs)	300,000/=
CCTV Camera Installation, Monitoring and Servicing	Analogy CCTV, IP CCTV and wireless CCTV installation and configuration, CCTV monitoring CCTV system repair and servicing	3 weeks 2hrs/day	350,000/=

Electrical Engineering

COURSE TITLE	COURSE CONTENTS	DURATION	TUTION FEE (TSHS)
Renewable Energy	Voltage size nomination, Load calculation, Switch gear choice, Solar module selection, Battery sizing, Installation procedures, Cost estimation, Analysis of different seasons of the year, Charge controllers, Inverters and TBS specifications for solar PV system.	3 months 3hrs/day	550,000/=
Maintenance of Electric Equipment and Industrial Instrumentation	Introduction to electrical system(AC, DC, 3Φ, 1Φ) Introduction to an electrical equipment, Introduction to an electrical maintenance, Basic electricity, AC Circuit and DC circuit, IEE Regulations, Electrical design	9 weeks 2hrs/day	300,000/=
Winding of Electrical Machine	Basic concept of winding. A.C windings. -Single phase winding -Three phase winding D.C winding.	3 months 3hrs/day	400,000/=
Electrical Installation (domestic and Industrials)	Single phase installations (various). Three phase installations (Various).	8 Weeks 3hrs/day)	400,000/=
Industrial Process Control	Control loop theory. Control modes. Process gain and dynamics. Nonlinear adaptive control.	3 months 3 hrs/day	320,000/=
Digital circuits and converters.	Combination and sequential logics design, Analogue to digital and Digital to analogue converters	Months 2hrs/day	350,000/=

Building and Civil Engineering

COURSES OFFERED	DURATION	TUTION FEE (TSHS)
Supervision of construction works	3weeks	450,000.00
Building construction and maintenance	3 weeks	450,000.00
Quality control – testing of engineering soils, Aggregates and bituminous materials	3 weeks	450,000.00
Quality control – testing of engineering soils, Aggregates and bituminous materials	2 weeks	450,000.00
Civil engineering computer applications part I	4 weeks	250,000.00
Surveying for civil engineering and building Technicians and engineers	3 weeks	450,000.00
Construction and maintenance of low cost highway structures	3weeks	450,000.00
Safety on highway work zones	2 weeks	300,000.00
AutoCAD for architectural design	4 weeks	350,000.00
Entrepreneurship/business management	4weeks	200,000.00
Design of low cost water supply projects	3 weeks	450,000.00
Labour based road maintenance for earth roads	4 weeks	450,000.00
Highway Structures maintenance	3weeks	450,000.00
Fire safety in building structures	2 weeks	300,000.00
Contract administration	3 weeks	450,000.00
Site management (general)	4weeks	600,000.00
Health and safety in construction sites	4weeks	600,000.00
Map 5 – traffic safety analysis	4weeks	600,000.00
Solid waste management	4weeks	450,000.00

Note:

1. Starting date is every 1st Monday of the Month
2. Time for course teaching and learning is 4.00 – 6.00 pm every day of the course

GENERAL STUDIES DEPARTMENT SHORT COURSES

COURSE TITLE	COURSE CONTENT	DURATION	TIME	STARTING DATE	TUITION FEE (TSHS)
Revisions on Basic Mathematics	Fractions, Decimals and percentages. Compounding, Discounting and Amuty, Applied Calculus. Matrix operations. Time value of money. Cost Revenue and Profit	6 Weeks	4:30- 6:30 pm	Every first date of the month	250,000/=

Introduction to statistics	Data collection. Statistical measure. Regression and correlations. Time series analysis Index number Probability Theory	6 weeks	6:30-8:30 pm	Every first date of the month	300,000/=
Applied statistics	Basic Review on probability Theory. Statistical Inferences. Hypothesis Testing. Correction and Regression. Forecasting. Time series.	6 weeks	4:30-6:30 pm	Every first date of the month	400,000/=
Operations research	Inventory control Queing theory Simulations Linear programming Transportation and assignment Network analysis Sequence	6 weeks	4:30-6:30 pm	Every first date of the month	400,000/=
Introduction to research methods and data analysis	Introduction to research. The research process. Data analysis process. Hypothesis Testing. Technical of Data analysis. Data Interpretation.	8 weeks	6:30-8:30	Every first date of a month	400,000/=

For further information, contact:
DIT -Institute Consultancy Bureau (ICB)
Dar es Salaam Institute of Technology, Bibi Titi Mohamed/Morogoro Rd
P.O.Box 2958, DAR ES SALAAM, Telephone: 022-2150902,
Fax : 022-2152504, Email : icb@dit.ac.tz

7.3 DEPARTMENT OF INDUSTRIAL LIAISON AND CAREER GUIDANCE (ILCG)

7.3.1 The main objective of the department is to provide guidance for efficient and effective coordination of industrial practical training (IPT), career counseling for the Institute's students, job placement and follow up of Institutes graduates.

To accommodate the objectives, the department has two functional sections mainly:

- IPT Coordination
- Career Counseling

The main link between the ILCG department and other academic departments is through the Departmental IPT and Career Coordinators.

(a) IPT Coordination section deals with:

i. Soliciting IPT placements for all students at the Institute
ii. Planning and coordinating IPT supervision
iii. Coordinating study visits for students and staff to industries and companies
iv. Coordinating study visits for students and staff from other Institutions
v. Coordinating professional lectures for students in and outside the Institute
vi. Coordinating staff professional attachments to industries and companies
vii. Coordinating employment opportunities for the Institute's graduates

(b) Career counseling section are:

i. identifying and providing solutions to existing potential recruitment problems for the graduates
ii. identifying, coordinating and streamlining professional requirements against industry employer's needs and demands
iii. organizing and coordinating job placements and career guidance services
iv. organizing and managing database on DIT graduates
v. locating the whereabouts of the DIT graduates in the industry
vi. soliciting feedback information on DIT graduate's performance at their respective work stations and establishing a benchmarking system
vii. coordinating matters related to facilities in exhibitions and publicity

7.3.2 Industrial Practical Training (IPT)

IPT is one of the modules included in all academic programs at the Institute. It is therefore an essential integral part of the entire training. The main objective is to provide an opportunity to students to merge theory and practical

Industrial practical training (IPT) structure

IPT module has specific credit values realized in specified time as shown in the table below.

