

SCHOOL OF MATHEMATICS, STATISTICS AND ACTUARIAL SCIENCE

Head of School: Prof Peter Hydon
School Web Site: www.kent.ac.uk/smsas

Please refer to the online Module Catalogue for full details of all modules:
www.kent.ac.uk/courses/modulecatalogue/

Note: It is ultimately your responsibility to ensure that you are registered for the correct modules for your programme.

YEAR IN COMPUTING – STAGE Y

–C2 OR –CF e.g. FINMATHS-C2:BSC

If you are taking a free-standing, self-contained Year in Computing after either Stage 2 or 3 of your programme, you must study the following modules (120 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-----------------------|---|---------------|-------------|--------------|-----------------|
| CO539 | Web Development | 15 | Spring | 5 | COMP5390 |
| CO580 | Year in Computing Project | 30 | Spring | 5 | COMP5800 |
| CO581 | An Introduction to Computer Systems | 15 | Autumn | 5 | COMP5810 |
| CO582 | Computer Interaction and User Experience | 15 | Autumn | 5 | COMP5820 |
| CO583 | An Introduction to Programming and Web Technologies | 30 | Autumn | 5 | COMP5830 |
| CO584 | Solving Problems with Data | 15 | Spring | 5 | COMP5840 |

Please select a link below to view the Stage 2+ requirements for your programme:

- [Actuarial Science: BSC](#)
- [Actuarial Science with a Year in Industry: BSC](#)
- [Financial Mathematics: BSC](#)
- [Financial Mathematics with a Year in Industry: BSC](#)
- [Mathematics: BSC](#)
- [Mathematics: MMATH](#)
- [Mathematics with a Year in Industry: BSC](#)
- [Mathematics and Accounting & Finance: BA](#)
- [Mathematics and Accounting & Finance with a Year in Industry: BA](#)
- [Mathematics and Statistics: BSC](#)
- [Mathematics and Statistics with a Year in Industry: BSC](#)
- [Mathematics with Secondary Education: BSC](#)

STAGE 2 - 120 credits

You must take the following compulsory modules (105 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|------------------------|--------------------------------------|---------------|-------------|--------------|-----------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | <i>MAST5001</i> |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | <i>MAST5007</i> |
| MA501 | Statistics for Insurance | 15 | Spring | 5 | <i>MAST5010</i> |
| MA516 | Contingencies 1 | 15 | Autumn | 5 | <i>MACT5160</i> |
| MA527 | Corporate Finance for Actuaries | 15 | Spring | 5 | <i>MACT5270</i> |
| MA528 | Finance Reports and Their Analysis | 15 | Autumn | 5 | <i>MACT5280</i> |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | <i>MAST6390</i> |

If you have completed Stage 1 of the BSC Financial Mathematics programme, you must also take the following module (15 credits):

| Optional module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-----------------------|-----------------------|---------------|-------------|--------------|-----------------|
| MA715 | Financial Mathematics | 15 | Autumn | 6 | <i>MACT7150</i> |

All other students must take one of the following optional modules (15 credits):

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|------------------------|--|---------------|-------------|--------------|-----------------|
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | <i>MAST5005</i> |
| MA5511 | Optimisation with Financial Applications | 15 | Autumn | 5 | <i>MAST5011</i> |

STAGE 3 - 120 credits

You must take the following compulsory modules (120 credits):[MA5501](#)

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-----------------------|---|---------------|-----------------|--------------|-----------------|
| MA509 | Actuarial Practice | 30 | Autumn & Spring | 6 | <i>MACT5090</i> |
| MA525 | Survival Models | 15 | Autumn | 6 | <i>MACT5250</i> |
| MA533 | Contingencies 2 | 15 | Spring | 6 | <i>MACT5330</i> |
| MA535 | Portfolio Theory and Asset Pricing Models | 15 | Autumn | 6 | <i>MACT5350</i> |
| MA537 | Mathematics of Financial Derivatives | 15 | Spring | 6 | <i>MAST5370</i> |
| MA539 | Financial Modelling | 15 | Spring | 6 | <i>MACT5390</i> |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | <i>MAST6360</i> |

ACTUARIAL SCIENCE WITH A YEAR IN INDUSTRY
Single Honours**ACTSCI-S:BSC****STAGE 2 - 120 credits**

You must take the following compulsory modules (105 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|--------------------------------------|----------------------|--------------------|---------------------|------------------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | MAST5001 |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | MAST5007 |
| MA501 | Statistics for Insurance | 15 | Spring | 5 | MAST5010 |
| MA516 | Contingencies 1 | 15 | Autumn | 5 | MACT5160 |
| MA527 | Corporate Finance for Actuaries | 15 | Spring | 5 | MACT5270 |
| MA528 | Finance Reports and Their Analysis | 15 | Autumn | 5 | MACT5280 |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | MAST6390 |

If you have completed Stage 1 of the BSC Financial Mathematics programme, you must also take the following module (15 credits):

| Optional module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------------|-----------------------|----------------------|--------------------|---------------------|------------------------|
| MA715 | Financial Mathematics | 15 | Autumn | 6 | MACT7150 |

All other students must take one of the following optional modules (15 credits):

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|--|----------------------|--------------------|---------------------|------------------------|
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | MAST5005 |
| MA5511 | Optimisation with Financial Applications | 15 | Autumn | 5 | MAST5011 |

ACTUARIAL SCIENCE WITH A YEAR IN INDUSTRY
Single Honours**ACTSCI-S:BSC****STAGE S - 120 credits**

You must take the following compulsory modules (120 credits):

| Compulsory module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------------|--|----------------------|--------------------|---------------------|------------------------|
| MA5801* | Industrial Placement Experience | 90 | Autumn & Spring | 5 | MAST5801 |
| MA5802* | Industrial Placement (Report and Presentation) | 30 | Autumn & Spring | 5 | MAST5802 |

*This module cannot be compensated, trailed or condoned.

