Management of Technology

There can be little doubt that technology is increasingly becoming an important base for competition between companies and also a key factor in international competitiveness. The ability to manage technology and technological innovation in a structured way is the key to a winning organisation.

Objective of Programme

The programmes in Technology Management offered by the Graduate School of Technology Management (GSTM), are aimed at engineers and scientists who have recently completed a bachelor’s degree. The objective is to produce engineers and scientists who not only have technological capabilities, but also the ability to manage technology – specialists who know not only how to develop and deploy technology, but also why. The degree builds on and adds value to the young engineers’ and scientists’ undergraduate education by exposing him or her to the management of technology and the management of technological innovation. Thereby skills are acquired that are not normally addressed at undergraduate level, but are nonetheless increasingly being sought after in the industry.

The option for a masters degree after the honours is completed, based either on a research dissertation or on the completion of four theoretical modules and mini-dissertation, is offered. This degree is aimed at graduate business managers and recent graduates with management and leadership potential to prepare them for leadership roles in business through professional postgraduate education.

Degrees offered

Four degrees are offered, i.e.:
BEng (Hons) (Technology Management)
MEng (Technology Management)
BSc (Hons) (Technology Management)
MSc (Technology Management)

The programmes are presented in English. A TOEFL or IELTS test may be required of candidates who have not studied the prerequisite degree through the medium of English.

The Honours Degree

The admission requirement for the BEng (Hons) is a recognised Bachelors Degree in Engineering and for the BSc (Hons) a recognised and appropriate Bachelors degree in the Natural Sciences or an appropriate BTech degree. Applicants should submit a full academic record (subjects, grades, time frame for completion) on application.

Only applicants with a minimum average of 60% (calculated on the grades off all the final year modules (failed/passed) for the prerequisite degree) will be considered for registration for the BSc (Hons) Technology Management degree.

Special attention will be given to mathematics education. The minimum requirement is first year mathematics at university or an equivalent level.

Structure and Curriculum

The honours degree programme consists of eight modules that may be completed in one year of study (all eight modules in one year) or two years’ study (four modules per year). The programme starts in January each year. All modules will be presented every year (offering of electives is subject to sufficient demand). Module-work totalling 128 credits is required for the honours degree, i.e. 16 credits per module. It is strongly recommended that students who work full-time complete the programme over a period of two years as the University’s recommended learning hours for a 16 credit module is 160 hours.

The programme curriculum consists of a set core modules and one elective module. The modules are:

Core Modules
- Organisation and Innovation
- Project Management
- Quality Management
- Operations Management
- Systems Engineering
- Maintenance Management
- Engineering Economics

Elective Modules
- Asset Management
- Technological Entrepreneurship
- Research Methodology (Ad-hoc students only)

Mode of Presentation

As candidates normally hold full-time positions, the mode of presentation has been designed to cause the least possible disruption in the work environment. The programme is structured around two study blocks per year. The first two week contact block is scheduled typically during March and the second during August. Each module is offered by way of two and a half consecutive days of full-time attendance. Class attendance is compulsory and important. Distance support is provided via the
Internet and complements the contact in the classroom. For this reason, all students are required to have access to the Internet through a suitable browser and be able to take part in discussions using the Internet.

The Masters Degree

Admission to the masters degree will only be considered after successful completion of the BEng/BSc (Hons) (Technology Management) degree. Academic performance and research aptitude will be factors in the selection of candidates for the masters programme.

Option A:
Masters Dissertation

Only applicants with an average of 65% or higher (failed/passed) for the prerequisite degree will be considered for registration for the dissertation.

Students must complete a masters dissertation. This comprises a significant piece of independent research undertaken by the candidate, on a topic in the subject field of the programme. A formal proposal must be approved by the GSTM’s postgraduate research committee. Although a new contribution to knowledge is not required, the research should be original and further the research objectives of the GSTM and/or the Institute for Technological Innovation.