IPT MODULE	Qualification level	Recommended Timing of IPT	Credit	Duration
IPT I	NTA level 5 (First Semester)	End of Semester of NTA Level 4	10	10 weeks
IPT II	NTA level 6 (First Semester)	End of 2nd Semester of NTA Level 5	10	10 weeks
IPT III	NTA level 7 (Third Semester)	End of 2nd Semester of NTA Level 7	12	9 weeks
IPT IV	NTA level 8 (First Semester)	End of 4th Semester of NTA Level 7	12	9 weeks

IPT Modules are treated as courses of succeeding year for all OD and Beng Programs

7.3.3 List of Staff in the Department of Industrial Liaison and Career Guidance

Head of Department

J.A. Msumba, FTC Eng (DTC), ADE (DIT), BSc. (Hons)- Electronics (University of Pretoria), MSc – Electronics (University of Pretoria- RSA), PhD Electronic Eng. (University of Kwazulu-Natal- RSA), Certificate in Wireless Telephone- UP-Mototola- RSA.

7.4 LIBRARY SERVICES

One of the major aspirations of the DIT is to continuously expand its library services in order to foster learning skills of its students and improve professional working conditions of staff. The Institute has, at present, a library whose collection is primarily geared towards providing materials and documentation services to support teaching and learning activities. The collections include materials for major courses in the fields of Electrical Engineering, Civil Engineering, Mechanical Engineering, Electronics and Telecommunications Engineering, Laboratory Technology and Computer studies. Also, it offers materials for supporting subjects such as Mathematics, Communication Skills, Development Studies, Labour Law and Engineering Management. According to the statistics of the previous stocktaking the library has a total number of 3,000 documents. These include up-to-date textbooks, professional journals, theses, manuals, directories, bibliographies, reports, research papers, encyclopaedias and handbooks.

Membership: Any person attending a course or working at DIT is entitled to the use of the library services, and therefore allowed to register him/ herself as a member. The library facilities are available to all students with valid identity cards. However, for students, a token membership fee of five thousand shillings (10,000/=) annually is contributed.

Every student shall enjoy the services of the Institute's library except for those students who for any good cause; have been banned from use of such services and those services shall be available to students at such hours as the management may prescribe. Any student borrowing books, periodicals, magazines or any document from the library shall personally be responsible for their care, safety and shall return them to the issuing offices or librarian on the specified date for their return.

Opening Hours

Monday – Friday	0900 -2000 hrs
Saturday	0900 -1300 hrs
Public Holidays	closed

and Sunday	

The library management aims to automate its library information materials to create easy and quick access. In line with that, it will create access to CD – ROM titles, E-books, E-journals, Internet searching and e-mail communication within the library.

List of Staff in the Library

Lecturer and Head of Library

E. Mtisi, BSc. Ed.(UDSM), MSc math (UDSM), MS. Appl. Biostatistics (Harvard), PhD Math (UDSM)

Library Officer

C. Komba, Cert. (SLADS BAGAMOYO), B.A in Librarianship (Tumaini Makumira University)

O. Ndimbo, Cert (SLADS Bagamoyo), B.A in Librarianship (Tumaini Makumira University)

B. Kamtawa, Cert & Dip. Librarian (SLADS Bagamoyo), B.A in Librarianship (Tumaini Makumira University)

Senior Library Assistant I

A. Nyenze, Cert & Dip. Librarian (SLADS Bagamoyo)

A. Msofe, Cert & Dip. Librarian (SLADS Bagamoyo)

F. Membea Cert & Dip. Librarian (SLADS Bagamoyo)

7.5 INFORMATION TECHNOLOGY (IT) SERVICES DEPARTMENT

The department engages actively with the Institute community, soliciting its current and changing requirements in support of the vision and strategy in order to:

- meet users' expectation and needs for high quality service in ICT, Information resources and print
- deliver those services effectively, efficiently and responsively
- develop and enhance close partnership with department and other institute so as to encourage the best working practice

- plan ahead cooperatively to keep pace with change in it providing leadership for innovation in ICT
- deploy with economy and efficiency it resource of people, money , space and equipment

7.5.1 The key objectives of the IT services department

(a) implement strategies for improving ICT infrastructure and for support to teaching staff involve the department's staff in developing the new culture in ICT

(b) play a leading role in developing and implementing the Institute's ICT/information strategy

(c) exploit the opportunities for the future learning resource centre to improve support for teaching, learning and research

(d) Contribute to and enhance institute initiatives in open and distance learning, lifelong learning, regional development and other outreach services

(e) Improve service quality to students (e.g. inter-library loans, enquiry handling, registration for ICT services etc.

(f) Improve robustness, resilience of ICT systems in the institutes.

7.5.2 . List of staff in the ICT services department

Head of ICT services

O. Mnzava, Adv Dipl. Comp Science, MSc IT and Mgt. (IFM)

Web Master

D. Maduhu, Dipl. Comp. Eng (DIT), BSc. (Computer Science) (UDSM)

System Administrator

I. Jumanne, BSc. (Computer Science) (UDSM)

Instructors

E. Bebwa, Adv Dipl Comp Science, (Macmaine School of Computing), MSc. Software Engineering (Beijing Institute of Technology China).