ACTUARIAL SCIENCE WITH A YEAR IN INDUSTRY
Single Honours

ACTSCI-S:BSC

STAGE 3 - 120 credits

You must take the following compulsory modules (120 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|---|----------------------|--------------------|---------------------|------------------------|
| MA509 | Actuarial Practice | 30 | Autumn & Spring | 6 | MACT5090 |
| MA525 | Survival Models | 15 | Autumn | 6 | MACT5250 |
| MA533 | Contingencies 2 | 15 | Spring | 6 | MACT5330 |
| MA535 | Portfolio Theory and Asset Pricing Models | 15 | Autumn | 6 | MACT5350 |
| MA537 | Mathematics of Financial Derivatives | 15 | Spring | 6 | MACT5370 |
| MA539 | Financial Modelling | 15 | Spring | 6 | MACT5390 |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | MACT6360 |

FINANCIAL MATHEMATICS
Single Honours

FINMATHS:BSC

STAGE 2 - 120 credits

You must take the following compulsory modules (90 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|--|----------------------|--------------------|---------------------|------------------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | MACT5001 |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | MACT5005 |
| MA5506 | Macroeconomics for Financial Mathematics | 15 | Autumn | 5 | MACT5006 |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | MACT5007 |
| MA5509 | Numerical Methods | 15 | Spring | 5 | MACT5009 |
| MA5511 | Optimisation with Financial Applications | 15 | Autumn | 5 | MACT5011 |

PLUS TWO of the following 15 credit modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|---|----------------------|--------------------|---------------------|------------------------|
| MA501 | Statistics for Insurance | 15 | Spring | 5 | MACT5010 |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | MACT5012 |
| MA517 | Corporate Finance for Financial Mathematics | 15 | Spring & Summer | 5 | MACT5170 |

FINANCIAL MATHEMATICS
Single Honours

FINMATHS:BSC

STAGE 3 - 120 credits

You must take the following compulsory modules (75 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|---|----------------------|--------------------|---------------------|------------------------|
| MA535 | Portfolio Theory and Asset Pricing Models | 15 | Autumn | 6 | MACT5350 |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | MACT6360 |
| MA6529 | Statistical Learning | 15 | Spring | 6 | MACT6029 |
| MA6534 | Derivative Markets | 15 | Autumn | 6 | MACT6034 |
| MA6540 | Financial Econometrics | 15 | Spring | 6 | MACT6040 |

PLUS 45 credits from the following modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|--|---------------|-----------------|--------------|-----------------|
| MA537 | Mathematics of Financial Derivatives | 15 | Spring | 6 | MACT5370 |
| MA538 | Applied Bayesian Modelling | 15 | Autumn | 6 | MAST5380 |
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | MAST5490 |
| MA587 | Numerical Solution of Differential Equations | 15 | Autumn | 6 | MAST5870 |
| MA6503† | Communicating Mathematics | 15 | Autumn | 6 | MAST6703 |
| MA6504† | Discovering and Communicating Mathematics | 30 | Autumn & Spring | 6 | MAST6704 |
| MA6512 | Applied Statistical Modelling 2 | 15 | Spring | 6 | MAST6012 |
| MA6518 | Games and Strategy | 15 | Spring | 6 | MAST6018 |
| MA771 | Computational Statistics | 15 | Spring | 6 | MAST7710 |

† Only one of these modules may be taken.

FINANCIAL MATHEMATICS WITH A YEAR IN INDUSTRY Single Honours

FINMATHS-S:BSC

STAGE 2 - 120 credits

You must take the following compulsory modules (90 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------|--|---------------|-------------|--------------|-----------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | MAST5001 |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | MAST5005 |
| MA5506 | Macroeconomics for Financial Mathematics | 15 | Autumn | 5 | MAST5006 |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | MAST5007 |
| MA5509 | Numerical Methods | 15 | Spring | 5 | MAST5009 |
| MA5511 | Optimisation with Financial Applications | 15 | Autumn | 5 | MAST5011 |

PLUS TWO of the following 15 credit modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|---|---------------|-----------------|--------------|-----------------|
| MA501 | Statistics for Insurance | 15 | Spring | 5 | MAST5010 |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | MAST5012 |
| MA517 | Corporate Finance for Financial Mathematics | 15 | Spring & Summer | 5 | MAST5170 |

FINANCIAL MATHEMATICS WITH A YEAR IN INDUSTRY Single Honours

FINMATHS-S:BSC

STAGE S - 120 credits

You must take the following compulsory modules (120 credits):

| Compulsory module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------|--|---------------|-----------------|--------------|-----------------|
| MA5801* | Industrial Placement Experience | 90 | Autumn & Spring | 5 | MAST5801 |
| MA5802* | Industrial Placement (Report and Presentation) | 30 | Autumn & Spring | 5 | MAST5802 |

*This module cannot be compensated, trailed or condoned.

