BSc (Hons) Mathematics

1. **Objectives**

   The BSc (Hons) Mathematics programme offers a combination of lectures and tutorials in Pure & Applied Mathematics, Probability & Statistics, Financial Mathematics and Computational Mathematics. The aims and objectives are:

   - to provide a challenging course in Mathematics and its applications for a range of students;
   - to provide a course that is suitable both for students aiming to pursue research and for students going into other careers;
   - to develop in students the capacity for learning and for clear logical thinking;
   - to produce the high calibre graduates in Mathematics sought by employers in the private & public sectors;
   - to provide an intellectually stimulating environment in which students have the opportunity to develop their skills to their full potential.

2. **General Entry Requirements**

   As per General Entry Requirements for admission to the University for undergraduate degrees.

3. **Programme Requirement**

   Minimum Grade 'C' in Mathematics at GCE 'A' level.

4. **Programme Duration**

	Normal	**Maximum**
Degree:	3 years	5 years

5. **Credits per Year**

   Minimum: 18 credits; Maximum (including retake modules): 48 credits

6. **Minimum Credits Required for Award of Undergraduate Degree:** 100

   Breakdown as follows:

Degree	Core Taught Modules	Project	Electives
BSc(Hons) Mathematics	72	7	Minimum 21[a,b]

   [a] 6 credits from level 1 electives
   [b] 6 credits from Mathematics level/year 2 electives & 9 credits from Mathematics level/year 3 electives.

   IMPORTANT NOTE: The student will be allowed to opt for the BSc (Hons) Mathematics, BSc (Hons) Mathematics with Statistics, or BSc (Hons) Mathematics with Finance programme after the common first year. For the specialisation in Finance/Statistics students are required to have 33 credits from Level 2/3 Finance/Statistics modules.

7. Assessment

Each module will be assessed over 100 marks and assessment will be based on a written examination of 2-hour duration for modules carrying less than or equal to three credits and 3-hour paper for modules carrying five-six credits, and on continuous assessment done during the semester or year.

Written examinations for modules, will be carried out at the end of the year, except for MATH1101(1) and MATH1201(1), which will be examined at the end of the semester.

The continuous assessment will count for 10-40% of the overall percentage mark of the module(s), except for a Programme where the structure makes for other specific provision(s). Continuous assessment may be based on laboratory work, seminars and/or assignments and should include at least 1 class test.

There will be a compulsory class test for all modules taught at the end of each semester of the given academic year unless stated otherwise in the Programme Structure.

An overall total of 40% is required for a candidate to pass a module. Special examinations (e.g. class tests) will be arranged at the end of semester 1 or semester 2 for exchange students who have registered only for one semester. In case of yearly modules, credits will be assigned on a pro-rata basis.

Projects/Dissertations will carry 7 credits for degree award.

The following list of modules will be assessed solely by continuous assessment:

MA1106Y (1)
MA1203(1)
MA3010(5)

8.   List of Modules

A.   Core Modules (72 + 7 Credits)

Code	Module Name	Hrs/Wk/ L+P	Credits
MA1101(1)	Mathematical Techniques I	3+0	3
MA1102(1)	Mathematical Analysis I	3+0	3
MA1103(1)	Applied Mathematics I	3+0	3
MA1104(1)	Algebra	3+0	3
MA1105(1)	Probability & Statistics	3+0	3
MA1106Y(1)	Tools for Scientific Reporting	2+2	6
MA1201(1)	Mathematical Techniques II	3+0.	3
MA1202(1)	Mathematical Analysis II	3+0	3
MA1203(1)	Computer Applications in Mathematics	2+2	3
MA2101(3)	Numerical Analysis I	3+0	3
MA2102(3)	Mathematical Methods I	3+0	3
MA2103(3)	Mathematical Statistics	3+0	3
MA2104(3)	Complex Analysis	3+0	3
MA2105(3)	Metric Spaces	3+0	3
MA2201(3)	Linear Algebra	3+0	3
MA2202(3)	Linear Programming	3+0	3
MA2203(3)	Linear Regression Analysis	3+0	3
MA2204(3)	Numerical Analysis II	3+0	3
MA2205(3)	Numerical Linear Algebra	3+0	3
MA3000(5)	Project	-	7
MA3101(5)	Measure and Integral	3+0	3
MA3102(5)	Fluid Dynamics I	3+0	3
MA3201(5)	Applied Probability	3+0	3
MA3202(5)	Functional Analysis	3+0	3