R. Nyangusi Dipl. Comp. Eng(DIT), Beng. Comp. Eng(DIT)

H. Mohamed, FTC. Comp (DIT), Adv. Dipl. Comp (China), M.Eng. Comp (China)

Technician

B. Sonzogo, FTC, Comp. Eng (DIT) M. Diplo, (Computer Eng) (UDSM), PGD (Centre for Dev. Adv. Comp.) India.

* H.M. Bakari, FTC Comp. Eng (DIT), Dip Comp (China)

E. Masawe FTC Comp. DIT, PGD (UDSM)

* R. Angotike, OD (Computer Eng), (DIT)

* On study leave

7.6 INDIA - TANZANIA CENTRE OF EXCELLENCY IN INFORMATION AND COMMUNICATION TECHNOLOGY (ITCoEICT)

7.6.1. Introduction

The India-Tanzania Centre of Excellence in Information and Communication Technology (ITCoEICT) was established in 2009 as a result of bilateral relation and cooperation between the United Republic of Tanzania and Government of India. The project implementing agencies on behalf of Tanzania and India are Dar es Salaam Institute of Technology (DIT) and India Centre for Development of Advanced Computing (CDAC) respectively. The principal objective of the Center is to promote development of information and communication technology in the United Republic of Tanzania. In order to realize this noble objective, the Centre engages in various professional activities in ICT including provision of high performance computing services, research, innovations, and conducting modular short-term proficiency courses in information technology.

7.6.2 Vision and mission and functions of the centre

7.6.2.1 Vision:

To become a world class centre of excellence in ICT services

7.6.2.2 Mission

To provide competitive ICT professional skills, high performance computing services, research, innovation and collaborative ICT services

ITCoEICT core values are abbreviated as "LISTEN" which represents the following:

i. **L**eadership

ii. **I**nnovation

iii. **S**upporting

iv. **T**eamwork

v. **E**ffectiveness, and

vi. **N**urturing

7.6.2.3 Functions of ITCoEICT:

ITCoEICT has three sections, namely, training and branch operations section, HPC and ICT services section, and research, innovation and collaboration section. The ITCoEICT director and heads of sections form the **ITCoEICT** management**.** Main functions of each section are described in the following subsequent sections:

A. Main functions of training and branch operations section

vii. Administer all ICT training programs at ITCoEICT;

viii. Coordinate implementation of ICT training at all ITCoEICT branches and CICs; and

ix. Monitor and evaluate quality of training delivered at ITCoEICT headquarter, branches and CICs.

B. Main functions of HPC and ICT services section

x. Maintain and operate the HPC and data centre;

xi. Promote the usage of HPC and data storage services;

xii. Create an enabling environment for researchers for utilization of HPC and data storage services;

xiii. Develop and maintain information management systems for supporting business processes at ITCoEICT; and

xiv. Maintain ICT infrastructure at ITCoEICT in collaboration with DIT ICT Services Department.

C. Main Functions of research, innovation and collaboration section

xv. Initiate new projects, research, and consultancies;

xvi. Initiate new collaborations and maintaining existing collaborations;

xvii. Solicit funding opportunities for research and projects; and

xviii. Foster innovations, industrial linkages and business development.

7.6.3 Training and Branch Operations Section

The section is in charge of conducting modular short-term proficiency courses in information technology. These courses are designed to address various ICT challenges which our

country faces such as low computer literacy rate among ordinary citizens and insufficient local IT workforce. Therefore, the training section offers variety of information technology professional certificate courses ranging from Computer Basics, Specialized Software packages to Advanced Computing. The courses target Tanzania citizens from varied background who aspire to make an intelligent use of computers or make successful career in the IT industry.

7.6.3.1 Objectives ICT courses

1. To provide ICT professional skills to individuals who aspire to make successful career in ICT industry as programmers, network administrators, website developers, graphics designers, desk top publishing operators, and so on.
2. To raise level of computer literacy among employees by providing relevant ICT skills that could enhance their job performance in their day-to-day operations.
3. To provide hands-on skills in using specialized computer applications such as statistical and accounting packages in processing statistical and financial data.
4. To prepare would-be computer trainers such as school and college teachers.

7.6.3.2 List of Professional Courses offered at ITCoEICT

ITCoEICT offers array of courses to suit a variety of needs in fast growing ICT industry in the region. Expanding from our publicly oered courses, RAFIC is also available to design customized trainings to meet specific demands of the clients. RAFIC oers professional term programs and long term National Vocational Award programs. Students from RAFIC are entitled to a host of valuable benefits including:

- Guaranteed high quality training with advanced technology from the industry
- Highly experienced instructors exposed to industrial best practices

7.6.3.2 List of Professional Courses offered at ITCoEICT

No	Course Name	Duration	Fee
1	Computer Application/ICDL ▪ PC Fundamentals ▪ Ms Word ▪ Ms Excel ▪ Ms Power Point ▪ Ms Publisher ▪ Internet Application	6 Weeks	300,000/=
2.	Computer maintenance & repair	6 Weeks	300,000/=
3.	Oracle database programming (10g)	6 Weeks	450,000/=
4.	Linux network administration	8Weeks	500,000/=
5.	Linux basics	6 Weeks	600,000/=
6.	Advanced Linux system administration	4 Weeks	550,000/=
7.	AUTOCAD	4 Weeks	400,000/=
8.	Revit Architecture	4 Weeks	450,000/=
9.	ARCHICAD	4 Weeks	450,000/=
10.	CISCO Certified network associates **(CCNA)**	8 Weeks	900,000/=
11	HUEWEI Certified ICT Associate(HCIA)	4 Weeks	500,000/=
12.	CISCO IT Essential	6 Weeks	650,000/=
13.	Web development using **PHP** and HTML	6 Weeks	400,000/=
14.	Video production	4 Weeks	450,000/=
15.	Graphics design using adobe Photoshop/illustrator	4 Weeks	350,000/=
16.	Motion graphics & visual effect	4 Weeks	450,000/=
17.	3D modeling & Animation	4 Weeks	450,000/=