FINANCIAL MATHEMATICS WITH A YEAR IN INDUSTRY
Single Honours

FINMATHS-S:BSC

STAGE 3 - 120 credits

You must take the following compulsory modules (75 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|------------------------|---|---------------|-------------|--------------|-----------------|
| MA636 | Stochastic Processes | 15 | Autumn | 6 | <i>MAST6360</i> |
| MA535 | Portfolio Theory and Asset Pricing Models | 15 | Autumn | 6 | <i>MACT5350</i> |
| MA6529 | Statistical Learning | 15 | Spring | 6 | <i>MAST6029</i> |
| MA6534 | Derivative Markets | 15 | Autumn | 6 | <i>MAST6034</i> |
| MA6540 | Financial Econometrics | 15 | Spring | 6 | <i>MAST6040</i> |

PLUS 45 credits from the following modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|--|---------------|-----------------|--------------|-----------------|
| MA537 | Mathematics of Financial Derivatives | 15 | Spring | 6 | <i>MACT5370</i> |
| MA538 | Applied Bayesian Modelling | 15 | Autumn | 6 | <i>MAST5380</i> |
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | <i>MAST5490</i> |
| MA587 | Numerical Solution of Differential Equations | 15 | Autumn | 6 | <i>MAST5870</i> |
| MA6503 † | Communicating Mathematics | 15 | Autumn | 6 | <i>MAST6703</i> |
| MA6504 † | Discovering and Communicating Mathematics | 30 | Autumn & Spring | 6 | <i>MAST6704</i> |
| MA6512 | Applied Statistical Modelling 2 | 15 | Spring | 6 | <i>MAST6012</i> |
| MA6518 | Games and Strategy | 15 | Spring | 6 | <i>MAST6018</i> |
| MA771 | Computational Statistics | 15 | Spring | 6 | <i>MAST7710</i> |

† Only one of these modules may be taken.

MATHEMATICS
Single Honours

MATHS:BSC

STAGE 2 - 120 credits

You must take the following compulsory modules (45 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|------------------------|---------------------------------------|---------------|-------------|--------------|-----------------|
| MA5513 | Real Analysis 2 | 15 | Autumn | 5 | <i>MAST5013</i> |
| MA5503 | Groups and Symmetries | 15 | Autumn | 5 | <i>MAST5003</i> |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | <i>MAST5005</i> |

The remaining 75 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|------------------------|-------------------------------------|---------------|-------------|--------------|-----------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | <i>MAST5001</i> |
| MA5502 | Curves and Surfaces | 15 | Spring | 5 | <i>MAST5002</i> |
| MA5504 | Lagrangian and Hamiltonian Dynamics | 15 | Spring | 5 | <i>MAST5004</i> |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | <i>MAST5007</i> |
| MA5509 | Numerical Methods | 15 | Spring | 5 | <i>MAST5009</i> |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | <i>MAST5012</i> |
| MA5514 | Rings and Fields | 15 | Spring | 5 | <i>MAST5014</i> |
| MA566 | Number Theory | 15 | Autumn | 5 | <i>MAST5660</i> |

STAGE 3 - 120 credits

Select up to 60 credits from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|------------------------|--------------------------------------|---------------|-------------|--------------|-----------------|
| MA538 | Applied Bayesian Modelling | 15 | Autumn | 6 | <i>MACT5380</i> |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | <i>MAST6360</i> |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | <i>MAST6390</i> |
| MA6512 | Applied Statistical Modelling 2 | 15 | Spring | 6 | <i>MAST6012</i> |
| MA6528 | Principles of Data Collection | 15 | Autumn | 6 | <i>MAST6028</i> |
| MA6529 | Statistical Learning | 15 | Spring | 6 | <i>MAST6029</i> |
| MA771 | Computational Statistics | 15 | Spring | 6 | <i>MAST7710</i> |

The remaining credits should be chosen from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------------|--|---------------|-----------------|--------------|-----------------|
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | <i>MAST5490</i> |
| MA567 | Topology | 15 | Autumn | 6 | <i>MAST5670</i> |
| MA568 | Orthogonal Polynomials and Special Functions | 15 | Spring | 6 | <i>MAST5680</i> |
| MA574 | Polynomials in Several Variables | 15 | Autumn | 6 | <i>MAST5740</i> |
| MA576 | Groups and Representations | 15 | Spring | 6 | <i>MAST6003</i> |
| MA587 | Numerical Solution of Differential Equations | 15 | Autumn | 6 | <i>MAST5870</i> |
| MA607 | Quantum Mechanics | 15 | Autumn | 6 | <i>MAST6004</i> |
| MA6503† | Communicating Mathematics | 15 | Autumn | 6 | <i>MAST6703</i> |
| MA6504† | Discovering and Communicating Mathematics | 30 | Autumn & Spring | 6 | <i>MAST6704</i> |
| MA6517 | Functions of a Complex Variable | 15 | Autumn | 6 | <i>MAST6017</i> |
| MA6518 | Games and Strategy | 15 | Spring | 6 | <i>MAST6018</i> |
| MA6522 | Integrable Systems | 15 | Spring | 6 | <i>MAST6022</i> |
| MA6591 | Mathematics in the World of Finance | 15 | Autumn | 6 | <i>MAST6091</i> |
| MA690 | Symmetry Methods for Differential Equations | 15 | Autumn | 6 | <i>MAST6001</i> |
| MA691 | Linear and Nonlinear Waves | 15 | Autumn | 6 | <i>MAST6002</i> |
| MA692 | Operators and Matrices | 15 | Spring | 6 | <i>MAST6005</i> |

† Only one of these modules may be taken.

