

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 of 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: Engineering Project Management, Quality Engineering and Systems Modelling and (or their equivalents). Candidates who have not completed these bridging modules before registration, will be required to complete them concurrently with this qualification.

Holders of any other equivalent South African or international qualifications may also be considered, but will have to apply at least six months in advance for the recognition of such qualifications. Candidates will be required to submit an evaluation of their qualifications by the South African Qualifications Authority (SAQA) with their application forms for admission. The University and/or Faculty reserves the right to assess these qualifications and the applicant's suitability and/or competence for admission to the programme. Depending on the nature of such an equivalent qualification, the completion of certain additional subjects may be required. Proof of English proficiency may be required.

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, will be invited to a Departmental Selection Committee for consideration.

c. *Duration:*

A minimum of two years and a maximum of four years.

d. *Presentation:*

Research and block-mode classes presented in the day or evening, provided that there are sufficient students. Classes and assessments may take place on Friday afternoons and/or Saturdays.

e. *Intake for the qualification:*

January and July.

f. *Rules on postgraduate studies:*

See Chapter 8 of the Students' Rules and Regulations for more information.

g. *Module credits:*

Module credits are shown in brackets after each module.

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)
EDY118M	Engineering Data Analysis	(8)	(15)

plus three* of the following modules:

EPJ119M	Engineering Project Management* (second semester)	(9)	(10)
LCY119M	Life Cycle Management (second semester)	(9)	(10)
MEN119M	Maintenance Engineering	(9)	(10)
QUE119M	Quality Engineering*	(9)	(10)
SPP119M	Supply Chain Management (second semester)	(9)	(10)

SECOND SEMESTER

RMD118M	Research Methodology	(8)	(15)
TVC119M	Technology Venture Creation	(9)	(15)

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

EPJ119M	Engineering Project Management*	(9)	(10)
LCY119M	Life Cycle Management	(9)	(10)
MEN119M	Maintenance Engineering (first semester)	(9)	(10)
QUE119M	Quality Engineering* (first semester)	(9)	(10)
SPP119M	Supply Chain Management	(9)	(10)

TOTAL CREDITS FOR THE QUALIFICATION: **180**

SUBJECT/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 subject. On 13 October 2017, the syllabus content was defined as follows:

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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 (EDY118M)**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 (LCY119M)****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 (RMD118M)****CONTINUOUS ASSESSMENT***(Subject 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 (SPP119M)****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)



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)

