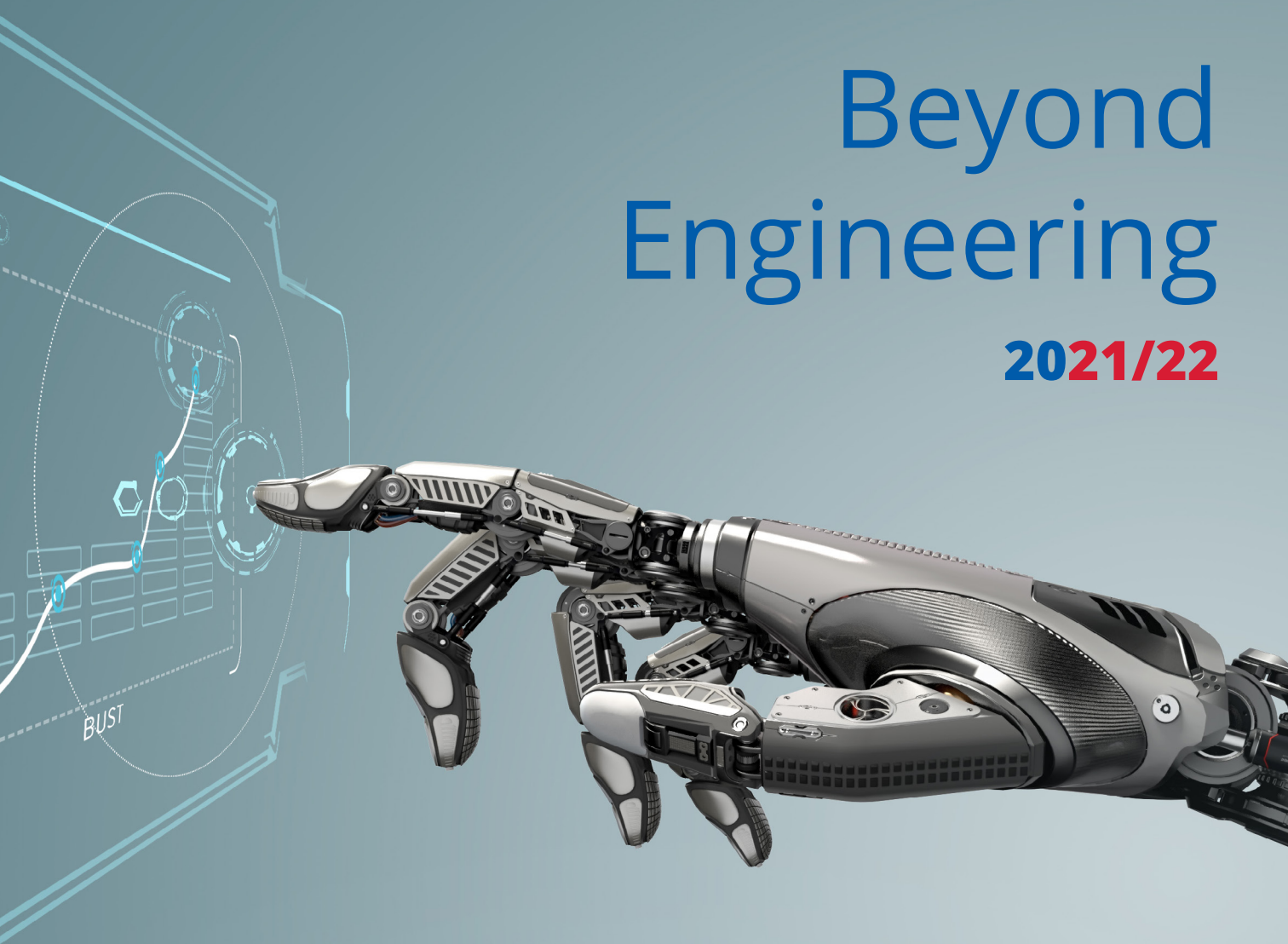


Beyond Engineering

2021/22



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Graduate School of
Technology Management

Formal Offering

The GSTM offers internationally recognised postgraduate management development programmes at honours, masters and doctoral level. These programmes address different needs in the fields of engineering, technology and innovation, or project management.