STAGE 2 - 120 credits

You must take the following compulsory modules (45 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|---------------------------------------|----------------------|--------------------|---------------------|------------------------|
| MA5513 | Real Analysis 2 | 15 | Autumn | 5 | <i>MAST5013</i> |
| MA5503 | Groups and Symmetries | 15 | Autumn | 5 | <i>MAST5003</i> |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | <i>MAST5005</i> |

The remaining 75 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|-------------------------------------|----------------------|--------------------|---------------------|------------------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | <i>MAST5001</i> |
| MA5502 | Curves and Surfaces | 15 | Spring | 5 | <i>MAST5002</i> |
| MA5504 | Lagrangian and Hamiltonian Dynamics | 15 | Spring | 5 | <i>MAST5004</i> |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | <i>MAST5007</i> |
| MA5509 | Numerical Methods | 15 | Spring | 5 | <i>MAST5009</i> |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | <i>MAST5012</i> |
| MA5514 | Rings and Fields | 15 | Spring | 5 | <i>MAST5014</i> |
| MA5566 | Number Theory | 15 | Autumn | 5 | <i>MAST5660</i> |

STAGE 3 - 120 credits

Select up to 60 credits from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|------------------------|--------------------------------------|---------------|-------------|--------------|-----------------|
| MA538 | Applied Bayesian Modelling | 15 | Autumn | 6 | <i>MACT5380</i> |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | <i>MAST6360</i> |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | <i>MAST6390</i> |
| MA6512 | Applied Statistical Modelling 2 | 15 | Spring | 6 | <i>MAST6012</i> |
| MA6528 | Principles of Data Collection | 15 | Autumn | 6 | <i>MAST6028</i> |
| MA6529 | Statistical Learning | 15 | Spring | 6 | <i>MAST6029</i> |
| MA771 | Computational Statistics | 15 | Spring | 6 | <i>MAST7710</i> |

The remaining credits should be chosen from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------------|--|---------------|-----------------|--------------|-----------------|
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | <i>MAST5490</i> |
| MA567 | Topology | 15 | Autumn | 6 | <i>MAST5670</i> |
| MA568 | Orthogonal Polynomials and Special Functions | 15 | Spring | 6 | <i>MAST5680</i> |
| MA574 | Polynomials in Several Variables | 15 | Autumn | 6 | <i>MAST5740</i> |
| MA576 | Groups and Representations | 15 | Spring | 6 | <i>MAST6003</i> |
| MA587 | Numerical Solution of Differential Equations | 15 | Autumn | 6 | <i>MAST5870</i> |
| MA607 | Quantum Mechanics | 15 | Autumn | 6 | <i>MAST6004</i> |
| MA6503† | Communicating Mathematics | 15 | Autumn | 6 | <i>MAST6703</i> |
| MA6504† | Discovering and Communicating Mathematics | 30 | Autumn & Spring | 6 | <i>MAST6704</i> |
| MA6517 | Functions of a Complex Variable | 15 | Autumn | 6 | <i>MAST6017</i> |
| MA6518 | Games and Strategy | 15 | Spring | 6 | <i>MAST6018</i> |
| MA6522 | Integrable Systems | 15 | Spring | 6 | <i>MAST6022</i> |
| MA6591 | Mathematics in the World of Finance | 15 | Autumn | 6 | <i>MAST6091</i> |
| MA690 | Symmetry Methods for Differential Equations | 15 | Autumn | 6 | <i>MAST6001</i> |
| MA691 | Linear and Nonlinear Waves | 15 | Autumn | 6 | <i>MAST6002</i> |
| MA692 | Operators and Matrices | 15 | Spring | 6 | <i>MAST6005</i> |

† Only one of these modules may be taken.

