FACULTY OF SCIENCE

DEPARTMENT OF MATHEMATICS AND STATISTICS

DATA ANALYTICS

Bachelor of Science with Honours in Data Analytics
Bachelor of Science in Data Analytics
Diploma of Higher Education in Data Analytics
Certificate of Higher Education in Data Analytics

These regulations are to be read in conjunction with General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

Mode of Study
1. The programmes are available by full-time study only.

Place of Study
2. On-campus or "face to face learning in an approved physical location" is the default Mode of Delivery.

Curriculum
3. All students shall undertake an approved curriculum as follows:

First Year

All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
CS103	Machines, Languages and Computation	1	20
CS104	Information and Information Systems	1	20
CS105	Programming Foundations	1	20
MM143	Mathematical Foundations	1	20
MM144	Calculus 1	1	20
MM106	Essential Statistics	1	10
MM147	Algebra and Geometry	1	10

Second Year

All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
CS207	Advanced Programming	2	20

CS208	Logic and Algorithms	2	20
CS209	User and Data Modelling	2	20
MM204	Probability and Statistical Inference	2	20
MM206	Mathematical and Statistical Computing	2	20
MM221	Linear Algebra	2	10
MM222	Multivariate Calculus	2	10

Third Year

All full-time students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
CS308	Building Software Systems	3	20
MM304	Inference and Regression Modelling	3	20
MM307	Stochastics and Financial Econometrics	3	20
	Elective Module(s)		20

Optional Modules

40 credits chosen by Honours students from the list below; and by other students from the list below or other modules approved by the Programme Director.

Module Code	Module Title	Level	Credits
CS310	Foundations of Artificial Intelligence	3	20
CS312	Web Applications Development	3	20
CS316	Functional Programming	3	20
CS317	Mobile App Development	3	20

Fourth Year

All full-time students shall undertake modules amounting to 120 credits as follows:

Compulsory Module

Module Code	Module Title	Level	Credits
MM490	Data Analytics*	4	120

*MM490 Data Analytics comprises either:

- MM401 Communicating Mathematics and Statistics (20 credits) or
- CS408 Individual Project (Computer Science) (40 credits); and
- optional modules chosen from Lists A and B (or another module approved by the Programme Director) so that no curriculum contains no fewer than 40 credits from each List.

Optional Modules

List A

Module Code	Module Title	Level	Credits
MM404	Statistical Modelling and Analysis	4	20
MM407	Applied Statistics in Society	4	20
MM409	Mathematical Introduction to Networks	4	20
MM415	Medical Statistics	4	20

Not all optional modules on this list will be available in each academic year. Please check your programme handbook for confirmation of which optional modules will run.

List B

Module Code	Module Title	Level	Credits
CS409	Software Architecture and Design	4	20
CS410	Advanced Functional Programming	4	20
CS411	Theory of Computation	4	20
CS412	Information Mining and Access	4	20

Not all optional modules on this list will be available in each academic year. Please check your programme handbook for confirmation of which optional modules will run.

Progress
4. In order to progress to the second year of the BSc Honours in Data Analytics programme in addition to satisfying the requirements of the General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level, a student must also gain a pass in the following modules: MM143 Mathematical Foundations and MM144 Calculus 1.

5. In order to progress to the second year of the BSc in Data Analytics programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

6. In order to progress to the third year of the BSc Honours in Data Analytics programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

7. In order to progress to the third year of the BSc in Data Analytics programme, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).

8. In order to progress to the fourth year of the BSc Honours in Data Analytics programme a student must have accumulated at least 100 credits at level 3.

Final Assessment and Classification

9. On successful completion of the fourth year, a student will be awarded 120 Level 4 credits under the module code MM490.

10. The final classification for the degree of BSc with Honours in Data Analytics will normally be based on the first assessed attempt at compulsory and specified optional modules at Levels 3 and 4 taken in the third and fourth years.

Award

11. **BSc with Honours**: In order to qualify for the award of the degree of BSc with Honours in Data Analytics, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).

12. **BSc**: In order to qualify for the award of the degree of BSc in Data Analytics, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).

13. **Diploma of Higher Education**: In order to qualify for the award of a Diploma of Higher Education in Data Analytics, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).

14. **Certificate of Higher Education**: In order to qualify for the award of a Certificate of Higher Education in Data Analytics, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).