Introduction to mathematical optimization for big data science 804 (MIT 804)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	5.00
NQF Level	09
Programmes	MIT *Big Data Science* (Coursework)
Prerequisites	First year level higher education modules in Computer Science, Mathematics and Statistics.
Contact time	5 contact hours
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Quarter 2

Module content

In this module students will be introduced to Mathematical Optimization through gaining knowledge about the theory and algorithms to solve optimisation problems. Topics will include: Linear programming, unconstrained optimization, equality constrained optimization, general linearly and nonlinearly constrained optimization, quadratic programming, global optimization, Theory and algorithms to solve these problems.

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.