MATHEMATICS
Single Honours

MATHS-4:MMATH

STAGE 4 - 120 credits

You must take the following compulsory module (30 credits):

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|------------------------------------|---------------|-----------------|--------------|-----------------|
| MA578 | Dissertation for MMath Mathematics | 30 | Autumn & Spring | 7 | MAST5780 |

PLUS 90 credits from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|--|---------------|-----------------|--------------|-----------------|
| MA7503 | Communicating Mathematics | 15 | Autumn | 7 | MAST7703 |
| MA7515 | Discrete Mathematics | 15 | Spring | 7 | MAST7015 |
| MA7522 | Integrable Systems | 15 | Spring | 7 | MAST7022 |
| MA7526 | Orthogonal Polynomials and Special Functions | 15 | Spring | 7 | MAST7026 |
| MA7527 | Polynomials in Several Variables | 15 | Autumn | 7 | MAST7027 |
| MA7532 | Topology | 15 | Autumn | 7 | MAST7032 |
| MA776 | Groups and Representations | 15 | Spring | 7 | MAST7003 |
| MA790 | Symmetry Methods for Differential Equations | 15 | Autumn | 7 | MAST7001 |
| MA791 | Linear and Nonlinear Waves | 15 | Autumn | 7 | MAST7002 |
| MA792 | Operators and Matrices | 15 | Spring | 7 | MAST7005 |
| MA962 | Geometric Integration | 15 | Autumn & Spring | 7 | MAST9620 |
| MA964 | Applied Algebraic Topology | 15 | Spring & Summer | 7 | MAST9640 |
| MA967 | Quantum Mechanics | 15 | Autumn | 7 | MAST7004 |
| MA972 | Algebraic Curves in Nature | 15 | Autumn & Spring | 7 | MAST9720 |

MATHEMATICS WITH A YEAR IN INDUSTRY
Single Honours

MATHS-S:BSC

STAGE 2 - 120 credits

You must take the following compulsory modules (45 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------|---------------------------------------|---------------|-------------|--------------|-----------------|
| MA5513 | Real Analysis 2 | 15 | Autumn | 5 | MAST5013 |
| MA5503 | Groups and Symmetries | 15 | Autumn | 5 | MAST5003 |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | MAST5005 |

The remaining 75 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|-------------------------------------|---------------|-------------|--------------|-----------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | MAST5001 |
| MA5502 | Curves and Surfaces | 15 | Spring | 5 | MAST5002 |
| MA5504 | Lagrangian and Hamiltonian Dynamics | 15 | Spring | 5 | MAST5004 |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | MAST5007 |
| MA5509 | Numerical Methods | 15 | Spring | 5 | MAST5009 |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | MAST5012 |
| MA5514 | Rings and Fields | 15 | Spring | 5 | MAST5014 |
| MA566 | Number Theory | 15 | Autumn | 5 | MAST5660 |

MATHEMATICS WITH A YEAR IN INDUSTRY
Single Honours

MATHS-S:BSC

STAGE S - 120 credits

You must take the following compulsory modules (120 credits):

| Compulsory module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------|--|---------------|-----------------|--------------|-----------------|
| MA5801* | Industrial Placement Experience | 90 | Autumn & Spring | 5 | MAST5801 |
| MA5802* | Industrial Placement (Report and Presentation) | 30 | Autumn & Spring | 5 | MAST5802 |

*This module cannot be compensated, trailed or condoned.

MATHEMATICS WITH A YEAR IN INDUSTRY
Single Honours

MATHS-S:BSC

STAGE 3 - 120 credits

Select up to 60 credits from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|--------------------------------------|---------------|-------------|--------------|-----------------|
| MA538 | Applied Bayesian Modelling | 15 | Autumn | 6 | MACT5380 |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | MAST6360 |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | MAST6390 |
| MA6512 | Applied Statistical Modelling 2 | 15 | Spring | 6 | MAST6012 |
| MA6528 | Principles of Data Collection | 15 | Autumn | 6 | MAST6028 |
| MA6529 | Statistical Learning | 15 | Spring | 6 | MAST6029 |
| MA771 | Computational Statistics | 15 | Spring | 6 | MAST7710 |

The remaining credits should be chosen from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|--|---------------|-----------------|--------------|-----------------|
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | MAST5490 |
| MA567 | Topology | 15 | Autumn | 6 | MAST5670 |
| MA568 | Orthogonal Polynomials and Special Functions | 15 | Spring | 6 | MAST5680 |
| MA574 | Polynomials in Several Variables | 15 | Autumn | 6 | MAST5740 |
| MA576 | Groups and Representations | 15 | Spring | 6 | MAST6003 |
| MA587 | Numerical Solution of Differential Equations | 15 | Autumn | 6 | MAST5870 |
| MA607 | Quantum Mechanics | 15 | Autumn | 6 | MAST6004 |
| MA6503† | Communicating Mathematics | 15 | Autumn | 6 | MAST6703 |
| MA6504† | Discovering and Communicating Mathematics | 30 | Autumn & Spring | 6 | MAST6704 |
| MA6517 | Functions of a Complex Variable | 15 | Autumn | 6 | MAST6017 |
| MA6518 | Games and Strategy | 15 | Spring | 6 | MAST6018 |
| MA6522 | Integrable Systems | 15 | Spring | 6 | MAST6022 |
| MA6591 | Mathematics in the World of Finance | 15 | Autumn | 6 | MAST6091 |
| MA690 | Symmetry Methods for Differential Equations | 15 | Autumn | 6 | MAST6001 |
| MA691 | Linear and Nonlinear Waves | 15 | Autumn | 6 | MAST6002 |
| MA692 | Operators and Matrices | 15 | Spring | 6 | MAST6005 |

† Only one of these modules may be taken.

