MASTER OF ENGINEERING IN ENGINEERING MANAGEMENT

(Qualification type: Structured Master's Degree)

Qualification code: MEEM18 - NQF Level 9 (180 credits)

SAQA ID: 96899, CHE NUMBER: H16/10747/HEQSF A

Campus where offered: Pretoria Campus

REMARKS

a. *Admission requirement(s):*
Any Baccalaureus Technologiae in Engineering, **or** a Bachelor Honours in Engineering Technology in Engineering, **or** a Bachelor of Engineering **or** a Bachelor of Science in Engineering, **or** a NQF Level 8 qualification in Engineering (or related field), obtained from an accredited South African university, with an aggregate of 60% for the final-year of study.

Candidates with a baccalaureus technologiae, will be required to complete bridging modules at NQF Level 8 before registration (through an online mode: BPEMO8). The modules are: Engineering Project Management (EPJ51BN), Quality Engineering (QUE51BN and Systems Modelling (SYM51BN (or their equivalents).

Holders of any other equivalent South African or international qualification may also be considered, see Chapter 1 of Students' Rules and Regulations.

b. *Selection criteria:*
Admission will be subject to approval of a research topic by the Departmental Research Committee (DRC). Candidates who do not meet the 60% minimum academic requirements, might be invited to a Departmental Selection Committee for consideration.

Acceptance is subject to available capacity according to the Student Enrolment Plan (SEP) as well as supervisory capacity. Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, www.tut.ac.za.

c. *Recognition of Prior Learning (RPL), equivalence and status:*
See Chapter 30 of Students' Rules and Regulations.

d. *Intake for the qualification:*
January and July.

e. *Presentation:*
Research and block-mode classes presented in the day, evening or online mode. Online modules and their assessments are presented via the myTutor platform. Classes and assessments may take place on Friday afternoons and/or Saturdays.

f. *Duration:*
A minimum of two years and a maximum of five years.

g. *Rules on postgraduate studies:*
See Chapter 8 of Students' Rules and Regulations.

Key to asterisks:

* Students who completed the bridging programme may not register (or request exemption) for Engineering Project Management (EPJ119M) and Quality Engineering (QUE119M). Further details in this regard are available from the Department.

CURRICULUM

ATTENDANCE

CODE	MODULE	NQF-L	CREDIT
RRT109M	Research Report: Engineering Management	(9)	(90)
RRT109R	Research Report: Engineering Management (re-registration)	(9)	(0)
RRT119R	Research Report: Engineering Management (re-registration) (semester option)	(9)	(0)

FIRST SEMESTER

EBU118M	Engineering Business Dynamics	(8)	(15)
RMD118N	Research Methodology (online module, offered in both semesters)	(8)	(15)

plus three* of the following modules:

EPJ119M	Engineering Project Management* (second semester)	(9)	(10)
MEN119M	Maintenance Engineering	(9)	(10)
QUE119M	Quality Engineering*	(9)	(10)

SECOND SEMESTER

EDY118N	Engineering Data Analysis (online module)	(8)	(15)
TVC119M	Technology Venture Creation	(9)	(15)

plus three* of the following modules (if not previously taken):

EPJ119M	Engineering Project Management*	(9)	(10)
LCY119N	Life Cycle Management (online module)	(9)	(10)
MEN119M	Maintenance Engineering (first semester)	(9)	(10)
QUE119M	Quality Engineering* (first semester)	(9)	(10)
SPP119N	Supply Chain Management (online module)	(9)	(10)

ONLINE OFFERING (MEEMO8)

** Modules are presented on an online-mode and students will have to register for these modules under a different programme code). Further details in this regard are available from the Department.

EDY118N	Engineering Data Analysis **	(8)	(15)
LCY119N	Life Cycle Management **	(9)	(10)
RMD118N	Research Methodology**	(8)	(15)
SPP119N	Supply Chain Management **	(9)	(10)

TOTAL CREDITS FOR THE QUALIFICATION: **180**

MODULE INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular module. On 01 October 2019, the syllabus content was defined as follows:

E

ENGINEERING BUSINESS DYNAMICS (EBU118M) **CONTINUOUS ASSESSMENT**
(Module custodian: Department of Industrial Engineering)
Fundamentals of system dynamics, system thinking, and utilisation of stock's, flows and causal loops diagram when drawing a system dynamics module. Stella software is used to draw the module. (Total tuition time: ± 80 hours)

ENGINEERING DATA ANALYSIS (EDY118N) **CONTINUOUS ASSESSMENT**
(Module custodian: Department of Industrial Engineering)
Innovation, decision-making and engineering data analysis tools are discussed to ensure effective problem solving skills. (Total tuition time: ± 80 hours)

ENGINEERING PROJECT MANAGEMENT (EPJ119M) **CONTINUOUS ASSESSMENT**
(Module custodian: Department of Industrial Engineering)
Introduction to Engineering Project. Project Management Approaches. Project Management Body of Knowledge (PMBOK). Computer application, systems approach to project management, and implementing a project. (Total tuition time: not available)

L

LIFE CYCLE MANAGEMENT (LCY119N) **CONTINUOUS ASSESSMENT**
(Module custodian: Department of Industrial Engineering)
Total quality, asset and environmental management integration in managing the organisation effectively. (Total tuition time: ± 80 hours)

M

MAINTENANCE ENGINEERING (MEN119M) **CONTINUOUS ASSESSMENT**
(Module custodian: Department of Industrial Engineering)
Introduction to maintenance; measures of maintenance system maintenance; and Systems design. (Total tuition time: ± 80 hours)

Q

QUALITY ENGINEERING (QUE119M) **CONTINUOUS ASSESSMENT**
(Module custodian: Department of Industrial Engineering)
Introduction to quality. Quality management systems. Quality improvement. Strategies. Quality assurance. (Total tuition time: ± 80 hours)

R

RESEARCH METHODOLOGY (RMD118N) **CONTINUOUS ASSESSMENT**
(Module custodian: Department of Industrial Engineering)
Research Methodology. Administrative procedures. Research topic. Research problem and objectives. Research proposal. Technical structure of dissertation. Application for funding. Article training. (Total tuition time: ± 80 hours)

RESEARCH REPORT: ENGINEERING MANAGEMENT (RRT109M/R, RRT119R) **MINI-DISSERTATION ASSESSMENT**
(Module custodian: Department of Industrial Engineering)
Syllabus content not available. Please contact the Head of the Department.

S

SUPPLY CHAIN MANAGEMENT (SPP119N) **CONTINUOUS ASSESSMENT**

(Module custodian: Department of Industrial Engineering)

This is about engineering inventory planning and control, linking materials requirement planning and entity resource planning with increasing customer service excellence. Integrating just in time, warehousing and technology with supplier management to optimise logistics engineering and taking care of risks. (Total tuition time: ± 80 hours)

T

TECHNOLOGY VENTURE CREATION (TVC119M) **CONTINUOUS ASSESSMENT**

(Module custodian: Department of Industrial Engineering)

Translation of ideas into commercially viable high technology venture. Development of business plan and funding strategies are discussed. To elucidate the role of creativity, entrepreneurial and innovative business activities, and their management, within a global environment, and also of gender and ethnic diversity. (Total tuition time: ± 80 hours)