

DAR ES SALAAM INSTITUTE OF TECHNOLOGY (DIT)



DEPARTMENT OF RESEARCH PUBLICATIONS AND POSTGRADUATE STUDIES

APPLICATION TO JOIN MASTER DEGREE PROGRAMMES (NTA LEVEL 9) FOR THE ACADEMIC YEAR 2016/2017

INFORMATION FOR APPLICANTS

1.0. BACKGROUND INFORMATION

Dar es Salaam Institute of Technology (DIT) was established in 1997 through the Parliamentary Act Number 6 of 1997. The major functions of DIT are to provide facilities for study, training and conduct of applied research and consultancy activities in the disciplines approved by the DIT Act. The same also gives DIT mandate to conduct its own examinations and grant awards as approved by the National Council for Technical Education (NACTE).

The Institutes now invites applications from various qualified applicants to joining Master of Engineering in Maintenance Management (MENGMM) and Master in Computational Science and Engineering (MCSE) for the academic year 2016/2017. The deadline for submitting applications **will be 1st August 2016.**

2.0. MASTER OF ENGINEERING IN MAINTENANCE MANAGEMENT (MENGMM) PROGRAMME

2.1. Aims of the Programme (MENGMM)

- a) To provide graduates who are technically and academically competent to serve in the profession of maintenance management
- b) To meet the need for locally-trained professional and innovative maintenance services engineers in consultancy, contracting, maintenance management, research and development.
- c) To provide an opportunity for student to learn through well-designed courses, the “art and science” for providing a safe, healthy and energy-efficient built environment which has minimum adverse environmental impact.
- d) To provide students with intellectual challenges this will enable them to further

self-development towards leadership in the Maintenance Services Engineering profession.

2.2. Programme Programme Structure

The programme duration is a minimum of 18 months comprised of two semesters for coursework and six months period of dissertation. Each course module is covered in one semester of 17 weeks. The coursework sessions will be carried out in the evening time starting from 04.00 pm. The programme has a total of 22 modules comprised of core and elective modules.

2.3. MASTER OF ENGINEERING IN MAINTENANCE MANAGEMENT (NTA 9) PROGRAMME MODULES

Semester I

Code	Module Title	Credits
CORE MODULES		
CEMG 09101	Leadership Principles and Human Resource Management	9
CEMG 09102	Maintenance Management	12
CEMG 09103	Maintenance Organization and Planning	9
CEMG 09104	Maintenance Materials Management	9
GSMG 09101	Statistics in maintenance management	12
CEMG 09112	Financial Management	6
	Total	57
ELECTIVE MODULES		
EEMG 09101	Electrical Maintenance Workshop	9
EEMG 09102	Power Transmission and Distribution Lines Maintenance	9
CEMG 09105	Building Maintenance Management	9
MEMG 09101	Heavy Duty Equipment Maintenance	9
MEMG 09102	Fluid Handling Systems Maintenance	9
	Total	43

Semester II

Code	Module Title	Credits
CORE MODULES		
CEMG 09206	System Engineering and Life Cycle Management	12

CEMG 09207	Maintenance System Design and Management	9
CEMG 09208	Computer Managed Maintenance System	9
CEMG 09209	Risk and Safety Management	9
CEMG 09210	Dissertation	60
	Total	99
Elective Modules		
EEMG 09203	Energy Management	12
EEMG 09204	Energy-Efficient Electric Motor Selection	9
CEMG 09211	Maintenance of Road and Road Structures	12
CEMG 09212	Maintenance for Water and Sanitation Infrastructures	9
MEMG 09203	Power Plant Maintenance	9
MEMG 09204	Industrial Equipment Maintenance	9
	Total	60

Total credits at this level NTA 9 is 259, (minimum credits required at this level is 180.)

2.4. Minimum Entry Requirements to be admitted to MENGMM Programme

- i. Applicants must be Holders of Bachelor degree in Civil Engineering, Electrical Engineering, Mechanical Engineering or its equivalent with a GPA of at least 3.0 from a recognized institution of higher learning. OR
- ii. Holders of Bachelor degree in either Civil Engineering, Electrical Engineering, Mechanical Engineering or its equivalent with a GPA of at least 2.7 from a recognized institution of higher learning and with a minimum of three years working experience after graduation. OR
- iii. Holders of Advanced Diploma in either Civil Engineering, Electrical Engineering, Mechanical Engineering or its equivalent with a PASS from a recognized institution of higher learning and with a minimum of five years working experience after graduation.

