

University of Pretoria Yearbook 2017

BEngHons Technology Management (12240252)

Duration of study 1 year

Total credits 128

Programme information

The BEngHons (Technology Management) degree is conferred by the following academic department:
Engineering and Technology Management

The stipulations of Faculty Regulations for honours degrees apply mutatis mutandis.

Any specific module is offered on the condition that a minimum number of students are registered for the module, as determined by the head of department and the Dean. Students must consult the relevant head of department in order to compile a meaningful programme, as well as on the syllabi of the modules. The relevant departmental postgraduate brochures must be consulted.

The curriculum is determined in consultation with the relevant heads of departments. A student is required to pass modules to the value of at least 128 credits.

The degree is awarded on the basis of examinations only.

Admission requirements

Subject to the stipulations of the General Regulations, Reg. G.1.3 and G.54, a BEng degree or equivalent qualification is required for admission.

Examinations and pass requirements

- The examination in each module for which a student is registered, takes place during the normal examination period after the conclusion of lectures (i.e. October/November or May/June).
- A student registered for the honours degree must complete his or her studies within two years (full-time), or within three years (part-time) after first registration for the degree: Provided that the Dean, on recommendation of the relevant head of department, may approve a stipulated limited extension of this period.
- A student must obtain at least 50% in an examination for each module where no semester or year mark is required. A module may only be repeated once.
- In modules where semester or year marks are awarded, a minimum examination mark of 40% and a final mark of 50% is required.
- No supplementary or special examinations are granted at postgraduate level.

Pass with distinction

A student passes with distinction if he or she obtains a weighted average of at least 75% in the first 128 credits for which he or she has registered (excluding modules which were discontinued timeously). The

degree is not awarded with distinction if a student fails any one module (excluding modules which were discontinued timeously).



Curriculum: Final year

Minimum credits: 128

Core modules

Engineering economics 780 (IKN 780)

Module credits	16.00
Prerequisites	No prerequisites.
Contact time	20 contact hours per semester
Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 and Semester 2

Module content

A research term paper will be prepared.

Organisation and innovation 780 (INV 780)

Module credits	16.00
Prerequisites	No prerequisites.
Contact time	16 lectures per week, 22 other contact sessions per week
Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 and Semester 2

Module content

A research term paper will be prepared.

Project management 780 (IPK 780)

Module credits	16.00
Prerequisites	No prerequisites.
Contact time	20 contact hours per semester
Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 and Semester 2

Module content

A research term paper will be prepared.

Systems thinking 780 (ISE 780)

Module credits	16.00
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Service modules	Faculty of Natural and Agricultural Sciences
Prerequisites	No prerequisites.
Contact time	20 contact hours per semester
Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 and Semester 2

Module content

The modern world is made up of “systems”. This is evident from everyday discussions amongst even the general public. Statements such as “The system failed us”, or “The national energy system is under pressure” abound. Unfortunately most people have little or no understanding what a system is, or how to deal with it. Digging deeper into the concept of “system” leads one to realise that engineers and scientists without any working knowledge of “systems thinking” cannot succeed when attempting to solve complex problems. The module will equip students with the ability to solve problems from a “whole”, “big picture” or holistic perspective. Students will develop a range of critical skills allowing them to successfully function in a complex world made up of many interrelated systems. The module will also provide students with an overview of systems engineering resulting from systems thinking, including the requisite tools and processes. This module will challenge much about a students’ work environment, but it also will be unlike any other module a student has ever completed, mostly presented independent of any traditional engineering discipline.

Research project 780 (IGB 780)

Module credits	32.00
Contact time	20 contact hours
Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 and Semester 2

Module content

The research project is the capstone of the MOT programme. It comprises an independent research study into an area of technology management, applying the principles learned during the programme. Although this is a research project of limited breadth and scope, it nonetheless has to comply with the requirements of scientific research on post-graduate level. The total volume of work that is to be invested in this module by an average student must be 320 hours. Normal requirements for assessment that include the use of an external examiner apply to this module.

Elective modules

Asset management 780 (IBB 780)

Module credits	16.00
Prerequisites	No prerequisites.
Contact time	20 contact hours

Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 and Semester 2

Module content

"Asset Management" may be defined as a life cycle process for creating, establishing, maintaining, operating, rehabilitating and divesting an asset in an optimal or balanced manner to satisfy the constraints imposed by economy, ergonomics, technical integrity and business performance. Within this definition, physical assets include equipment, infrastructure, and people. The 'holistic' view implied here recognises the wider range of disciplines required for strategic decisions and tactical management of physical assets. Strategy and tactics depend on the asset, whereas people processes underpin the effective management of an asset. The overall objective for the physical Asset Management module is to provide an integrated understanding of the complimentary disciplines applicable to the management of engineered assets. The module will emphasise the synergy between specialist and cross-disciplinary skills and their respective roles with respect to the management of physical assets. The overall outcome for the learner will be awareness of the collaboration required and application of cross-disciplinary skills in technical, engineering, finance logistics, human communication, and other functions to achieve effective management of physical assets.

Technological entrepreneurship 780 (IEE 780)

Module credits	16.00
Prerequisites	No prerequisites.
Contact time	20 contact hours per semester
Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 and Semester 2

Module content

A research term paper will be prepared.

Maintenance management 780 (IMC 780)

Module credits	16.00
Prerequisites	No prerequisites.
Contact time	20 contact hours per semester
Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 and Semester 2

Module content

A research term paper will be prepared.

Operations management 781 (IVV 781)



Module credits	16.00
Prerequisites	No prerequisites.
Contact time	20 contact hours per semester
Language of tuition	Module is presented in English
Academic organisation	Engineering and Technology Mgt
Period of presentation	Semester 1 or Semester 2

Module content

A research term paper will be prepared.

The information published here is subject to change and may be amended after the publication of this information. The [General Regulations \(G Regulations\)](#) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the [General Rules](#) section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.