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# University of Pretoria Yearbook 2020

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

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	5.00
<b>Programmes</b>	<a href="#">MIT Big Data Science (Coursework)</a>
<b>Prerequisites</b>	First year level higher education modules in Computer Science, Mathematics and Statistics.
<b>Contact time</b>	5 contact hours
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	School of Information Technology
<b>Period of presentation</b>	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.

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