Overview

The program is intended for students who have completed a degree in Mathematics or Statistics, or a Science degree with a major in mathematics or statistics, and who wish to further their knowledge of mathematical sciences. The program offers intensive, high-level training in principles of mathematical sciences. In particular, the program will develop their research and analytic skills, and substantially broaden the knowledge gained from their prior studies. This program will equip students with a range of skills demanded by today’s employers, and will provide a means of obtaining the necessary preparation for further research in Mathematics.
<table>
<thead>
<tr>
<th><strong>Faculty</strong></th>
<th>Faculty of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campus</strong></td>
<td>Kensington</td>
</tr>
<tr>
<td><strong>Study Level</strong></td>
<td>Postgraduate</td>
</tr>
<tr>
<td><strong>Typical duration</strong></td>
<td>1.7 Years</td>
</tr>
<tr>
<td><strong>Delivery Mode</strong></td>
<td>Face-to-face</td>
</tr>
<tr>
<td><strong>Intake Period</strong></td>
<td>Term 1, Term 3</td>
</tr>
<tr>
<td><strong>Academic Calendar</strong></td>
<td>3+ Calendar</td>
</tr>
<tr>
<td><strong>Minimum Units of Credit</strong></td>
<td>72</td>
</tr>
<tr>
<td><strong>Award type</strong></td>
<td>Masters (Coursework)</td>
</tr>
<tr>
<td><strong>Award(s)</strong></td>
<td>Master of Mathematics - MMath</td>
</tr>
<tr>
<td><strong>CRICOS Code</strong></td>
<td>080059G</td>
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</tbody>
</table>
Learning Outcomes

1. Graduates will have developed an understanding of enquiry-based learning and demonstrate analytical skills as they relate to mathematical science.
2. Graduates will have acquired advanced disciplinary knowledge and skills in mathematical science, and an ability to apply these in a range of contexts.
3. The program will enhance research, inquiry, and analytical thinking skills and abilities in mathematical sciences.
4. Graduates will be able to communicate effectively to a range of audiences both in written and oral forms, and be capable of independent and collaborative enquiry and working effectively with others.
5. Graduates will have developed advanced critical thinking and problem solving skills in the field of mathematical sciences.

Graduate Capabilities:

For more information on Graduate Capabilities, please click on this link.
**Program Structure**

Students must complete 72 UOC as a standalone program.

1. 60 UOC of Coursework Courses
2. 12 UOC Supervised Research Project

**Core Courses**

Students must take 12 UOC of the following project courses.

- **MATH5005 | 6 UOC**  
  Advanced Mathematics Project A

- **MATH5006 | 6 UOC**  
  Advanced Mathematics Project B

**Electives**

Students must take 60 UOC of the following courses.

Please Note: Students are allowed to take up to 18 UOC (3 courses) outside the School of Mathematics and Statistics provided that the courses are at postgraduate level and approved by the Postgraduate Coursework Coordinator.

- **MATH5165 | 6 UOC**  
  Optimization

- **MATH5175 | 6 UOC**  
  Special Topics in Applied Mathematics A

- **MATH5185 | 6 UOC**  
  Special Topics in Applied Mathematics B

- **MATH5285 | 6 UOC**  
  Fluids, Oceans and Climate

- **MATH5295 | 6 UOC**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>UOC</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH5305</td>
<td>6</td>
<td>Computational Mathematics for Science and Engineering</td>
</tr>
<tr>
<td>MATH5335</td>
<td>6</td>
<td>Computational Methods for Finance</td>
</tr>
<tr>
<td>MATH5425</td>
<td>6</td>
<td>Graph Theory</td>
</tr>
<tr>
<td>MATH5505</td>
<td>6</td>
<td>Combinatorics</td>
</tr>
<tr>
<td>MATH5515</td>
<td>6</td>
<td>Special Topics in Pure Mathematics A</td>
</tr>
<tr>
<td>MATH5525</td>
<td>6</td>
<td>Special Topics in Pure Mathematics B</td>
</tr>
<tr>
<td>MATH5535</td>
<td>6</td>
<td>Special Topics in Pure Mathematics C</td>
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<tr>
<td>MATH5605</td>
<td>6</td>
<td>Functional Analysis</td>
</tr>
<tr>
<td>MATH5615</td>
<td>6</td>
<td>Banach and Operator Algebras</td>
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<tr>
<td>MATH5645</td>
<td>6</td>
<td>Number Theory</td>
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<tr>
<td>MATH5665</td>
<td>6</td>
<td>Algebraic Topology</td>
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<tr>
<td>Code</td>
<td>UOC</td>
<td>Course</td>
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<tr>
<td>MATH5685</td>
<td>6</td>
<td>Complex Analysis</td>
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<tr>
<td>MATH5705</td>
<td>6</td>
<td>Modern Analysis</td>
</tr>
<tr>
<td>MATH5715</td>
<td>6</td>
<td>Harmonic Analysis</td>
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<tr>
<td>MATH5725</td>
<td>6</td>
<td>Galois Theory</td>
</tr>
<tr>
<td>MATH5735</td>
<td>6</td>
<td>Modules and Representation Theory</td>
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<tr>
<td>MATH5785</td>
<td>6</td>
<td>Geometry</td>
</tr>
<tr>
<td>MATH5805</td>
<td>6</td>
<td>Special Topics in Statistics</td>
</tr>
<tr>
<td>MATH5806</td>
<td>6</td>
<td>Applied Regression Analysis</td>
</tr>
<tr>
<td>MATH5816</td>
<td>6</td>
<td>Continuous Time Financial Modelling</td>
</tr>
<tr>
<td>MATH5825</td>
<td>6</td>
<td>Measure, Integration and Probability</td>
</tr>
<tr>
<td>MATH5826</td>
<td>6</td>
<td>Statistical Methods in Epidemiology</td>
</tr>
<tr>
<td>MATH5835</td>
<td>6</td>
<td>Stochastic Processes</td>
</tr>
</tbody>
</table>
MATH5836 | 6 UOC
Data Mining and its Business Applications