B.   Electives (Not all modules may be on offer)

Code	Module Name	Hrs/Wk/ L+P	Credits
ACF1000(1)	Accounting For Financial Decision Making	3+0	3
ACF1002(1)	Principles of Finance	3+0	3
MA1001(1)	Financial Mathematics	3+0	3
MA1002(1)	Applied Mathematics II	3+0	3
MA1003(1)	Descriptive Statistics	3+0	3
MA1004(1)	Simulation Modeling and Analysis	3+0	3
MA2001(3)	Group Theory	3+0	3
MA2002(3)	Discrete Mathematics	3+0	3
MA2003(3)	Vector and Tensor Analysis	3+0	3
MA2005(3)	Mathematical Methods II	3+0	3
MA3001(5)	Operational Research	3+0	3
MA3003(5)	Numerical Solution of PDE's	3+0	3
MA3004(5)	Optimisation	3+0	3
MA3006(5)	Fluid Dynamics II	3+0	3
MA3007(5)	Rings and Fields	3+0	3
MA3008(5)	Topology	3+0	3
MA3009(5)	Dynamical Systems	3+0	3
MA3010(5)	Mathematical Modelling	3+0	3

9. Programme Plan - BSc (Hons) Mathematics

YEAR 1

Semester 1

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA1101(1)	Mathematical Techniques I	3+0	3
MA1102(1)	Mathematical Analysis I	3+0	3
MA1103(1)	Applied Mathematics I	3+0	3
MA1104(1)	Algebra	3+0	3
MA1105(1)	Probability & Statistics	3+0	3
MA1106Y(1)	Tools for Scientific Reporting	2+2	6

Semester 2

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA1201(1)	Mathematical Techniques II	3+0	3
MA1202(1)	Mathematical Analysis II	3+0	3
MA1203(1)	Computer Applications in Mathematics	2+2	3
TWO ELECTIVES FROM:			
MA1001(1)	Financial Mathematics I	3+0	3
MA1002(1)	Applied Mathematics II	3+0	3
MA1003(1)	Descriptive Statistics	3+0	3
MA1004(1)	Simulation Modeling & Analysis	3+0	3
ACF1000(1)	Accounting for Financial Decision Making	3+0	3
ACF1002(1)	Principles of Finance	3+0	3

YEAR 2

Semester 1

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA2101(3)	Numerical Analysis I	3+0	3
MA2102(3)	Mathematical Methods I	3+0	3
MA2103(3)	Mathematical Statistics	3+0	3
MA2104(3)	Complex Analysis	3+0	3
MA2105(3)	Metric Spaces	3+0	3

Semester 2

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA2201(3)	Linear Algebra	3+0	3
MA2202(3)	Linear Programming	3+0	3
MA2203(3)	Linear Regression Analysis	3+0	3
MA2204(3)	Numerical Analysis II	3+0	3
MA2205(3)	Numerical Linear Algebra	3+0	3

NOTE: AT LEAST TWO ELECTIVES FROM:

Code	Module Name	Hrs/Wk L+P	Credits	Code	Module Name	Hrs/Wk L+P	Credits
MA2001(3)	Group Theory	3+0	3	MA2003(3)	Vector & Tensor Analysis	3+0	3
MA2002(3)	Discrete Mathematics	3+0	3	MA2005(3)	Mathematical Methods II	3+0	3

and /or any other year 2 module offered by the department.