STAGE 2 - 120 credits

You must take the following compulsory modules (60 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|---------------------------------------|----------------------|--------------------|---------------------|------------------------|
| AC523 | Principles of Finance | 30 | Autumn & Spring | 5 | <i>ACCT5230</i> |
| EC566 | Macroeconomics for Business | 15 | Spring | 5 | <i>ECON5660</i> |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | <i>MAST5005</i> |

The remaining 60 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|---|----------------------|--------------------|---------------------|------------------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | <i>MAST5001</i> |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | <i>MAST5007</i> |
| MA5509 | Numerical Methods | 15 | Spring | 5 | <i>MAST5009</i> |
| MA501 | Statistics for Insurance | 15 | Spring | 5 | <i>MAST5010</i> |
| MA5511 | Optimisations with Financial Applications | 15 | Autumn | 5 | <i>MAST5011</i> |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | <i>MAST5012</i> |
| MA566 | Number Theory | 15 | Autumn | 5 | <i>MAST5660</i> |

STAGE 3 - 120 credits

You must take the following compulsory module (30 credits):

| Compulsory module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------------|-------------------------|----------------------|--------------------|---------------------|------------------------|
| AC524 | Financial Accounting II | 30 | Autumn & Spring | 5 | <i>ACCT5240</i> |

PLUS ONE of the following optional modules (30 credits):

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|-----------------------------|----------------------|--------------------|---------------------|------------------------|
| AC502 | Business Finance | 30 | Autumn & Spring | 6 | <i>ACCT5020</i> |
| AC504 | Auditing | 30 | Autumn & Spring | 6 | <i>ACCT5040</i> |
| CB513 | Taxation | 30 | Autumn & Spring | 6 | <i>BUSN5130</i> |
| CB611 | Futures and Options Markets | 30 | Autumn & Spring | 6 | <i>BUSN6110</i> |

The remaining 60 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|--|----------------------|--------------------|---------------------|------------------------|
| MA538 | Applied Bayesian modelling | 15 | Autumn | 6 | <i>MAST5380</i> |
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | <i>MAST5490</i> |
| MA587 | Numerical Solution of Differential Equations | 15 | Autumn | 6 | <i>MAST5870</i> |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | <i>MAST6360</i> |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | <i>MAST6390</i> |
| MA6503 | Communicating Mathematics | 15 | Autumn & Spring | 6 | <i>MAST6703</i> |
| MA6518 | Games and Strategy | 15 | Spring | 6 | <i>MAST6018</i> |
| MA6528 | Principles of data collection | 15 | Autumn | 6 | <i>MAST6028</i> |
| MA6529 | Statistical Learning | 15 | Spring | 6 | <i>MAST6029</i> |
| MA691 | Linear and Nonlinear Waves | 15 | Autumn | 6 | <i>MAST6002</i> |
| MA771 | Computational Statistics | 15 | Spring | 6 | <i>MAST7710</i> |

**MATHEMATICS AND ACCOUNTING & FINANCE WITH A
YEAR IN INDUSTRY
Single Honours**

MATHS-ACCF-S:BA

STAGE 2 - 120 credits

You must take the following compulsory modules (60 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|---------------------------------------|----------------------|--------------------|---------------------|------------------------|
| AC523 | Principles of Finance | 30 | Autumn & Spring | 5 | <i>ACCT5230</i> |
| EC566 | Macroeconomics for Business | 15 | Spring | 5 | <i>ECON5660</i> |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | <i>MAST5005</i> |

The remaining 60 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|---|----------------------|--------------------|---------------------|------------------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | <i>MAST5001</i> |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | <i>MAST5007</i> |
| MA5509 | Numerical Methods | 15 | Spring | 5 | <i>MAST5009</i> |
| MA501 | Statistics for Insurance | 15 | Spring | 5 | <i>MAST5010</i> |
| MA5511 | Optimisations with Financial Applications | 15 | Autumn | 5 | <i>MAST5011</i> |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | <i>MAST5012</i> |
| MA566 | Number Theory | 15 | Autumn | 5 | <i>MAST5660</i> |

**MATHEMATICS AND ACCOUNTING & FINANCE WITH A
YEAR IN INDUSTRY
Single Honours**

MATHS-ACCF-S:BA

STAGE S - 120 credits

You must take the following compulsory modules (120 credits):

| Compulsory module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------------|--|----------------------|--------------------|---------------------|------------------------|
| MA5801* | Industrial Placement Experience | 90 | Autumn & Spring | 5 | <i>MAST5801</i> |
| MA5802* | Industrial Placement (Report and Presentation) | 30 | Autumn & Spring | 5 | <i>MAST5802</i> |

*This module cannot be compensated, trailed or condoned.

