



University of Pretoria Yearbook 2025

Enterprise engineering and research methods 781 (BBA 781)

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| Qualification | Postgraduate |
| Faculty | Faculty of Engineering, Built Environment and Information Technology |
| Module credits | 32.00 |
| NQF Level | 08 |
| Programmes | <i>BEngHons Industrial Engineering</i> <i>BScHons (Applied Science) Industrial Systems</i> |
| Prerequisites | Knowledge about database design, using entity relationship diagrams to represent data requirements |
| Contact time | 36 contact hours per semester |
| Language of tuition | Module is presented in English |
| Department | Industrial and Systems Engineering |
| Period of presentation | Semester 1 |

Module content

Enterprise Engineering can be defined as the body of knowledge, principles, and practices to design an enterprise. Due to their complexity and the continuously changing environment, enterprises need new approaches, tools and techniques to deliver innovative products and services to new markets in competitive environments. This module offers an introduction to the engineering design process applied to the enterprise as a system, and present existing approaches for designing, aligning and governing the enterprise. Within the design paradigm, the module also offers research methods (e.g. case study research, design science research, action research and action design research) that are relevant for doing research within the enterprise engineering discipline.

The module covers:

- Background on systems thinking
- The basic system design process
- Prominent approaches for creating an enterprise engineering capability (e.g. Dietz/Hoogervorst, Zachman, The Open Group).
- Mechanisms and practices associated with different phases of enterprise design (e.g. enterprise modelling, languages, road maps, maturity assessment).
- Research methodologies, methods and techniques to validate and extend the EE knowledge base
- Case studies



General Academic Regulations and Student Rules

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations. The G Regulations are updated annually and may be amended after the publication of this information.

Regulations, degree requirements and information

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.