



# University of Pretoria Yearbook 2021

## MIT Big Data Science (Coursework) (12254017)

**Department** Computer Science

**Minimum duration of study** 2 years

**Total credits** 180

**NQF level** 09

### Programme information

This degree programme is presented in English only.

Also consult G Regulations G.30 to G.54

The curriculum is determined in consultation with the programme organiser.

A student will have to apply to the Dean of the Faculty of Engineering, Built Environment and Information Technology if he/she requires more than three years to complete the degree.

### Admission requirements

1. Relevant honours degree with a cumulative weighted average of at least 65% for the honours degree **or** relevant four-year bachelor's degree with a weighted average of at least 65% at final-year level and
1. The following modules passed at first-year level:
  - a. Mathematical Statistics or Statistics and
  - b. Mathematics (preferably Calculus and Linear Algebra) and
  - c. Programming
2. A recommendation letter from the employer/line manager, indicating a commitment that they will make time available for the employee to devote to the studies
3. An essay/motivation letter motivating the interest in this degree
4. Comprehensive intellectual CV

### Other programme-specific information

#### Discontinuation of studies

The Dean may, on the recommendation of the admissions committee, cancel the studies of a student who fails more than one module. A module may only be repeated once.

#### Deregistration of modules

Deregistration of modules is only allowed before the early deadline.

### Examinations and pass requirements

A minimum semester mark of 40% is required in order to be admitted to the final examinations in all the



prescribed modules of the degree. A final mark of 50% is required to pass all coursework modules and the mini-dissertation.

## Pass with distinction

The degree is conferred with distinction on students who have obtained at least 75% for the mini-dissertation and a minimum of 75% weighted average final mark for the coursework modules.



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## Curriculum: Year 1

**Minimum credits: 70**

### Core modules

Introduction to big data science 800 (MIT 800) - Credits: 5.00

Introduction to machine and statistical learning 801 (MIT 801) - Credits: 15.00

Introduction to data platforms and sources 802 (MIT 802) - Credits: 5.00

Introduction to Information Ethics for Big Data Science 803 (MIT 803) - Credits: 5.00

Introduction to mathematical optimization for big data science 804 (MIT 804) - Credits: 5.00

Big data 805 (MIT 805) - Credits: 10.00

Big data management 806 (MIT 806) - Credits: 10.00

Research methods for big data science 809 (MIT 809) - Credits: 5.00

### Elective modules

Big data science elective 801 (COS 801) - Credits: 5.00

Big data science elective 802 (COS 802) - Credits: 5.00

Big data science elective 801 (ERZ 801) - Credits: 5.00

Big data science elective 802 (ERZ 802) - Credits: 5.00

Big data science elective 801 (INF 801) - Credits: 5.00

Big data science elective 802 (INF 802) - Credits: 5.00

Big data science elective 820 (INL 820) - Credits: 5.00

Statistics elective 801 (STK 801) - Credits: 5.00

Statistics elective 802 (STK 802) - Credits: 5.00

Big data science elective 801 (WTW 801) - Credits: 5.00

Big data science elective 802 (WTW 802) - Credits: 5.00



## Curriculum: Final year

**Minimum credits: 110**

### Core modules

Mini dissertation in big data science 807 (MIT 807) - Credits: 90.00

Big data science project 808 (MIT 808) - Credits: 20.00

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The information published here is subject to change and may be amended after the publication of this information. The [General Regulations \(G Regulations\)](#) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the [General Rules](#) section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.