STAGE 3 - 120 credits

You must take the following compulsory module (30 credits):

| Compulsory module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------------|-------------------------|----------------------|--------------------|---------------------|------------------------|
| AC524 | Financial Accounting II | 30 | Autumn & Spring | 5 | ACCT5240 |

PLUS ONE of the following optional modules (30 credits):

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|-----------------------------|----------------------|--------------------|---------------------|------------------------|
| AC502 | Business Finance | 30 | Autumn & Spring | 6 | ACCT5020 |
| AC504 | Auditing | 30 | Autumn & Spring | 6 | ACCT5040 |
| CB513 | Taxation | 30 | Autumn & Spring | 6 | BUSN5130 |
| CB611 | Futures and Options Markets | 30 | Autumn & Spring | 6 | BUSN6110 |

The remaining 60 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|--|----------------------|--------------------|---------------------|------------------------|
| MA538 | Applied Bayesian modelling | 15 | Autumn | 6 | MAST5380 |
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | MAST5490 |
| MA587 | Numerical Solution of Differential Equations | 15 | Autumn | 6 | MAST5870 |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | MAST6360 |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | MAST6390 |
| MA6503 | Communicating Mathematics | 15 | Autumn & Spring | 6 | MAST6703 |
| MA6518 | Games and Strategy | 15 | Spring | 6 | MAST6018 |
| MA6528 | Principles of data collection | 15 | Autumn | 6 | MAST6028 |
| MA6529 | Statistical Learning | 15 | Spring | 6 | MAST6029 |
| MA691 | Linear and Nonlinear Waves | 15 | Autumn | 6 | MAST6002 |
| MA771 | Computational Statistics | 15 | Spring | 6 | MAST7710 |

MATHEMATICS AND STATISTICS
Single Honours

MATHS-STATS:BSC

STAGE 2 - 120 credits

You must take the following compulsory modules (75 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------|---------------------------------------|---------------|-------------|--------------|-----------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | MAST5001 |
| MA5503 | Groups and Symmetries | 15 | Autumn | 5 | MAST5003 |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | MAST5005 |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | MAST5007 |
| MA5513 | Real Analysis 2 | 15 | Autumn | 5 | MAST5013 |

The remaining 45 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|-------------------------------------|---------------|-------------|--------------|-----------------|
| MA5502 | Curves and Surfaces | 15 | Spring | 5 | MAST5002 |
| MA5504 | Lagrangian and Hamiltonian Dynamics | 15 | Spring | 5 | MAST5004 |
| MA501 | Statistics for Insurance | 15 | Spring | 5 | MAST5010 |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | MAST5012 |
| MA5514 | Rings and Fields | 15 | Spring | 5 | MAST5014 |

MATHEMATICS AND STATISTICS
Single Honours

MATHS-STATS:BSC

STAGE 3 - 120 credits

You must take the following compulsory modules (30 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------|---------------------------------|---------------|-------------|--------------|-----------------|
| MA6512 | Applied Statistical Modelling 2 | 15 | Spring | 15 | MAST6012 |
| MA6528 | Principles of Data Collection | 15 | Autumn | 15 | MAST6028 |

You must take at least 30 credits from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|--------------------------------------|---------------|-------------|--------------|-----------------|
| MA538 | Applied Bayesian Modelling | 15 | Autumn | 6 | MACT5380 |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | MAST6360 |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | MAST6390 |
| MA6510 | Advances in Statistics | 15 | Spring | 6 | MAST6009 |
| MA6529 | Statistical Learning | 15 | Spring | 6 | MAST6029 |
| MA771 | Computational Statistics | 15 | Spring | 6 | MAST7710 |

The remaining credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|-------------------|--|---------------|-----------------|--------------|-----------------|
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | MAST5490 |
| MA567 | Topology | 15 | Autumn | 6 | MAST5670 |
| MA568 | Orthogonal Polynomials and Special Functions | 15 | Spring | 6 | MAST5680 |
| MA574 | Polynomials in Several Variables | 15 | Autumn | 6 | MAST5740 |
| MA6503† | Communicating Mathematics | 15 | Autumn | 6 | MAST6703 |
| MA6504† | Discovering and Communicating Mathematics | 30 | Autumn & Spring | 6 | MAST6704 |
| MA6517 | Functions of a Complex Variable | 15 | Autumn | 6 | MAST6017 |
| MA6518 | Games and Strategy | 15 | Spring | 6 | MAST6018 |
| MA6591 | Mathematics in the World of Finance | 15 | Autumn | 6 | MAST6091 |
| MA691 | Linear and Nonlinear Waves | 15 | Autumn | 6 | MAST6002 |

† Only one of these modules may be taken.

**MATHEMATICS AND STATISTICS WITH A
YEAR IN INDUSTRY
Single Honours**

MATHS-STATS-S:BSC

STAGE 2 - 120 credits

You must take the following compulsory modules (75 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|---------------------------------------|----------------------|--------------------|---------------------|------------------------|
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | MAST5001 |
| MA5503 | Groups and Symmetries | 15 | Autumn | 5 | MAST5003 |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | MAST5005 |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | MAST5007 |
| MA5513 | Real Analysis 2 | 15 | Autumn | 5 | MAST5013 |

The remaining 45 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|-------------------------------------|----------------------|--------------------|---------------------|------------------------|
| MA5502 | Curves and Surfaces | 15 | Spring | 5 | MAST5002 |
| MA5504 | Lagrangian and Hamiltonian Dynamics | 15 | Spring | 5 | MAST5004 |
| MA501 | Statistics for Insurance | 15 | Spring | 5 | MAST5010 |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | MAST5012 |
| MA5514 | Rings and Fields | 15 | Spring | 5 | MAST5014 |

**MATHEMATICS AND STATISTICS WITH A
YEAR IN INDUSTRY
Single Honours**

MATHS-STATS-S:BSC

STAGE S - 120 credits

You must take the following compulsory modules (120 credits):

| Compulsory module: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|---------------------------|--|----------------------|--------------------|---------------------|------------------------|
| MA5801* | Industrial Placement Experience | 90 | Autumn & Spring | 5 | MAST5801 |
| MA5802* | Industrial Placement (Report and Presentation) | 30 | Autumn & Spring | 5 | MAST5802 |

*This module cannot be compensated, trailed or condoned.