MATH5845 | 6 UOC
Time Series

MATH5846 | 6 UOC
Introduction to Probability and Stochastic Processes

MATH5855 | 6 UOC
Multivariate Analysis

MATH5856 | 6 UOC
Introduction to Statistics and Statistical Computations

MATH5885 | 6 UOC
Longitudinal Data Analysis

MATH5895 | 6 UOC
Nonparametric Statistics

MATH5905 | 6 UOC
Statistical Inference

MATH5906 | 6 UOC
Design & Analysis of Clinical Trials

MATH5916 | 6 UOC
Survival Analysis

MATH5945 | 6 UOC
Categorical Data Analysis

MATH5960 | 6 UOC
Bayesian Inference and Computation

MATH5965  |  6 UOC
Discrete Time Financial Modelling

MATH5975  |  6 UOC
Introduction to Stochastic Analysis

Minimum Level 5/6 Mathematics UOC

Students must complete 54 UOC of the following courses.

any level 5 Mathematics course

any level 6 Mathematics course

Enrolment Disclaimer

Unless advised otherwise by your program authority, you should follow the rules for the handbook for the year you commenced your program. You are also responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements.
Admission Requirements

Entry Requirements

To gain entry to this program, students must:

- Have completed a Bachelor of Mathematics or a Bachelor of Science undergraduate degree with a major in mathematics or statistics; and
- Have sufficient mathematical and/or statistical background, as indicated by an average of 65 or above in level III mathematics and/or statistics university courses. In addition, students must have permission of the Head of School or Nominee to be admitted into the program.

Prospective international students should note they will need to meet the University's English language requirements.

For more information about admission requirements for various UNSW programs, visit the following website(s):

- Domestic Students
- International Student
Program Requirements

Recognition of Prior Learning

Honours graduates in Mathematics or Statistics from UNSW (or equivalent) may receive advanced standing of up to a maximum of 24 UOC and may complete the degree within 48 UOC, or one year of full time study.

Progression Requirements

Students who have completed 24 UOC of this program may exit with a Graduate Certificate in Mathematics and Statistics (7659), subject to meeting the program rules and requirements of that program.

Students who have completed the Graduate Certificate (7659) and have a WAM of 70 may apply to transfer into this Masters program and will receive up to 24 UOC of Advanced Standing.

Students who have completed the full 48 UOC of the Graduate Diploma (5659), and have a WAM of 70, may apply to transfer into this Masters program and will receive up to 48 UOC of Advanced Standing.

For more information on university policy on progression requirements please visit Academic Progression.
Pathways

Articulation Arrangements

Other program(s) within articulated suite:

Graduate Diploma - **GradDip**

**5659 Mathematics and Statistics**

Faculty: Faculty of Science  
Campus: Kensington  
Units of Credit: 48  
Typical Duration: 1 Years

Read More

Graduate Certificate - **GradCert**

**7659 Mathematics and Statistics**

Faculty: Faculty of Science  
Campus: Kensington  
Units of Credit: 24  
Typical Duration: 0.7 Years

Read More
Recognition of Achievement

Award with Excellence

The Award with Excellence is awarded in coursework masters programs, including Masters (Extension) but with the exception of Masters (Extended) such as JD and MD, when a Weighted Average Mean (WAM) of at least 80% has been achieved and at least 50% of the requirements of the award are completed at UNSW. All eligible programs will award 'with Excellence' except in special circumstances where approval of Academic Board has been given for a program to opt out.

For more information, please visit:

Current Students Award with Excellence
Program Fees

At UNSW fees are generally charged at course level and therefore dependent upon individual enrolment and other factors such as student's residency status. For generic information on fees and additional expenses of UNSW programs, click on one of the following:

Domestic Students
Commonwealth Supported Students
International Students
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
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Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179