The programmes are offered on a part-time, modular basis over two years.

Taught Programmes

- Honours in Engineering and Technology Management (ETM)
- Masters in Technology and Innovation Management (MTIM)
- Masters in Engineering Management (MEM)
- Masters in Project Management (MPM)

Full Research Programmes

- PhD (Engineering Management/Project Management/Technology and Innovation Management)

Skills Development

The GSTM is involved in community activities and offers several certificate programmes and short courses in collaboration with Enterprises University of Pretoria.

The goal is to develop individual and organisational skills gained from research-based knowledge offered by experienced lecturers who are leaders in the industry.

Our year programmes and short courses are offered in the fields of:

- Asset Management
- Corporate Entrepreneurship
- Engineering Management
- Maintenance Management
- Project Management
- Science, Technology and Innovation Policy
- Systems Engineering
- Technological Entrepreneurship and Innovation

Several Short Courses are on offer. For more in depth information on all the programmes and courses offered, please visit

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GRADUATE SCHOOL OF TECHNOLOGY MANAGEMENT (GSTM)

Engineering, Technology and Innovation Management is a globally evolving discipline. The increasing complexity of engineering projects, systems and activities, the scope and sophistication of resources as well as advances in technology have all been driving forces in the evolution of this field.

A Chair for Engineering Management, sponsored by industry, was established at the University of Pretoria in 1987. This evolved into the Department of Engineering and Technology Management in 1994 – the first and only Department of its kind at a South African university. The Graduate School of Technology Management (GSTM) evolved from this department and was established on 1 January 2007.

The GSTM is not just the first graduate school of its kind in South Africa, but also the largest in Africa.

The GSTM offers internationally recognised post graduate programmes. These programmes are offered at honours, masters and doctoral level and address different needs in the field of Engineering Management, Technology and Innovation Management as well as Project Management.

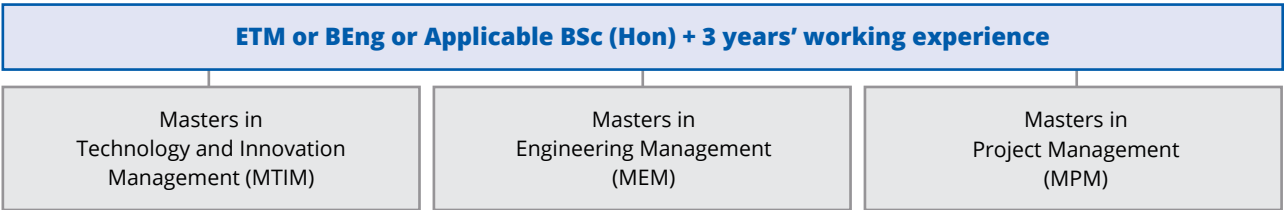
A strong focus is placed on high quality research and excellent teaching and education. Research ensures relevance to the market in terms of increased international competitiveness, optimising product life-cycles, technology transfer and positioning of technological abilities within the international context.

Honours in Engineering and Technology Management (ETM)

The honours programme in Engineering and Technology Management is aimed at engineers and scientists who have recently completed a bachelor's degree and who have insufficient work experience or require an entry qualification to enrol for a Masters degree in the technical management sciences.

The honours programme provides the first step towards technical management and exposes the young graduate to the management of technology and the management of technological innovation through predefined modules as well as a research project.

By successfully completing the honours programme, young engineers and scientists should have improved their ability to manage technology and have the knowledge on how to develop and deploy technology innovations.



Masters in Technology and Innovation Management (MTIM)

The programme aims to introduce students to the aspects of technology which support the long term goals of innovation and productivity within an organisation.

Technology and Innovation Management focuses on the introduction of new products, processes, services or systems to an organisation, through the economic development and transfer of knowledge on the choice and application of technology and processes, in order to secure the organisation's growth, competitiveness and sustainability.