18.	ANDROID for mobile development	8 Weeks	800,000/=
19.	JAVA for software development	8 Weeks	700,000/=
20.	Web designing using PHP & MYSQL	6 Weeks	350,000/=
21	Basic Electronics Circuit Troubleshooting and Repair	4 Weeks	350,000/=
22	PLC programming, wiring and troubleshooting	6 Weeks	500,000/=
23.	Printer maintenance & Repair	6 Weeks	500,000/=
24.	Photocopier maintenance & Repair	6 Weeks	500,000/=
25.	Basic Computer Networking	4 Weeks	400,000/=
26.	Network Security	8 Weeks	600,000/=
27.	Tally	4 Weeks	400,000/=
28.	Certified Information System Auditor(CISA)	8 Weeks	1,200,000/=
29.	CCTV	4 Weeks	350,000/=
30.	Access Control	4 Weeks	350,000/=
31.	Programming in C/C++	4Weeks	350,000/=
32.	Mobile Phone Technician certification • Basic Mobile phone repair • Intermediate Mobile phone repair • Advanced Mobile phone repair	 4 Weeks 6 Weeks 2 Weeks	 150,000/= 200,000/= 120,000/=

7.4 HPC and ICT services section

The High Performance Computing (HPC) and ICT Services Section is involved in provision and maintenance of HPC services. The section is responsible for the upkeep of the HPC facility codenamed "PARAM Serengeti" which 5 clusters of computing nodes and 20

Terabytes of raw storage and 38 Terabytes of tape backup. Currently the facility is installed with various scientific applications in various fields of specialization including Bioinformatics, Atmospheric Science, Oceanography, Computational Fluid Dynamics, Finite Element Analysis, Seismic Analysis, Materials Modeling, and Data Visualization Tools. The facility is primarily used for research and scientific works. Researchers from all institutions in Tanzania are invited to use the facility. The section is responsible to provide technical support to researchers and student to effectively utilize the facility and other software can be installed based on the requirements of the researchers.

The HPC and ICT Services Section is also responsible for development of ICT Solutions for the supporting the operation and functions of the centre. It is also responsible for management of ICT infrastructure for effective delivery of all ICT training courses.

7.5 Research, Innovation and Collaboration Section

This is the section is involved in establishing and sustaining industrial linkage. The section fosters application of Research, Development and Innovation in the National Priority Sectors so as to facilitate transition to Industrial economy. The section provides framework for research and innovation and research and innovation management at ITCoEICT by involving industrial stakeholders in the absorption of technological innovation coming from the institute. The section develops customized market relevant professional programs to cater for fast paced ICT industry. The section is also involved in various outreach programs with public and private stakeholders including development and maintenance of telemedicine infrastructure to support utilization of few specialists located in urban facilities.

7.7. LIST OF STAFF AT ITCoEICT

Centre Director

Kenedy Aliila Greyson**,** FTC Eng.(DTC), Adv Dip(DTC)Post Graduate Cert. (Temple University, USA), PhD (Suranaree University of Technology, Thailand.

Head of Training and Branch Operations

S.K. Samson, BSC (SUA), MSc (Spain), PhD (NM-AIST)

Head of HPC and ICT Services

N.N. Mwasaga, MSc Computer (Ukraine)

Head of Research, Innovation and Collaboration

G. Tesha, Cert (Music Prod) (Thailand), FTC (Comp.) (DIT), BEng (Telecoms) (DIT), MEng (Comm.) (China), PhD (Info. & Comm. Eng.) (China)

CHAPTER EIGHT

OTHER DIT CAMPUSES

8.1. MWANZA CAMPUS

Message from the Director Dr. Albert G. Mmari

DIT Mwanza campus continues to serve societal needs and excel in academics. In the new academic year 2020/21, I am pleased to inform you that, we will introduce another three years leather based programme, Ordinary Diploma in Leather Processing Technology, leading to a National Technical Award (NTA Level 6). This adds up to the existing leather based programme, Ordinary Diploma in Leather Products Technology, Ordinary Diploma in Science and Laboratory Technology, and short courses, Leather Craft Tanning, Basic Shoe Making, Leather Goods Making, and Information and Communication Technology (ICT).

To further spearhead realization of Tanzania industry economy, DIT Mwanza campus has introduced National Vocational Education Trainings in Footwear and Leather Goods Technology, Laboratory Assistant and ICT, leading to National Vocational Awards (NVA Levels 1 - 3). All courses have been revolutionalised by adopting a teaching factory approach, whereby training is interactively linked to real life factory/industrial businesses. In addition to that, we continue to support the Tanzanian hides and skins derived industries to leather products development and manufacturing.

With these achievements and more to come, we thank all developing partners and collaborators, with whom we have continue to implement a memorandum of understanding (MoU) for skills development training to youths in leather industry, including the Kilimanjaro International Leather Industries Company Limited in Moshi, Kilimanjaro region, and Federal TVET Institute of Addis Ababa, Ethiopia with whom we have signed a MoU for skill-upgrading trainings and technology transfer. We are optimistic to realize our vision and mission.

"A GOOD DEED IS NEVER LOST"

Courses offered by DIT Mwanza Campus

Mwanza campus has a teaching tannery, footwear and leather goods workshops classrooms and laboratories. In addition, it has 13 academic staff members and 12 administrative staff. The campus offers the following programmes:

(a) Ordinary Diploma in Science and Laboratory Technology (NTA Level 4-6)
This programme is the same as the one offered at Dar es Salaam campus
(b) Basic Technician Certificate in Leather Products Technology (NTA Level 4)
(c) Technician Certificate in Leather Products Technology (NTA level 5)
(d) Ordinary Diploma in Leather Products Technology (NTA level 6) and
(e) Certificate in Information Technology

NVA (NVA Level 1 – 3) programs include
(a)Footwear and Leather Goods
(b) Laboratory Assistant and
(c) Information and Communication Technology

(a) BASIC TECHNICIAN CERTIFICATE IN LEATHER PRODUCTS TECHNOLOGY (NTA LEVEL 4)

SEMESTER I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 04101	Algebra	5
GST 04102	Basic Technical Communication skills	2
GST 04103	Entrepreneurship Concepts and Context	3
CSET 04101	Computer Basics and Word processing	2
	Sub-Total	12
CORE MODULES		

MFLT 04101	Footwear Design and Pattern Engineering	12
MFLT 04102	Leather Products Materials	09
MFLT 04103	Fundamental of Footwear Technology	12
MFLT 04104	Fundamental of Leather Goods Technology	12
	Sub-Total	45
Total		**57**