YEAR 3

Semester 1

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA3000(5)	Project	-	7
MA3101(5)	Measure & Integral	3+0	3
MA3102(5)	Fluid Dynamics I	3+0	3

Semester 2

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA3201(5)	Applied Probability	3+0	3
MA3202(5)	Functional Analysis	3+0	3

NOTE: AT LEAST THREE ELECTIVES FROM

Code	Module Name	Hrs/Wk L+P	Credits	Code	Module Name	Hrs/Wk L+P	Credits
MA3001(5)	Operational Research	3+0	3	MA3007(5)	Rings & Fields	3+0	3
MA3003(5)	Numerical Solution of PDEs	3+0	3	MA3008(5)	Topology	3+0	3
MA3004(5)	Optimisation	3+0	3	MA3009(5)	Dynamical Systems	3+0	3
MA3006(5)	Fluid Dynamics II	3+0	3	MA3010(5)	Mathematical Modelling	3+0	3

and /or any other year 3 module offered by the department.

Note:

1. *Electives may be offered in either semester 1 or 2 & not all electives may be on offer.*
2. *Students opting for BSc (Hons) Mathematics with Finance should register for ACF 1000(1) and ACF1002(1) as electives in Year I.*

BSc (Hons) Mathematics with Statistics

1. Objectives

Mathematics and Statistics are the means by which we interpret large amount of data that science, government and industry generate. With mathematical tools and theoretical understanding students are better equipped to understand and analyse these information. This degree will provide very good knowledge and skills of both mathematics and statistics which keep career options broad. Also, logical thinking, problem-solving and analytical skills will allow one to take up roles as diverse as management, consulting, marketing and journalism.

The first year develops and strengthens the background of probability and statistics, but also introduces professional software such as Mathematica and statistical softwares like R and SPSS. In the second year students can master more advanced statistical techniques such as regression analysis, survey methodology and design of experiments. After this sound base is established, the final year features more choice, including time series and multivariate analysis.

2. General Entry Requirements

As per General Entry Requirements for admission to the University for undergraduate degrees.

3. Programme Requirement

Minimum Grade 'C' in Mathematics at GCE 'A' level.

4. Programme Duration

	Normal	Maximum
Degree:	3 years	5 years

5. Credits per Year

Minimum: 18 credits; Maximum (including retake modules): 48 credits

6. Minimum Credits Required for Award of Undergraduate Degree: 100

Breakdown as follows:

Degree	Core Taught Modules	Project	Electives
BSc(Hons)Mathematics with Statistics	75	7	Minimum 18[a, b, c]

[a] 6 credits from level/year 1 electives.
[b] at least 3 credits from level/year 2.
[c] at least 9 credits from level/year 3.

IMPORTANT NOTE: The student will be allowed to opt for the BSc (Hons) Mathematics, BSc (Hons) Mathematics with Statistics, or BSc (Hons) Mathematics with Finance programme after the common first year. For the specialisation in Finance/Statistics students are required to have 33 credits from Level 2/3 Finance/Statistics modules.

7. Assessment

Each module will be assessed over 100 marks and assessment will be based on a written examination of 2 hour duration for modules carrying less or equal to three credits and 3 hour paper for modules carrying five-six credits, and on continuous assessment done during the semester or year.

Written examinations for modules will be carried out at the end of the year, except for MATH1101(1) and MATH1201(1), which will be examined at the end of the semester.

The continuous assessment will count for 10-40% of the overall percentage mark of the module(s), except for a Programme where the structure makes for other specific provision(s). Continuous assessment may be based on laboratory work, seminars and/or assignments and should include at least 1 class test.

There will be a compulsory class test for all modules taught at the end of each semester of the given academic year unless stated otherwise in the Programme Structure.

An overall total of 40% is required for a candidate to pass a module. Special examinations (e.g. class tests) will be arranged at the end of semester 1 or semester 2 for exchange students who have registered only for one semester. In case of yearly modules, credits will be assigned on a pro-rata basis.

Projects/Dissertations will carry 7 credits for degree award.

