

# FACULTY OF SCIENCE

## DEPARTMENT OF MATHEMATICS AND STATISTICS

### MATHEMATICS, STATISTICS AND ACCOUNTING

**Bachelor of Science with Honours in Mathematics, Statistics and Accounting**

**Bachelor of Science in Mathematics, Statistics and Accounting**

**Diploma of Higher Education in Mathematical Studies**

**Certificate of Higher Education in Mathematical Studies**

*These regulations are to be read in conjunction with the [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).*

#### **Status of the Programmes**

1. All students are normally admitted in the first instance as Honours students. Transfer to the BSc in Mathematics, Statistics and Accounting is possible at any time subject to satisfying the appropriate progress regulations. Students wishing to obtain professional accreditation in Accounting should consult the Adviser of Study (Accounting) regarding their choice of optional modules. To be eligible for accreditation students may be required to take an additional 20 credit module.

#### **Mode of Study**

2. The programmes are available by full-time study.

#### **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
AG111	Accounting Technologies	1	20
MM143	Mathematical Foundations	1	20
MM144	Calculus 1	1	20
MM145	Introduction to Geometry and Algebra	1	20
MM106	Essential Statistics	1	10
MM107	Data Analysis and Presentation	1	10

#### **Optional Modules**

Module Code	Module Title	Level	Credits
AG105	Introduction to Finance and Financial Statistics*	1	20

	Elective Module(s)		20
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\*Must be taken by students seeking professional accreditation in Accounting and can be taken as an elective module.

## **Second Year**

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

### **Compulsory Modules**

Module Code	Module Title	Level	Credits
AG218	Intermediate Financial Reporting	2	20
AG219	Cost and Management Accounting	2	20
MM201	Linear Algebra and Differential Equations	2	20
MM202	Advanced Calculus	2	20
MM204	Probability and Statistical Inference	2	20

### **Optional Modules**

20 credits chosen from the following list or another module approved by the Programme Director.

Module Code	Module Title	Level	Credits
BF112/BF113	Introduction to Tourism Studies and Managing People	1	20
BF114/BF115	Introduction to Economics and Business Analysis	1	20
BF127/BF128	Introduction to Marketing and Entrepreneurship	1	20
MM206	Mathematical and Statistical Computing	2	20

## **Third Year**

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

### **Compulsory Modules**

Module Code	Module Title	Level	Credits
AG308	Auditing and Assurance	3	10
AG309	Governance and Accounting Ethics	3	10
AG310	Contemporary Management Accounting	3	10
AG311	Advanced Financial Reporting	3	10

MM302	Differential Equations	3	20
MM304	Inference and Regression Modelling	3	20

### **Optional Modules**

Honours students should take 40 credits from Lists A and B or another module approved by the Programme Director, including at least 20 credits from List A; and other students should select 40 credits from Lists A, B and C.

### **List A**

Module Code	Module Title	Level	Credits
MM300	Complex Variables and Integral Transforms	3	20
MM301	Linear Algebra	3	20
MM306	Numerical Analysis	3	20
MM307	Stochastics and Financial Econometrics	3	20

### **List B**

Module Code	Module Title	Level	Credits
AG314	Taxation*	3	20

\*Students seeking professional accreditation in Accounting must take this option.

### **List C**

Modules in First and Second Year not previously taken or further Optional Modules as approved by the Programme Director (this applies to students who may have transferred from another degree programme and therefore have not completed all Year 1 and Year 2 modules).

### **Fourth Year**

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

### **Compulsory Module**

Module Code	Module Title	Level	Credits
MM450	Mathematics and Accounting*	4	120

\*MM450 Mathematics and Accounting comprises:

- Either MM401 Communicating Mathematics and Statistics (20 credits) plus 100 credits of optional modules with no fewer than 20 credits from each of Lists A and B and 40 credits from List C or other modules as approved by the Programme Director.  
Or
- AG435 Accounting Dissertation (40 credits); plus 80 credits of optional modules with no fewer than 20 credits from each of Lists A, B and C or other modules as approved by the Programme Director.

### **List A**

<b>Module Code</b>	<b>Module Title</b>	<b>Level</b>	<b>Credits</b>
MM402	Modelling and Simulation with Applications to Financial Derivatives	4	20
MM404	Statistical Modelling and Analysis	4	20
MM407	Applied Statistics in Society	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**

<b>Module Code</b>	<b>Module Title</b>	<b>Level</b>	<b>Credits</b>
MM402	Modelling and Simulation with Applications to Financial Derivatives	4	20
MM406	Finite Element Methods for Boundary Value Problems and Approximation	4	20
MM408	Mathematical Biology and Marine Population Modelling	4	20
MM409	Mathematical Introduction to Networks	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 C**

<b>Module Code</b>	<b>Module Title</b>	<b>Level</b>	<b>Credits</b>
AG415	Contemporary Issues in International Financial Reporting	4	20
AG416	Management Accounting Theory and Practice	4	20
AG419	Accounting and Risk	4	20
AG420	Auditing Theory and Practice	4	20
AG422	Accounting Ethics	4	20
AG438	Understanding Accounting Technologies and Institutional Structures	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 Mathematics, Statistics and Accounting** 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 MM144 Calculus 1 and AG111 Accounting Technologies.

5. In order to progress to the second year of the **BSc in Mathematics, Statistics and Accounting** 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 module: AG111 Accounting Technologies.
6. In order to progress to the third year of the **BSc Honours in Mathematics, Statistics and Accounting** 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: MM201 Linear Algebra and Differential Equations, MM204 Probability and Statistical Inference, AG218 Intermediate Financial Reporting and AG219 Cost and Management Accounting.
7. In order to progress to the third year of the **BSc in Mathematics, Statistics and Accounting** 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: AG218 Intermediate Financial Reporting and AG219 Cost and Management Accounting.
8. In order to progress to the fourth year of the **BSc Honours in Mathematics, Statistics and Accounting** programme the [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#) shall apply with at least 100 credits at Level 3, including a pass in the following modules: AG309 Governing and Accounting Ethics, AG308 Auditing and Assurance, AG310 Contemporary Management Accounting and AG311 Advanced Financial Reporting.

#### **Final Assessment and Classification**

9. On successful completion of the fourth year, a candidate will be awarded 120 Level 4 credits under the module code MM450.
10. The final classification for the degree of BSc with Honours in Mathematics, Statistics and Accounting 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 Mathematics, Statistics and Accounting, 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 Mathematics, Statistics and Accounting, the [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#) shall apply and must include AG218 Intermediate Financial Reporting, AG219 Cost and Management Accounting, AG309 Governance and Accounting Ethics, AG308 Auditing and Assurance, AG310 Contemporary Management Accounting and AG311 Advanced Financial Reporting.
13. **Diploma of Higher Education:** In order to qualify for the award of a Diploma of Higher Education in Mathematical Studies, 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 Mathematical Studies, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).