Masters in Engineering Management (MEM)

The MEM aims to provide relevant management education to the practising engineer/scientist who is active in primarily technology-based enterprises.

The MEM programme focuses on the process of value creation, i.e. product and system development, production and operations and the maintenance of systems and related services within a business context. The question of strategically positioning the enterprise in terms of technological capability is paramount. The above mentioned study areas are the key factors which distinguish MEM from other postgraduate and business management degrees.

Masters in Project Management (MPM)

The Masters in Project Management empowers graduates to apply scientific thinking and advanced interdisciplinary skills to manage projects over the project life-cycle.

Viewing projects as temporary endeavours, the programme facilitates learning the fundamentals of project management to enable learners to identify, develop, implement and close projects. Apart from the core project management modules, the programme also views projects as strategic initiatives with modules considering the environment, people and the realisation of benefits.



International Accreditation

The MPM Programme, offered by the Graduate School of Technology Management (GSTM), is fully accredited by the Global Accreditation Center for Project Management Education Programs (GAC) of the Project Management Institute (PMI), USA. The programme is aligned with ISO 21500 guidelines.

PhD Degree

A PhD degree in either Engineering Management, Technology and Innovation Management or Project Management is offered.

Learning Model

All the programmes (Honours and Masters) are structured around two study blocks per year. The first two-week study block is scheduled during February/March, and the second during August. Web-based support is provided to create a virtual classroom and an e-learning experience. Students are required to have access to the Internet via a suitable browser.

Full day attendance during study block weeks is compulsory. Candidates will be expected to work in the evenings and over weekends during study blocks. Students must be able to take part in discussions using the Internet. Lecturers facilitate distance learning (group and individual activities) throughout each academic cycle. It is expected of participants to attend the study blocks fully prepared.

Programme Architecture

Honours Degree: Engineering and Technology Management (ETM)

The programme consists of five core modules and two elective modules and may be completed in one or two years' study.

The modules are equivalent to 16 credits each, except the research project which is equivalent to 32 credits.

Programme Design

Semester 1 (2x Core and 2x Electives)

- Technology and Innovation Management
- Engineering Techno Economics
- Operations Management*
- Maintenance and Asset Management*
- Technological Entrepreneurship*

Semester 2 (2x Core and 1x Research Project)

- Project Management
- Systems Thinking and Engineering
- Research Project

* Electives: Choose two of the three electives above or a prior approved elective from the School of Engineering.

Masters Degrees

The Masters programmes each consists of nine modules and a research project. Modules are all equivalent to 10 credits each, except the research component (mini-dissertation), which is equivalent to 90 credits. The programme must be completed within the prescribed years of study.



Programme Design

MEM	MPM	MTIM
Year 1: Semester 1		
Systems Engineering and Mngmt. Production and Operations Mngmt. Technology Management Strategic Management	Project Planning Finance and Cost Management Procurement and Contract Mngmt. Risk Management	Fundamentals of Technology Mngmt. Organisation and Innovation Corporate Entrepreneurship Strategic Tech. and Inn. Mngmt.
Year 1: Semester 2		
People Management Eng Asset Mngmt. and Maintenance Financial Management	Project Organisation Quality and Integration Mngmt. Construction Mngmt. <i>or</i> IT and Services Project Mngmt. <i>or</i> Project Systems Engineering	New Product Development Science, Tech. and Inn. Policy Techno-Economics and the Circular Economy
Research (mini-dissertation)		
Year 2: Semester 1		
*Elective x2	*Elective x2	*Elective x2
Research (mini-dissertation)		
Year 2: Semester 2		
Research (mini-dissertation)		
*Electives available to all programmes		*Electives only available to specific programmes
Commercialisation and Intellectual Property Industrial Marketing Knowledge and Information Management Legal Aspects New Ventures and Entrepreneurship Programme and Portfolio Management Sustainable Management Systems Thinking		New Product Development (MEM/MPM) Project Planning (MEM/MTIM) Risk Management (MEM/MTIM)

Research Symposium

Assessment for the Honours and Masters programmes are conducted by means of individual/group assignments, oral presentations, tests and written examinations. Masters students must present their mini-dissertation research at the GSTM Research Symposium.