The following list of modules will be assessed solely by continuous assessment:

MA1106Y (1)
MA1203(1)
MA3010(5)

8. List of Modules

A. Core Modules (75+7 credits)

Code	Module Name	Hrs/Wk/L+P	Credits
MA1101(1)	Mathematical Techniques I	3+0	3
MA1102(1)	Mathematical Analysis I	3+0	3
MA1103(1)	Applied Mathematics I	3+0	3
MA1104(1)	Algebra	3+0	3
MA1105(1)	Probability & Statistics	3+0	3
MA1106Y(1)	Tools for Scientific Reporting	2+2	6
MA1201(1)	Mathematical Techniques II	3+0	3
MA1202(1)	Mathematical Analysis II	3+0	3
MA1203(1)	Computer Applications in Mathematics	2+2	3
MA2101(3)	Numerical Analysis I	3+0	3
MA2102(3)	Mathematical Methods I	3+0	3
MA2103(3)	Mathematical Statistics	3+0	3
MA2104(3)	Complex Analysis	3+0	3
MA2105(3)	Metric Spaces	3+0	3
MA2107(3)	Survey Methodology	3+0	3
MA2201(3)	Linear Algebra	3+0	3
MA2202(3)	Linear Programming	3+0	3
MA2203(3)	Linear Regression Analysis	3+0	3
MA2205(3)	Numerical Linear Algebra	3+0	3
MA2207(3)	Design and Analysis of Experiments	3+0	3

Code	Module Name	Hrs/Wk L+P	Credits
MA3000(5)	Project	-	7
MA3101(5)	Measure and Integral	3+0	3
MA3103(5)	Generalised Linear Models	3+0	3
MA3201(5)	Applied Probability	3+0	3
MA3203(5)	Multivariate Analysis	3+0	3

B. Elective Modules   (Not all modules may be offered)

Code	Module Name	Hrs/Wk/ L+P	Credits
ACF1000(1)	Accounting For Financial Decision Making	3+0	3
ACF1002(1)	Principles of Finance	3+0	3
MA1001(1)	Financial Mathematics I	3+0	3
MA1002(1)	Applied Mathematics II	3+0	3
MA1003(1)	Descriptive Statistics	3+0	3
MA1004(1)	Simulation Modeling and Analysis	3+0	3
MA2004(3)	Computational Statistics	3+0	3
MA2007(3)	Survival Analysis	3+0	3
MA2008(3)	Statistical Quality Control	3+0	3
MA2009(3)	Actuarial Mathematics	3+0	3
MA2106(3)	Risk Analysis I	3+0	3
MA3002(5)	Longitudinal Data Analysis	3+0	3
MA3005(5)	Statistical Methods for Finance	3+0	3
MA3011(5)	Time Series Analysis	3+0	3
MA3012(5)	Geostatistics	3+0	3
MA3013(5)	Statistical Data Mining	3+0	3
MA3014(5)	Categorical Data Analysis	3+0	3
MA3015(5)	Bayesian Statistics	3+0	3
MA3016(5)	Game Theory	3+0	3

9.   Programme Plan - BSc(Hons) Mathematics with Statistics

YEAR 1

Semester 1

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA1101(1)	Mathematical Techniques I	3+0	3
MA1102(1)	Mathematical Analysis I	3+0	3
MA1103(1)	Applied Mathematics I	3+0	3
MA1104(1)	Algebra	3+0	3
MA1105(1)	Probability & Statistics	3+0	3
MA1106Y(1)	Tools for Scientific Reporting	2+2	6

Semester 2

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA1201(1)	Mathematical Techniques II	3+0	3
MA1202(1)	Mathematical Analysis II	3+0	3
MA1203(1)	Computer Applications in Mathematics	2+2	3
TWO ELECTIVES FROM:			
MA1001(1)	Financial Mathematics I	3+0	3
MA1002(1)	Applied Mathematics II	3+0	3
MA1003(1)	Descriptive Statistics	3+0	3
MA1004(1)	Simulation Modeling & Analysis	3+0	3
ACF1000(1)	Accounting for Financial Decision Making	3+0	3
ACF1002(1)	Principles of Finance	3+0	3