2.5. Information about fees structure

2.5.1. Fees payable to the Institute (MENGMM Programme)

Item	Residents		Non residents	
	First Year (SEM 1+2) [TZS]	6 Months [TZS]	First Year [US \$]	6 Months [US \$]
Examination Fees	200,000.00	200,000.00	200.00	200.00
Registration Fee	50,000.00		50.00	
Tuition Fees	3,475,000.00	625,000.00	3,475.00	625.00
DITSO Contribution	10,000.00	5,000.00	10.00	5.00

Graduation Fees		50,000.00		50.00
Identity Card	10,000.00		10.00	
Caution money	10,000.00		10.00	
Library Membership	30,000.00		50.00	
Total	3,785,000	880,000.00	3,805.00	880.00

***For Non-NHIF Member or non-health insured members must pay to the Institute 50,400/= per year for securing NHIF membership for Tanzanian and USD 150 for non Tanzanian.**

2.5.2. COSTS PAYABLE DIRECTLY TO THE STUDENTS (MENGMM PROGRAMME)

Item	Residents		Non residents	
	First Year [TZS]	6 Months [TZS]	First Year [US \$]	6 Months [US \$]
Books	500,000.00		500.00	
Stationery	150,000.00	50,000.00	150.00	50.00
Dissertation Production Costs		250,000.00		250.00
Living and Facilitation Costs Allowance	3,600,000.00	1,800,000.00	3,600.00	1,800.00
Research Costs		2,000,000.00	30.00	2,000.00
Total	4,250,000.00	4,100,000.00	4,280.00	4,100.00

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.

3.0. MASTER IN COMPUTATIONAL SCIENCE AND ENGINEERING PROGRAMME (MCSE)

3.1. Aims of the Programme

Computational science and engineering (CSE) is a rapidly growing multidisciplinary area with connections to sciences, engineering, mathematics and computer science. Computational science and engineering (CSE) focuses on the development of problem-solving methodologies and robust tools for the solution of scientific and engineering problems. The programme for the academic year 2016/2017 is intended to commence in **November 2016**.

3.2. The objectives of the programme include:

- a) To lead graduate students to a mastery of high-performance computer programming tools as methods, as well as the acquisition, processing and analysis of large datasets.
- b) To educate and train students in computational modelling, simulation and visualization.
- c) To educate and train students in obtaining computational solutions to problems of high dimensions or involving large datasets.
- d) To assist students in relating and applying the acquired computational science and engineering knowledge and skills to specific application fields of engineering, science, technology and business with expertise in the associated domain fields and their computational aspects.
- e) To teach students to develop novel and robust computational methods and tools to solve scientific, engineering, technology, and business problems.
- f) To produce highly versatile computational scientists, engineers, technologists, or business executives with a good understanding of the connections among various disciplines, capable of interacting and collaborating effectively with scientists, engineers, and professionals in other fields.
- g) To equip students with managerial skills for industries, government (e.g., national agencies, laboratories) and academia.

3.3. Programme structure

The programme comprises a total of twenty three (23) modules with a minimum of 180 credits that are spread over three semesters (51 Weeks) for course work and six months dissertation. The modules comprise of twelve (12) Core modules, ten (10) Elective and a Dissertation. Each module is covered in one semester of fifteen (15) weeks of coursework and two (2) weeks are intended for end-of-semester examination: The dissertation will be covered in six (6) months after successfully completing coursework modules in the third semester. The Table below shows how the weeks are distributed in each semester.

3.4. List of modules for MCSE Programme

Semester I

Core Modules

Code	Module Title	Credits
CSCG 09101	High Performance Computing	9
GSCG 09101	Advance Numerical Methods	12
CSCG 09102	Advance Computational Algorithms	12
GSCG 09103	Numerical Methods for Ordinary Differential Equations	9
CSCG 09103	Advance Computer Programming	12
	Total Credits	54

Semester II

Core Modules

Code	Module Title	Credits
CSCG 09203	Numerical Methods for Partial Differential Equations	9
CSCG 09204	Advance Parallel Programming	9
CSCG 09205	Computer Graphics and Visualization	9
CSCG 09204	Mathematical Models Analysis and Simulation	6
	Total Credits	33

Elective Modules

Code	Module Title	Credits
CECG 09201	Computational Fluid Dynamics	9
CSCG 09206	Machine Learning	9
CSCG 09207	Data Mining and Analytics	9
CSCG 09205	Computational Methods in Optimization	9
CSCG 09208	Image Progressing	9
	Total Credits	45

Semester III

Core Modules

Code	Module Title	Credits
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

Dissertation

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)

3.5. Minimum Entry Requirements (MCSE Programme)

Applicants must have a good background in mathematics at bachelor level and must fulfil one of the following requirements:

- (i) Applicants must be Holders of Bachelor degree in Engineering, Science or equivalent with a GPA of at least 3.0 from a recognized higher learning institution.
OR
- (ii) Holders of Bachelor degree in Engineering, Science or equivalent of at least 2.7 from a recognized higher learning institution and with a minimum of three years in relevant working experience after graduation OR
- (iii) Holders of Advanced Diploma in Engineering, Science or equivalent with a PASS from a recognized higher learning institution and with a minimum of five years working experience after graduation.

