

University of Pretoria Yearbook 2022

Enterprise engineering and research methods 781 (BBA 781)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	32.00
NQF Level	08
Programmes	BEngHons <i>Industrial Engineering</i> BScHons (Applied Science) <i>Industrial Systems</i>
Prerequisites	Information Systems Design (BID 320) or similar course
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. design research and action research) that are relevant for doing research within the enterprise engineering discipline.

The module covers:

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



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