YEAR 2

Semester 1

Code	Module Name	Hrs/Wk L+P	Credits
CORE			

Semester 2

Code	Module Name	Hrs/Wk L+P	Credits
CORE			

Code	Module Name	Hrs/Wk L+P	Credits	Code	Module Name	Hrs/Wk L+P	Credits
MA2101(3)	Numerical Analysis I	3+0	3	MA2201(3)	Linear Algebra	3+0	3
MA2102(3)	Mathematical Methods I	3+0	3	MA2202(3)	Linear Programming	3+0	3
MA2103(3)	Mathematical Statistics	3+0	3	MA2203(3)	Linear Regression Analysis	3+0	3
MA2104(3)	Complex Analysis	3+0	3	MA2205(3)	Numerical Linear Algebra	3+0	3
MA2105(3)	Metric Spaces	3+0	3	MA2207(3)	Design & Analysis of Experiments	3+0	3
MA2107(3)	Survey methodology	3+0	3				

NOTE: AT LEAST ONE ELECTIVE FROM:

Code	Module Name	Hrs/Wk	Credits	Code	Module Name	Hrs/Wk	Credits
MA2004(3)	Computational Statistics	3+0	3	MA2008(3)	Statistical Quality Control	3+0	3
MA2007(3)	Survival Analysis	3+0	3				
MA2106(3)	Risk Analysis I	3+0	3	MA2009(3)	Actuarial Mathematics	3+0	3

and /or any other year 2 module offered by the department.

YEAR 3

Semester 1 Code	Module Name	Hrs/Wk L+P	Credits	Semester 2 Code	Module Name	Hrs/Wk L+P	Credits
CORE				**CORE**			
MA3000(5)	Project	-	7	MA3201(5)	Applied Probability	3+0	3
MA3101(5)	Measure & Integral	3+0	3	MA3203(5)	Multivariate Analysis	3+0	3
MA3103(5)	Generalised Linear Models	3+0	3				

NOTE: AT LEAST THREE ELECTIVES FROM:

Code	Module Name	Hrs/Wk	Credits	Code	Module Name	Hrs/Wk	Credits
MA3002(5)	Longitudinal Data Analysis	3+0	3	MA3013(5)	Statistical Data Mining	3+0	3
MA3005(5)	Statistical Methods for Finance	3+0	3	MA3014(5)	Categorical Data Analysis	3+0	3
MA3011(5)	Time Series Analysis	3+0	3	MA3015(5)	Bayesian Statistics	3+0	3
MA3012(5)	Geostatistics	3+0	3	MA3016(5)	Game Theory	3+0	3

and /or any other year 3 module offered by the department.

Note:
1. *Electives may be offered in either semester 1 or 2 & not all electives may be on offer.*
2. *Students opting for BSc (Hons) Mathematics with Finance should register for ACF 1000(1) and ACF1002(1) as electives in Year I.*

BSc (Hons) Mathematics with Finance

1. **Objectives**

The BSc (Hons) Mathematics with Finance programme offers a combination of lectures and tutorials in Pure & Applied Mathematics, Probability & Statistics and Finance, including general and applied financial theory. The aims and objectives are:

• to provide a challenging course in Mathematics, combined with Finance and its applications, for a range of students;
• to provide a course that is both suitable for students aiming to pursue research and for students going into other careers;
• to develop in students the analytical and logical skills related to the knowledge of Finance, backed up by mathematical knowledge, that are highly valued by employers;
• to produce the high calibre graduates sought by employers in the private and public sectors, in areas of banking, accountancy, insurance, offshore, sales and marketing;
• to provide an intellectually stimulating environment in which students have the opportunity to develop their skills to their full potential.

2.   General Entry Requirements

As per General Entry Requirements for admission to the University for undergraduate degrees.

3.   Programme Requirement

Minimum Grade 'C' in Mathematics at GCE 'A' level.