SEMESTER II

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 04204	Trigonometry	5
GST 04205	Communication Skills	2
GST 04206	Small Business Development	3
CSET04201	Spread Sheet and Database	2
	Sub Total	**12**
CORE MODULES		
MFLT 04201	Tools and Machine maintenance in Leather Products Technology	09
MFLT 04202	Leather products Marketing	09
MFLT 04203	Footwear Technology	12
MFLT 04204	Leather Goods Technology	12
MFLT 04205	Industrial Practical Training: IPT	10
	Sub Total	52
Total		**64**

(b) TECHNICIAN CERTIFICATE IN LEATHER PRODUCTS TECHNOLOGY (NTA LEVEL 5)

SEMISTER I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 05101	Differentiation and Integration	6
GST 05102	Research methods for Technicians	3
CSET 05101	Programming Fundamentals for Technicians	6
	Sub-Total	15
CORE MODULES		
MFLT 05101	Process of Leather Manufacture	12
MFLT 05102	Polymeric Materials	12
MFLT 05103	Leather Products Machinery	12
MFLT 05104	Industrial Practical Training I	10
	Sub-Total	46
Total		**61**

SEMISTER II

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 05203	Probability and Statistics for Technicians	5
GST 05204	Technical writing and Presentation	2
GST 05201	Data Structure and Algorithm for Technician	3
	Sub Total	**10**
CORE MODULES		
MFLT 05201	Design Trends in Leather Products Manufacture	9
MFLT 05202	Application of CAD in Leather Products Design and Manufacturing	12

MFLT 05203	Sports Leather Goods Technology	12
MFLT 05204	Footwear Performance and Customer Care	9
	Sub Total	42
Total		**52**

(c) ORDINARY DIPLOMA IN LEATHER PRODUCTS TECHNOLOGY (NTA 6)

SEMISTER I

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 06102	Small Business Development	6
	Sub Total	**6**
CORE MODULES		
MFLT 06101	Basic Orthopedic Footwear	12
MFLT 06102	Ladies Leather Products Manufacture	12
MFLT 06103	Safety in Leather Products Industry	6
MFLT 06104	Heavy Boots Manufacturing Technology	12
MFLT 06105	Project Data collection	10
	Sub Total	52
Total		**58**

SEMESTER II

Module Code	Module Title	Credits
FUNDAMENTAL MODULES		
GST 06203	Numerical Methods and Series	6
GST 06204	Business Planning	6
	Sub Total	**12**
CORE MODULES		
MFLT06201	Quality Control and Standards for Leather Products	12

MFLT06202	Industrial Organization and Management	6
MFLT06203	Leather Garments Technology	12
MFLT06204	Fancy Leather Goods Technology	12
MFLT06205	Project – Data Analysis and Reporting	10
	Sub Total	52
Total		**64**

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Head of Department (Science & Laboratory Technology)

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Sosten Reuben Kyando, BSc. (Education (Physics & Mathematics), (UDSM)

Baraka P. Sanjito, BSc. Ed. (UDSM), MEd (University of Iringa)

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Richard Lyaganda, Dip. (Lab. Tech) (DIT)

Principal Human Resource and Administrative Officer

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Principal Accountant

Stephen Nelson Ngiga CPA(T), MSc. (Finance & Accounting), (MU)

Accounts Assistant II

Viana M. Mgoa, OD(Accountancy)(TIA)

Internal Auditor I

Grace N. Tambo, ADA (SAUT), PGD-AF (SAUT), MSc(A&F) (MU)

Estates Officer I

Dorice N. Ngogo, BSc. Building Survey, (ARU)

Janitor I

Annastazia G. Mnaku, Dipl. Ed., (Butimba)
Francisca Gerald Shayo Dipl. Ed (Kleruu)

Warden II

Hildeltha Fulgence Lwejuna, BA (Sociology) (ISW)

Secretary I

Zena H. Hussein, Dipl.(TPSC) (Dar)

Driver II

Nelson Vicent , Cert. (VETA)

Artisans

Ramadhan Khalfan, Dip. Leather Products (DIT)

8.2. MYUNGA CAMPUS

Message from the Director, Dr. Frank C. Lujaji

Welcome to DIT Myunga Campus in Songwe Region an inclusive training center where we share the DIT vision to become a leading technical education institution in addressing societal needs. We have staff members that are committed to work alongside every student to support them in daring to become excellent in everything they do. I am pleased to inform you that, we have introduced a Diploma Program in Civil Engineering (i.e. NTA 4 to 6). We also offer a National Vocational Award (NVA) program under Vocational Education Training Authority (VETA) at Level 1 - 3.

DIT Myunga campus efforts are streamlined with the national vision and strategies. By adopting a teaching factory approach, whereby training is interactively linked to a real life factory/industrial setting, our students and trainees will possess the necessary skills to become actively involved in building their livelihood and that of the rest of the society.

Become a part of our campus community. Your feedback, opinions and concerns are valued and it is important to communicate with the campus at any time regarding matters which may contribute in addressing societal needs.

For students, to be successful in life, have ambitions and define your goals clearly. Discipline and hard work is the key to success.

Programme offered at DIT Myunga campus

Myunga campus has a computer laboratory and a soil laboratory. In addition, it has 12, energetic staff members. The campus is running a Civil engineering program (NTA 4 to 6) which is running parallel with that offered at DIT Main Campus in Dar es salaam.

The campus has two (2) academic program leading to the qualification of certificate in information and communication technology and Plumbing & Pipe fitting (NVA Level 1-3).