QUALIFICATIONS AWARDED

Honours Degree (ETM)

Depending on the undergraduate qualification:

- BEng (Hons) (Engineering and Technology Management) or
- BSc (Hons) (Engineering and Technology Management)

Masters Degree (MEM/MPM/MTIM)

Depending on the undergraduate qualification:

- MEng (Engineering Management or Project Management or Technology and Innovation Management) or
- MSc (Engineering Management or Project Management or Technology and Innovation Management)

ADMISSION AND SELECTION

Honours Degree (ETM)

- A Bachelor's degree in Engineering; or
- Appropriate Bachelor's degree in the Natural Sciences; or
- Appropriate BTech degree.
- For the BSc (Hons) degree a minimum average of 65% for the prerequisite degree is a requirement. Full academic record (modules, grades, time frame for completion) will be required on application.
- First year mathematics at university or an equivalent level.

Masters Degrees (MEM/MPM/MTIM)

- A four-year Bachelor's degree in Engineering and at least three years' relevant postgraduate experience.
- A BSc degree as well as a BSc Honours degree (four study years) in a suitable scientific field and at least three years' relevant postgraduate experience.
- For a MSc degree, a minimum average of 60% (MOT/ETM 55%) for the prerequisite degree. Full academic record (modules, grades, time frame for completion) will be required on application.

A limited number of applicants are admitted to the Honours and Masters degrees.

Prerequisite degrees to the programmes must be from a recognised institution.

The medium of instruction is English. A TOEFL or IELTS test will be required of candidates who have not studied the prerequisite degree through the medium of English.

For more information re the calculation of the required percentage and more detail on admission requirements, please visit [or](#)

Fees indicated in this brochure for all the GSTM programmes are as in 2021. The University reserves the right to increase fees annually. The fees for 2022 should be available in January 2022.

Honours Degree (ETM)

The 2021 tuition fee is R 43 881.

Fees do not include textbooks or meals on campus.

Masters Degrees (MEM/MPM/MTIM)

The 2021 tuition fee is R 141 700 per programme. Fees include study material and meals on campus, but exclude textbooks. These fees, inclusive of an approved increase in 2022, apply to students completing the programme within the prescribed period.

Students who do not have South African citizenship are liable for an additional amount of approximately R 2 700 per annum administration fee.

Distance examinations

Approximately R 800 per examination paper within the RSA and SADC countries, and approximately R 1 600 per examination paper for international countries.

For information re the distribution of payment for the above programmes, re-registration, distance examinations and increase in fees, please visit [www.wits.ac.za](#).



APPLICATION PROCEDURES AND FORMS

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: [https://www.up.ac.za/apply/entry-requirements/entry-requirements-international-students](#) or [https://www.up.ac.za/apply/entry-requirements/entry-requirements-international-students](#)

Information for foreign students with respect to fees, registration and study permit requirements can be obtained at the University of Pretoria's website – International Cooperation Division (ICD).

Application at UP

Complete the on-line University application form at [https://www.up.ac.za/apply/entry-requirements/entry-requirements-international-students](#).

Closing Date for Applications

Honours (ETM): 31 December 2021

Masters Degrees (MEM/MPM/MTIM): 31 December 2021



CONTACT DETAILS

Honours Degree (ETM)

E-mail

Room 2-12, Engineering 2 Building
University of Pretoria

Masters Degrees (MEM/MPM)

E-mail

Room 2-16, Engineering 2 Building
University of Pretoria

Masters Degree (MTIM)

E-mail

Room 2-14, Engineering 2 Building
University of Pretoria

GSTM programmes and short courses at Enterprises University of Pretoria

Amanda Mostert

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For more in depth information on all the GSTM programmes please visit



www.up.ac.za/gstm

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