**MATHEMATICS AND STATISTICS WITH A
YEAR IN INDUSTRY
Single Honours**

MATHS-STATS-S:BSC

STAGE 3 - 120 credits

You must take the following compulsory modules (30 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|---------------------------------|----------------------|--------------------|---------------------|------------------------|
| MA6512 | Applied Statistical Modelling 2 | 15 | Spring | 15 | <i>MAST6012</i> |
| MA6528 | Principles of Data Collection | 15 | Autumn | 15 | <i>MAST6028</i> |

You must take at least 30 credits from the following optional modules:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|--------------------------------------|----------------------|--------------------|---------------------|------------------------|
| MA538 | Applied Bayesian Modelling | 15 | Autumn | 6 | <i>MACT5380</i> |
| MA636 | Stochastic Processes | 15 | Autumn | 6 | <i>MAST6360</i> |
| MA639 | Time Series Modelling and Simulation | 15 | Spring | 6 | <i>MAST6390</i> |
| MA6510 | Advances in Statistics | 15 | Spring | 6 | <i>MAST6009</i> |
| MA6529 | Statistical Learning | 15 | Spring | 6 | <i>MAST6029</i> |
| MA771 | Computational Statistics | 15 | Spring | 6 | <i>MAST7710</i> |

The remaining credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|--|----------------------|--------------------|---------------------|------------------------|
| MA549 | Discrete Mathematics | 15 | Autumn | 6 | <i>MAST5490</i> |
| MA567 | Topology | 15 | Autumn | 6 | <i>MAST5670</i> |
| MA568 | Orthogonal Polynomials and Special Functions | 15 | Spring | 6 | <i>MAST5680</i> |
| MA574 | Polynomials in Several Variables | 15 | Autumn | 6 | <i>MAST5740</i> |
| MA6503† | Communicating Mathematics | 15 | Autumn | 6 | <i>MAST6703</i> |
| MA6504† | Discovering and Communicating Mathematics | 30 | Autumn & Spring | 6 | <i>MAST6704</i> |
| MA6517 | Functions of a Complex Variable | 15 | Autumn | 6 | <i>MAST6017</i> |
| MA6518 | Games and Strategy | 15 | Spring | 6 | <i>MAST6018</i> |
| MA6591 | Mathematics in the World of Finance | 15 | Autumn | 6 | <i>MAST6091</i> |
| MA691 | Linear and Nonlinear Waves | 15 | Autumn | 6 | <i>MAST6002</i> |

† Only one of these modules may be taken.

MATHEMATICS WITH SECONDARY EDUCATION
Single Honours

MATHS-EDU:BSC

STAGE 2 - 120 credits

You must take the following compulsory modules (60 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|---------------------------------|----------------------|--------------------|---------------------|------------------------|
| MAE100 | School Practice | 30 | Autumn | 5 | <i>MAED1000</i> |
| MA5501 | Applied Statistical Modelling 1 | 15 | Spring | 5 | <i>MAST5001</i> |
| MA5503 | Groups and Symmetries | 15 | Autumn | 5 | <i>MAST5003</i> |

The remaining 60 credits should be taken from the following:

| Optional modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|--------------------------|---------------------------------------|----------------------|--------------------|---------------------|------------------------|
| MA5504 | Lagrangian and Hamiltonian Dynamics | 15 | Spring | 5 | <i>MAST5004</i> |
| MA5505 | Linear Partial Differential Equations | 15 | Autumn | 5 | <i>MAST5005</i> |
| MA5507 | Mathematical Statistics | 15 | Autumn | 5 | <i>MAST5007</i> |
| MA5512 | Ordinary Differential Equations | 15 | Spring | 5 | <i>MAST5012</i> |
| MA5514 | Rings and Fields | 15 | Spring | 5 | <i>MAST5014</i> |
| MA566 | Number Theory | 15 | Autumn | 5 | <i>MAST5660</i> |

MATHEMATICS WITH SECONDARY EDUCATION
Single Honours

MATHS-EDU:BSC

STAGE 3 - 120 credits

You must take the following compulsory modules (120 credits):

| Compulsory modules: | MODULE TITLE | CREDIT AMOUNT | TERM TAUGHT | CREDIT LEVEL | Office Use Only |
|----------------------------|-----------------------------------|----------------------|--------------------|---------------------|------------------------|
| MAE101 | Curriculum Studies: Mathematics | 40 | Year Long | 6 | <i>MAED1010</i> |
| MAE102 | Professional Placement 1 | 10 | Autumn & Spring | 6 | <i>MAED1020</i> |
| MAE103 | Professional Placement 2 | 20 | Autumn | 6 | <i>MAED1030</i> |
| MAE104 | Professional Studies | 20 | Year Long | 6 | <i>MAED1040</i> |
| MA601 | Individual Project in Mathematics | 30 | Autumn & Spring | 6 | <i>MAST6010</i> |