Big Data Technologies

Offered by Stellenbosch University

What to expect?

This module focuses on the tools and platforms for big data management and processing. Big data management refers to the governance, administration and organization of large volumes of data of different types (both structured and unstructured). Efficient platforms to store and manage big data will be considered, including NoSQL, data warehousing, and distributed systems. Big data processing focuses on the 3V-characteristics of big data namely volume, velocity, and variety. Different architectures for big data processing will be studied, including map-reduce and graphical big data models. Students will obtain experience in big data tools and platforms, including Spark, Hadoop, and data virtualization. Other aspects of big data, such as data streams, data fusion, and data sources, including social media and sensor data, will be discussed.

Minimum admission requirements

The applicant must at least hold an approved BTech, BEng, or a BSc degree from a South African university or university of technology. In cases where the applicant's prior learning makes him/her a suitable candidate for the short course, his/her prior learning will be considered by the course leader in the application process. In taking part in this course, it is expected of the student to either:

- Have prior experience in the fields of data science, applied machine learning and optimisation,

- Has successfully completed courses in data science, applied machine learning and optimisation.

If either one of these requirements is not met, it is expected of the student to do some prior reading in preparation for this course. Contact the course facilitator for further details if this is the case.

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Department of Industrial Engineering

PRESENTERS

Dr J Du Toit, Industrial Engineering   **View Bio**

PRESENTATION MODE AND DATES

This short course is presented online.   **View dates**

The course consists of three parts:

2 Pre-block weeks
1 Lecture week
6 Post block weeks

REGISTRATION

Register here 2 weeks before the Pre-block starts.

* Take note: your registration and proof of payment must reach us before the Pre-block starts to gain access to the platform SUNOnline.

ASSESSMENT

Pre-block assignment	20%
Lecture week assessments	20%
Post block assignments	3 x 20%

CERTIFICATE OF COMPETENCE

Requirements - 50% average over all assignments submitted

FEES 2023: R 20 000

NQF Level 8

CONTACT

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