4.   Programme Duration

	Normal	**Maximum**
Degree:	3 years	5 years

5.   Credits per Year

Minimum: 18 credits; Maximum (including retake modules): 48 credits

6.   Minimum Credits Required for Award of Undergraduate Degree: 100

Breakdown as follows:

Degree	**Core Taught Modules**	**Project**	**Electives**
BSc(Hons) Mathematics with Finance	72	7	Minimum 21[a,b,c]

[a] 6 credits from level/year 1 electives
[b] 6 credits from level/year 2 finance module electives
 [c] 9 credits from level/year 3 electives with at least 6 credits from finance modules.

IMPORTANT NOTE: The student will be allowed to opt for the BSc (Hons) Mathematics, BSc (Hons) Mathematics with Statistics, or BSc (Hons) Mathematics with Finance programme after the common first year. For the specialisation in Finance/Statistics students are required to have 33 credits from Level 2/3 Finance/Statistics modules.

7. Assessment

Each module will be assessed over 100 marks and assessment will be based on a written examination of 2 hour duration for modules carrying less or equal to three credits and 3 hour paper for modules carrying five-six credits, and on continuous assessment done during the semester or year.

Written examinations for modules, will be carried out at the end of the year, except for MATH1101(1) and MATH1201(1), which will be examined at the end of the semester.

The continuous assessment will count for 10-40% of the overall percentage mark of the module(s), except for a Programme where the structure makes for other specific provision(s). Continuous assessment may be based on laboratory work, seminars and/or assignments and should include at least 1 class test.

There will be a compulsory class test for all modules taught at the end of each semester of the given academic year unless stated otherwise in the Programme Structure.

An overall total of 40% is required for a candidate to pass a module. Special examinations (e.g. class tests) will be arranged at the end of semester 1 or semester 2 for exchange students who have registered only for one semester. In case of yearly modules, credits will be assigned on a pro-rata basis.

Projects/Dissertations will carry 7credits for degree award. They will normally be carried out in the area of specialisation.

The following list of modules will be assessed solely by continuous assessment:
MA1106Y(1)
MA1203(1)
MA3010(5)

8. List of Modules

A. Core Modules (72 + 7 Credits)

Code	Module Name	Hrs/Wk L+P	Credits
MA1101(1)	Mathematical Techniques I	3+0	3
MA1102(1)	Mathematical Analysis I	3+0	3
MA1103(1)	Applied Mathematics I	3+0	3
MA1104(1)	Algebra	3+0	3
MA1105(1)	Probability & Statistics	3+0	3
MA1106Y(1)	Tools for Scientific Reporting	2+2	6
MA1201(1)	Mathematical Techniques II	3+0.	3
MA1202(1)	Mathematical Analysis II	3+0	3
MA1203(1)	Computer Applications in Mathematics	2+2	3
MA2101(3)	Numerical Analysis I	3+0	3
MA2102(3)	Mathematical Methods I	3+0	3
MA2103(3)	Mathematical Statistics	3+0	3
MA2106(3)	Risk Analysis I	3+0	3
MA2201(3)	Linear Algebra	3+0	3
MA2202(3)	Linear Programming	3+0	3
MA2203(3)	Linear Regression Analysis	3+0	3
MA2206(3)	Fixed Income Analysis	3+0	3
DFA2002Y(3)	Corporate Finance	3+0	6
MA3000(5)	Project	-	7
MA3104 (5)	Risk Analysis II	3+0	3
MA3105(5)	Financial Derivatives	3+0	3
MA3201(5)	Applied Probability	3+0	3
MA3204(5)	Stochastic Calculus	3+0	3

