

# MAGISTER TECHNOLOGIAE: ENGINEERING: INDUSTRIAL (Field of specialisation: Technology Management) (Structured)

Qualification code: MTEIS1 - NQF Level 8

Campus where offered: Pretoria Campus (research and block-mode classes)  
Last year of new intake: 2017  
Teach-out (phase-out) date: 31 December 2020

Students registered for this qualification should complete their studies according to the teach-out date prescribed for the qualification, subject to the stipulations of Regulation 3.1.11 and 3.1.13 in the Students' Rules and Regulations.

Information on phased-out programmes can be obtained from the TUT website, [www.tut.ac.za](http://www.tut.ac.za).

## CURRICULUM

Consult the 2017 Faculty Prospectus for the full contents of the qualification.

## ATTENDANCE

CODE	SUBJECT	CREDIT
RRT500T	Research Report: Technology Management V	(0,500)
RRT500R	Research Report: Technology Management V (re-registration)	(0,000)
RRT501R	Research Report: Technology Management V (re-registration) (semester option)	(0,000)

### FIRST SEMESTER

EBU501T	Engineering Business Dynamics V	(0,077)
RMD501E	Research Methodology V	(0,038)

### SECOND SEMESTER

EDY501T	Engineering Data Analysis V	(0,077)
TVC501T	Technology Venture Creation V	(0,077)

#### plus three of the following subjects:

EPJ501T	Engineering Project Management V	(0,077)
LCY501T	Life Cycle Management V	(0,077)
MEN501T	Maintenance Engineering V (offered in first semester)	(0,077)
QUE501T	Quality Engineering V (offered in first semester)	(0,077)
SPP501T	Supply Chain Management V	(0,077)

TOTAL CREDITS FOR THE QUALIFICATION: **1,000**



## SUBJECT 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 8 August 2018, the syllabus content was defined as follows:

### E

**ENGINEERING BUSINESS DYNAMICS V (EBU501T)** **CONTINUOUS ASSESSMENT**  
*(Subject 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 V (EDY501T)** **CONTINUOUS ASSESSMENT**  
*(Subject 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 V (EPJ501T)** **CONTINUOUS ASSESSMENT**  
*(Subject 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 V (LCY501T)** **CONTINUOUS ASSESSMENT**  
*(Subject 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 V (MEN501T)** **CONTINUOUS ASSESSMENT**  
*(Subject custodian: Department of Industrial Engineering)*  
Introduction to maintenance; measures of maintenance system maintenance; and Systems design. (Total tuition time: ± 80 hours)

### Q

**QUALITY ENGINEERING V (QUE501T)** **CONTINUOUS ASSESSMENT**  
*(Subject custodian: Department of Industrial Engineering)*  
Introduction to quality. Quality management systems. Quality improvement. Strategies. Quality assurance. (Total tuition time: ± 80 hours)

### R

**RESEARCH METHODOLOGY V (RMD501E)** **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: TECHNOLOGY MANAGEMENT V (RRT500T/R, RRT501R)** **MINI-DISSERTATION ASSESSMENT**  
*(Subject custodian: Department of Industrial Engineering)*  
Syllabus content not available. Please contact the Head of the Department.



**S****SUPPLY CHAIN MANAGEMENT V (SPP501T)****CONTINUOUS ASSESSMENT****(Subject 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 V (TVC501T)****CONTINUOUS ASSESSMENT****(Subject 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)