NVA Programs Offered at DIT Myunga Campus

(a) Certificate in Information and Communication Technology (NVA Level 1)

No.	Module Code	Module Titles
1	ICT - 01	Information Communication Technology
2	CM 01 - 03	Computer Mathematics
3	EC 01 - 02	English and Communication Skills
4	ES 01 - 02	Engineering Science
5	TD 01 - 03	Technical Drawing
6	EET 01 - 03	Entrepreneurship
7	LS 01 - 08	Life Skills

(b) Certificate in Information and Communication Technology (NVA Level 2)

No.	Module Code	Module Titles
1	ICT - 02	Information Communication Technology
2	CM 04 - 07	Computer Mathematics
3	EC 03 - 06	English and Communication Skills
4	ES 03 - 08	Engineering Science
5	TD 04 - 08	Technical Drawing
6	EET 04 - 04	Entrepreneurship
7	CAD 01 - 02	Computer Aided Design

Certificate in Information and Communication Technology (NVA Level 3)

No.	Module Code	Module Titles
1	ICT - 03	Information Communication Technology
2	CM 08 - 11	Computer Mathematics
3	EC 07	English and Communication Skills
4	TD 08 - 10	Technical Drawing
5	CAD 03	Computer Aided Design

NTA Programs offered at DIT Myunga Campus

a) Basic Technician Certificate (BTC) in Civil Engineering (NTA level 4)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 04111	Algebra	6
GST 04112	Basic Technical Communication skills	6
COT 04114	Computer Fundamentals and Basic Information Processing	6
CET 04115	Mechanics	6
CORE MODULES		
CET 04111	Construction Equipment and Machinery	6
CET 04112	Carpentry and Painting Practices	9
CET 04113	Introduction to Concrete Technology	6
CET 04114	Introduction to Technical Drawing	6
CET 04105	Linear Surveying	9
	Total	**60**

Semester II:

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 04214	Trigonometry, Vectors and Complex numbers	6
COT 04216	Spreadsheet and Database Fundamentals	6
MET 04218	Arc Welding Processes	9
CORE MODULES		
CET 04211	Basic building maintenance	9

Module Code	Module Title	Credit
CET 04212	Basic Soil Mechanics	9
CET 04213	Introduction to Architectural Drawing	9
CET 04214	Masonry and Plumbing Practices	12
CET 04215	Mechanics	6
	Total	**66**

Total Credits at NTA Level 4: 126 (Minimum credits required at level 4: 120)

(b) Technician Certificate (BTC) in Civil Engineering (NTA level 5)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 05101	Fundamental Rule of Counting, matrices and Differentiation	5
GST 05102	Business Communication	2
CSET 05101	Presentation and Internet	2
GST 05103	Business Startup and Management	3
SLTP 05101	Strength of Materials and Rotational Dynamic	3
CORE MODULES		
CET 05101	Land Surveying	9
CET 05102	Building Construction	9
CET 05103	Measurement of Building Works	8
CET 05104	Building and Civil Engineering Materials	6
CET 05105	Structural Analysis	9
CET 05106	Hydraulics and Fluid Mechanics	6
CET 05212	Industrial Practical Training	10
	Total	**72**

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 05204	Integration, Statistics and Probability	5
GST 05205	Communication and Technical Presentations	2
GST 05206	Business Financial Management and Accounting	3
GST 05207	Research Methods for Technicians	3
SLTP 05202	Fluid Mechanics	3
CORE MODULES		
CET 05207	Hydrology, Water Supply and Sanitation	9
CET 05208	Architectural Design and Drawing	9
CET 05209	Road Construction and Maintenance	9
CET 05210	Soil Mechanics	9
CET 05211	Project for Survey	9
	Total	**61**

Total Credits at NTA Level 5: 133 (Minimum credits required at level 5: 120)

(c) Ordinary Diploma (OD) in Civil Engineering (NTA Level 6)

Semester I

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 06101	Conics and Differential Equation	4
GST 06102	Engineering Study Skills	2
GST 06103	Formalizations, Internationalization and E-Business	2
CSET 06101	Basic of Computer Programming	2
SLT P 06101	Electromagnetism	2
GST 06102	Engineering study skills	2

Module Code	Module Title	Credit
CORE MODULES		
CET 06101	Building Service and Maintenance	9
CET 06102	Elementary Structure Design	9
CET 06103	Route and Traffic Engineering	9
CET 06104	Structural Steel Design	10
CET 06105	Quantity Survey	9
CET 06106	Labour Based Technology	9
CET 06107	Project Data Collection	10
CET 06211	Industrial Practical Training	10
	Total	**96**

Semester II

Module Code	Module Title	Credit
FUNDAMENTAL MODULE		
GST 06204	Complex Number, Numerical methods and series	4
GST 06205	Technical Writing	2
GST 06206	Business Planning	2
CSET 06201	Computer programming and Data structure	2
SLTP 06202	Heat and Thermodynamics	2
CORE MODULES		
CET 06208	Reinforced Concrete design	10
CET 06209	Soil Mechanics and Foundations	9
CET 06210	Construction Management	9
CET 06211	Structural Timber Design	9
CET 06212	Pavement Design	9
CET 06213	Transportation Engineering	10
CET 06214	Project Data Analysis	10
	Total	**78**

Total Credits at NTA Level 6: <u>155</u> (Minimum credits required at level 6: 120

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Instructor: Civil Engineering Department

Mr. George B. Kiruwa

Technitian Civil Engineering Department

Mr. Yasini M. Limia

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Mr. Evance E. Mlawa, Diploma in Vocational Teacher: Carpentry & Joinery

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Mr. Stephen L. Kalonge, ADA (IFM)

Procurement Management Unit

Mr. Hassan Semndili

Campus Nurse

Ms Edith E. Kijah

Driver
Mr. Uswege M. Mwakatuma

Human Resource and Administration Officer
Ms. Ritha D. Kimaro

Genitor
Mr. Lameck D. Kamsakila

CHAPTER NINE

GENERAL INFORMATION

9.1 BEST STUDENTS' PRIZES AND AWARDS

In order to promote learning competitions among students, the Institute, award prizes to the best three students in each academic department who show outstanding academic performance in all the subjects carried out in an academic year.. In addition, other prizes are awarded by different sponsors (individuals and companies) to best students in various fields from d. Information regarding awards and prizes will be released to students by the DIT management before the graduation day of each academic year.