3.6. Information about fees structure

Fees structures for conducting the course: Master of computational Science and ENGINEERING 2016/2017

(a): Tuition fees and other costs payable to the institute (MCSE Programme)

Item	TANZANIANS		NON TANZANIANS	
	First Year [TZS] (Sem I + Sem II)	Second Year [TZS] (Sem III +Dissertation)	First Year [US \$] (Sem I + Sem II)	Second year [US \$] (Sem III +Dissertation)
Tuition Fees	4,674,000.00	2,962,000.00	2950.00	1860.00
Supervision				
Tuition				
Laboratory equipment				
Examination Fees	200,000.00	200,000.00	200.00	200.00
Internal examiners				
External examiners				
Registration Fees	50,000.00	50,000.00	50.00	50.00
National Health Insurance Fund (NHIF)	50,400.00	50,400.00	150.00	150.00
DITSO Contribution	10,000.00	10,000.00	20.00	20.00
Library membership fee	30,000.00		50.00	
Graduation Fees	-	50,000.00	-	50.00
Identity Card	10,000.00		10.00	
Caution money	10,000.00		10.00	
Total	5,034,400.00	3,322,400.00	3,420.00	2,310.00

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

Fees can be reviewed from time to time by the Dar es Salaam Institute of Technology depending on the requirement and operational costs. Once fees are paid are non-refundable.

(The total amount required for the 1st year can be paid in two instalments).

(b) Costs payable directly to students (MCSE)

Item	TANZANIANS		Non TANZANIANS	
	First Year [TZS]	2nd year [TZS]	First Year [US \$]	2nd year [US \$]
Books	900,000.00	500,000.00	800.00	400.00
Stationery	150,000.00	50,000.00	150.00	50.00
Dissertation Production Costs		500,000.00		500.00
Special Requirements: Laptop latest for computational purposes	2,000,000.00		2000.00	
Storage devices	50000.00	50000.00	50.00	50.00
Living and Accommodation Costs	3,600,000.00	3,600,000.00	3,600.00	3,600.00
Research Costs		3,000,000.00		3,000.00
Total	4,650,000.00	7,650,000.00	6,200.00	6,350.00

Fees can be reviewed from time to time by the Dar es Salaam Institute of Technology depending on the requirement and operational costs.

4.0. COMMENCEMENT OF THE PROGRAMMES

The Masters of Engineering in Maintenance Management and Master in Computational Science and Engineering for the academic year 2016/2017 will commence in November 2016

5.0. APPLICATION FORMS

- (a) Applicants are required to download, print and fill the application forms (DIT/PS/APPL/01 and DIT/PS/APPL/02) and mail them by the address indicated in the form. The duly filled in application must be accompanied with non-refundable application fee of TShs. 30,000/= for Tanzanian applicants or USD 30 for non-Tanzanian applicants payable to the Principal, Dar es Salaam Institute of Technology through any branch of NBC Ltd Bank, account number 011103005389. The form must also be accompanied with certified copies of academic and birth certificates and that of transcripts as well as two coloured passport size photographs taken within the last six months.
- (b) Non-disclosure of details if discovered shall lead to de-registration from DIT
- (c) Remember it is a criminal offence to submit false information
- (d) Candidates with academic certificates issued by any non Tanzanian academic institution should be certified by TCU or NACTE.

Duly filled application forms should be sent to the following address:-

PRINCIPAL

DAR ES SALAAM INSTITUTE OF TECHNOLOGY
P.O. BOX 2958
DAR ES SALAAM

6.0. APPLICATION CHECKLIST

- ▶ Read ALL the instructions carefully.
- ▶ Fill in the application form and sign it.
- ▶ The following documents must be attached to the application form.

	Two referees' letters of recommendation (sealed and signed).
	Copies of Secondary School Certificates.
	Copy of Birth Certificate/ Affidavit.
	Copies of Diploma / Advanced Diploma / Postgraduate Diploma Degree Academic Transcripts and Certificates. Successful applicants will be required to bring the originals for verification at the time of registration.
	CV detailing employment and self-employment experience.
	Brief Statement of Purpose for pursuing the postgraduate programme (maximum 1 page).
	Two passport sizes colored photographs (with your name written at the back).
	An original receipt (Bank Pay-in-Slip) indicating payment of the non-refundable admission fee.
	Evidence of sponsorship (or self sponsored).