B. Electives (Not all modules may be on offer)

Code	Module Name	Hrs/Wk L+P	Credits
ACF1000(1)	Accounting for Financial Decision Making	3+0	3
ACF1002(1)	Principles of Finance	3+0	3
MA1001(1)	Financial Mathematics	3+0	3
MA1002(1)	Applied Mathematics II	3+0	3
MA1003(1)	Descriptive Statistics	3+0	3
MA1004(1)	Simulation Modeling and Analysis	3+0	3
MA2006(3)	Alternative Investments	3+0	3
MA2009(3)	Actuarial Mathematics	3+0	3
DFA2012Y(3)	Portfolio Theory & Fixed Income Securities	3+0	6
MA3005(5)	Statistical Methods for Finance	3+0	3
MA3011(5)	Time Series Analysis	3+0	3
MA3017(5)	Mathematics for Economics	3+0	3
MA3018(5)	Discrete Time Finance	3+0	3

DFA3006Y(5)   International Finance   3+0   6

9. Programme Plan - BSc (Hons) Mathematics with Finance

YEAR 1

Semester 1

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA1101(1)	Mathematical Techniques I	3+0	3
MA1102(1)	Mathematical Analysis I	3+0	3
MA1103(1)	Applied Mathematics I	3+0	3
MA1104(1)	Algebra	3+0	3
MA1105(1)	Probability & Statistics	3+0	3
MA1106Y(1)	Tools for Scientific Reporting	2+2	6

Semester 2

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA1201(1)	Mathematical Techniques II	3+0	3
MA1202(1)	Mathematical Analysis II	3+0	3
MA1203(1)	Computer Applications in Mathematics	2+2	3
TWO ELECTIVES FROM			
MA1001(1)	Financial Mathematics	3+0	3
MA1002(1)	Applied Mathematics II	3+0	3
MA1003(1)	Descriptive Statistics	3+0	3
MA1004(1)	Simulation Modelling & Analysis	3+0	3
ACF1000(1)	Accounting for Financial Decision Making	3+0	3
ACF1002(1)	Principles of Finance	3+0	3

YEAR 2

Semester 1

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA2101(3)	Numerical Analysis I	3+0	3
MA2102(3)	Mathematical Methods I	3+0	3
MA2103(3)	Mathematical Statistics	3+0	3
MA2106(3)	Risk Analysis I	3+0	3
DFA2002Y(3)	Corporate Finance	3+0	6

Semester 2

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA2201(3)	Linear Algebra	3+0	3
MA2202(3)	Linear Programming	3+0	3
MA2203(3)	Linear Regression Analysis	3+0	3
MA2206(3)	Fixed Income Analysis	3+0	3

NOTE: AT LEAST TWO ELECTIVES FROM:

Code	Module Name	Hrs/Wk L+P	Credits		Code	Module Name	Hrs/Wk L+P	Credits
DFA2012Y(3)	Portfolio Theory & Fixed Income Securities	3+0	6		MA2006(3)	Alternative Investments	3+0	3
					MA2009(3)	Actuarial Mathematics	3+0	3

and /or any other year 2 module offered by the department.

YEAR 3

Semester 1

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA3000(5)	Project	-	7
MA3104(5)	Risk Analysis II	3+0	3
MA3105(5)	Financial Derivatives	3+0	3

Semester 2

Code	Module Name	Hrs/Wk L+P	Credits
CORE			
MA3201(5)	Applied Probability	3+0	3
MA3204(5)	Stochastic Calculus	3+0	3

NOTE: AT LEAST THREE ELECTIVES FROM (of which six(6) credits from finance modules):

Code	Module Name	Hrs/Wk L+P	Credits		Code	Module Name	Hrs/Wk L+P	Credits
MA3011(5)	Time Series Analysis	3+0	3		MA3018(5)	Discrete Time Finance	3+0	3
MA3017(5)	Mathematics for Economics	3+0	3		MA3005(5)	Statistical Methods for Finance	3+0	3
DFA3006Y(5)	International Finance	3+0	6					

and /or any other year 3 module offered by the department.

Note:

1. Electives may be offered in either semester 1 or 2 & not all electives may be on offer.

2. *Students opting for BSc (Hons) Mathematics with Finance should register for ACF 1000(1) and ACF1002(1) as electives in Year I.*