9.2. STUDENTS' ACCOMMODATION

Currently, DIT has a limited number of rooms in its hostels to provide accommodation to all students. Students are encouraged to look for private accommodation in the city. For the limited accommodation spaces available, Institute Students Accommodation Bureau (ISAB) will use criteria stipulated in accommodation policy in allocation accommodation for students preferentially for those who have applied for accommodation from ISAB. Students' hostels are located within the DIT compound and Chang'ombe area.

Student who will secure accommodation in DIT hostels are required to bring with them; pillows, bed sheets, blanket and mosquito nets. Every student shall, before being granted institutes' accommodation pay a prescribed accommodation fee.

Every resident student shall observe accommodation rules and regulations. These include, but not limited to, the strict requirement for all students to vacate their rooms and hand-over their room keys to the janitor/warden during vacation and industrial practical training periods. Residents are not allowed to sublet, use illegal drugs as well as not to cook in hostels or employ house girls/boys for cooking and laundry duties.

9.3. STUDENTS' ADMINISTRATION

Most of the students' activities at the Institute are organized by the DIT Students Organisation (DITSO) under the coordination of the Office of the Dean of Students. The Organisation is concerned with the student's academic, political, social and recreational activities. Every student becomes a member of DITSO (DIT Student Organization) and students are advised to make their academic life meaningful by making their Organization contribute positively towards the Institute Vision, Mission and its objectives.

9.4. STUDENTS' CATERING SERVICES

NTA Level 4-6 students are not paid meal allowances, instead, meals are provided by the Institute in a dining hall located in the campus. Menu depends on the ability of the sponsor. B.Eng students obtain their meals from a number of points providing catering services within the proximity of the Institute. The same applies to all day and private sponsored students.

9.5. MEDICAL SERVICES

The Institute has a health vare unit for students, staff and their families. The unit provides outpatient services to NHIF members and on cost sharing basis to non-NHIF members and may refer to other hospitals if necessary. Students are encouraged to bring with them NHIF cards and for nonmembers a special health insurance package for students has been introduced by the NHIF. Each non-member student should make early consultation with the institute students NHIF officer to get registration forms for students to fill. Currently, the amount to be paid by individual student is TZS 50,400/= per academic year. The amount to be paid regarding medical insurance cover is clearly stipulated in the college fees structure. Students are directed to report at the health care unit each time before they embark for any referral treatment.

9.6. GENDER MANAGEMENT UNIT (GMU)

The DIT- gender management Unit (DIT_GMU) was established in 2000 to advocates all the gender related issues at DIT including gender equity and efficiency in education and

training. GMU recognizes and addresses gender issues and problems as stipulated in *the DIT corporate strategic plan 2003/2004-2017/2018* sections 6.1.4, 6.5.6 and 6.6 under specific goals number 4 and 5. Goal 5 emphasizes on improving gender balance amongst staff and students.

The DIT-GMU closely works with the management in an attempt to intensify efforts to admit more qualified female students and recruit female staff to address gender imbalance. It also works closely with the management in an attempt to ensure supportive learning environment to both male and female.

GMU provides counseling services to new students during the orientation period and whenever needed in collaboration with the dean of students' office.

9.7. PROMOTING AND SUPPORTING FEMALE STUDENTS

a) Gender sensitization programs

i. GMU conducts sensitization campaigns to selected secondary schools in different regions to encourage female students join science and engineering/technological fields.
ii. Creation of gender awareness in the DIT community through seminars and workshops as per the action plan or when budget allow.
iii. Incorporation of gender modules in the curricula for all DIT programs (O.D and B.Eng.) through entrepreneurship module GST 04103.
iv. In collaboration with HIV/AIDS coordinator, dispensary unit and dean of students' office, GMU makes provision of *counseling services* to students and employees. In this way, other gender issues or problems are addressed.
v. Promoting gender empowerment to gender task force members so as to enable the team to mainstream gender in some DIT programs and documents. Furthermore, GTF solicit resources for running some GMU activities and other related projects for staff and students.

b) The Sponsorship for Female Students

In an attempt to ensure gender mainstreaming, GMU constantly make efforts to solicit fund from various sources to sponsor female students. GMU therefore, from time to time ensures limited sponsorship for OD female students admitted in the Institute.

9.8. RENTAL SERVICES

DIT possesses a variety of renting facilities, which are available for use at reasonable charges. Its ideal location in the city centre makes it possible for excellent use and access of these facilities for interested users.

DIT has 19 engineering workshops and 4 science laboratories that can be used for providing both training and production services to students and outside community.

It has 26 classrooms which can be rented during weekends and when students are on vacation or industrial training.

The DIT library has adequate facilities to cater for meetings and/or conferences with up to 100 participants. The facility is available to the outside community for renting, when it is not in DIT use.

An executive room with a sitting capacity of about 20 people is also available for renting. This room is furnished with soft chairs and can be ideal for small workshops, meetings and other similar forum. The strategic central location of DIT makes this offer most attractive.

DIT hostels and the Dining Hall may be available when students are out for vacation

CHAPTER TEN

ACADEMIC CALENDAR FOR ACADEMIC YEAR 2020/2021

1.0 ORDINARY DIPLOMA PROGRAMMES 2021-2022

1.1 Ordinary Diploma 1st year (OD 21)

S/N	DATE	WEEKS	SEMESTER	EVENT
1	18/10/2021-24/10/2021	1		ORIENTATION FOR FRESHERS 2021-2022
2	25/10/2021-06/02/2022	15	I	LEARNING PERIOD
3	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS
4	19/02/2022-06/03/2022	2		VACATION
5	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
6	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
7	02/07/2022-07/08/2022	5		VACATION
8	09/08/2022-19/08/2022	2		SUPPLEMENTARY EXAMINATIONS
9	22/08/2022-16/10/2022	8		INDUSTRIAL PRACTICAL TRAINING