Option B:
Theoretical Modules and Mini-dissertation (MTM)

Only applicants with a minimum average of 60% (calculated on the grades of all the final year modules (failed/passed) for the prerequisite degree) will be considered for registration for the MSc in Technology Management (MTM) programme.

Students must complete the following four theoretical modules as well as a mini-dissertation.

- Strategic Technology Management
- Research Methodology
- Literature Study
- Elective module (Technology Commercialisation or a module from the MEM/MPM programmes. Your choice is subject to approval).

As part of the mini-dissertation or dissertation, each candidate is required to produce an article for publication and present his or her findings at the final year symposium.

Tuition Fees

The approximate fees for 2015 are indicated hereunder.

Distance examinations are arranged for students who apply, but at an extra cost of R 550 per examination paper within the RSA and R 1 100 per examination paper for international countries. Examination fees are reviewed annually, and could thus be higher in 2015.

Honours in Technology Management (MOT)
The fee for the MOT programme in 2015 will be approximately R 31 672, i.e. R 3 959 per module. The final fee will be available in January 2015.

The total fee is distributed over a maximum of two years and charged on the basis of modules taken in a year. Full-time students are expected to pay the total fee in the first year. Prescribed books are not included in the fee.

Masters Dissertation in Technology Management

The fee for the masters dissertation in 2015 will be approximately R 14 000 per annum.

Theoretical Modules and Mini-dissertation (MTM)
The total fee for the masters programme for 2015 will be approximately R 50 000. The final fee will be available in January 2015.

The fee includes tuition, textbooks, other study material and meals on campus. These fees are applicable for 2015 and apply to students completing the programme within the prescribed two-year period. The fees are typically payable as follows: 50% in the first year, 50% in the second year. Where necessary, arrangements can be made to pay each year’s portions in two equal installments. In the case of the programme not being completed in the prescribed two years, a re-registration fee of R 7 500 for a third (final) year is payable. The University reserves the right to increase fees annually. Students who do not have South African citizenship are liable for an additional R 2 500 per annum administration fee.

Distance examinations are arranged for students who apply, but at an extra cost of R 550 per examination paper within the RSA and SADC countries and R 1 100 per examination paper for international countries. Examination fees are reviewed annually, and could thus be higher in 2015. Fees will be finalised towards the end of the year, typically during November.
Application Procedures and Forms

Any person who wishes to register at the University for the first time, or after an interruption of studies: Please complete the University’s online application form at www.up.ac.za and click on “Apply at UP”.

OR

To receive a hard copy application form, please contact the Client Service Centre at csc@up.ac.za or 012 420 3111. A hard copy application form will then be posted to you.

Current UP studies

Please complete the Honours or Masters degree application form for current UP students at www.up.ac.za/gstm/mot

Please fax or e-mail the form to the specific person indicated at “Contact Details”.

International Students

All international students who have not studied the prerequisite degree through the medium of English will be obliged to submit a TOEFL or IELTS test to the University before registration. Further information with regard to the TOEFL / IELTS test, can be found at: www.toefl.org or www.ielts.org

Any further queries or information required by foreign students with respect to fees, registration and study permit requirements can be obtained at the University of Pretoria’s website – International Affairs Office (IAO) (www.up.ac.za and click on “International Students”).

Closing Date for Applications

Honours (MOT):
Last Friday in November 2014

Masters (Modules and Mini-dissertation) (MTM):
1st Friday in November 2014

Masters (Dissertation):
1st Friday in December 2014

Module Descriptions

For a detailed description on any of the MOT/MTM modules, go to www.up.ac.za/gstm/mot

Contact Details

Honours Degree
Thuli Mvakali
Room 2 – 13
Engineering 2 Building
University of Pretoria
Tel: 012 420 4605
Fax: 086 580 8372 or +27 12 420 6700
E-mail: thuli.mvakali@up.ac.za

Masters Degree
Hellen Kriek
Room 2 – 14
Engineering 2 Building
University of Pretoria
Tel: 012 420 5052
Fax: 086 585 5460 or +27 12 420 6700
E-mail: Hellen.Kriek@up.ac.za