1.2 Ordinary Diploma 2nd Year (OD 20)

S/N	DATE	WEEKS	SEMESTER	EVENT
1	25/10/2021-06/02/2022	15	I	LEARNING PERIOD
2	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS
3	19/02/2022-06/03/2022	2		VACATION
4	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
5	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
6	02/07/2022-07/08/2022	5		VACATION
7	09/08/2022-19/08/2022	2		SUPPLEMENTARY EXAMINATIONS
8	22/08/2022-16/10/2022	8		INDUSTRIAL PRACTICAL TRAINING

1.3. Ordinary Diploma 3rd Year (OD 19)

S/N	DATE	WEEKS	SEMESTER	EVENT
1	25/10/2021-06/02/2022	15	I	LEARNING PERIOD
2	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS
3	19/02/2022-06/03/2022	2		VACATION
4	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
5	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
6	02/07/2022-07/08/2022	3		VACATION

7	09/08/2022-19/08/2022	1		SUPPLEMENTARY EXAMINATIONS

2.0 UNDERGRADUATE PROGRAMMES 2021/2022

2.1 Bachelor Degree 1st Year (B. Eng21 and B. Tech21)

S/N	DATE	WEEKS	SEMESTER	EVENT
1	18/10/2021-24/10/2021	1		ORIENTATION FOR FRESHERS 2021-2021
2	25/10/2021-06/02/2022	15	I	LEARNING PERIOD
3	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS
4	19/02/2022-06/03/2022	2		VACATION
5	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
6	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
7	02/07/2022-07/08/2022	5		VACATION
8	09/08/2022-19/08/2022	2		SUPPLEMENTARY EXAMINATIONS
9	22/08/2022-16/10/2022	9		INDUSTRIAL PRACTICAL TRAINING

2.2 Bachelor Degree 2nd years (B.Eng20 and B.Tech20)

S/N	DATE	WEEKS	SEMESTER	EVENT
1	25/10/2021-06/02/2022	15	I	LEARNING PERIOD
2	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS

3	19/02/2022-06/03/2022	2		VACATION
4	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
5	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
6	02/07/2022-07/08/2022	5		VACATION
7	09/08/2022-19/08/2022	2		SUPPLEMENTARY EXAMINATIONS
8	22/08/2022-16/10/2022	8		INDUSTRIAL PRACTICAL TRAINING

2.3 Bachelor Degree 3rd Year (B .Eng 19 and B.Tech19)

S/N	DATE	WEEKS	SEMESTER	EVENT
1	25/10/2021-06/02/2022	15	I	LEARNING PERIOD
2	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS
3	19/02/2022-06/03/2022	2		VACATION
4	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
5	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
6	02/07/2022-07/08/2022	3		VACATION
7	09/08/2022-19/08/2022	1		SUPPLEMENTARY EXAMINATIONS

3.0 POSTGRADUATE PROGRAMS

3.1. Master of Engineering in Maintenance Management 1st Year (MENGMM 21)

S/N	DATE	WEEKS	SEMESTER	EVENT
1	18/10/2021-24/10/2021	1	I	ORIENTATION FOR FRESHERS 2021-2022
2	25/10/2021-06/02/2022	15		LEARNING PERIOD
3	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS
4	19/02/2022-06/03/2022	2		VACATION
5	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
6	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
7	02/07/2022-07/08/2022	5		VACATION
8	09/08/2022-12/08/2022	1		SUPPLEMENTARY EXAMINATIONS
9	13/08/2022- 18/02/2023	27		DISSERTATION

3.2. Master of Computational Science and Engineering (MCSE 21) 1st Year

S/N	DATE	WEEKS	SEMESTER	EVENT
1	18/10/2021-24/10/2021	1		ORIENTATION FOR FRESHERS 2021-2021
2	25/10/2021-06/02/2022	17	I	LEARNING PERIOD
3	07/02/2022-18/02/2022			END OF SEMESTER EXAMINATIONS

4	19/02/2022-06/03/2022	2		VACATION
5	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
6	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
7	02/07/2022-07/08/2022	5		VACATION
8	09/08/2022-12/08/2022	1		SUPPLEMENTARY EXAMINATIONS
9	13/08/2022- 18/02/2023	27		DISSERTATION

3.2. Master of Technology in Computing and Communications 1st Year (MTCC21)

S/N	DATE	WEEKS	SEMESTER	EVENT
1	18/10/2021-24/10/2021	1		ORIENTATION FOR FRESHERS 2021-2022
2	25/10/2021-06/02/2022	15	I	LEARNING PERIOD
3	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS
4	19/02/2022-06/03/2022	2		VACATION
5	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
6	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
7	02/07/2022-07/08/2022	5		VACATION
8	09/08/2022-12/08/2022	1		SUPPLEMENTARY EXAMINATIONS
9	13/08/2022- 18/02/2023	27		DISSERTATION

3.3. Master of Engineering in Sustainable Energy Eng. (MESEE 21) 1st Year

S/N	DATE	WEEKS	SEMESTER	EVENT
1	18/10/2021-24/10/2021	1		ORIENTATION FOR FRESHERS 2021-2022
2	25/10/2021-06/02/2022	15	I	LEARNING PERIOD
3	07/02/2022-18/02/2022	2		END OF SEMESTER EXAMINATIONS
4	19/02/2022-06/03/2022	2		VACATION
5	07/03/2022-19/06/2022	15	II	LEARNING PERIOD
6	20/06/2022-01/07/2022	2		END OF SEMESTER EXAMINATIONS
7	02/07/2022-07/08/2022	5		VACATION
8	09/08/2022-12/08/2022	2		SUPPLEMENTARY EXAMINATIONS
9	13/08/2022 – 26/11/2022	15	III	LEARNING PERIOD
10	27/11/2022-10/12/2022	2		END OF SEMESTER EXAMINATIONS
11	11/01/2023-25/01/2023	2		VACATION
12	25/01/2023-10/02/2023	2		SUPPLEMENTARY EXAMINATIONS
13	12/02/2023-19/09/2023	27		DISSERTATION

This Prospectus can be reviewed or amended from time to time as deemed necessary and approved by the DIT Council

For further Enquiries contact
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