Double Degree

Advanced Mathematics (Honours) / Computer Science

3781  |  240 Units of Credit

Overview

The Faculty of Science and the Faculty of Engineering offer a dual degree program leading to the award of the degrees Bachelor of Science (Advanced Mathematics) (Honours) and Bachelor of Science (Computer Science). The typical duration of this program is 5 years full-time.

The Advanced Mathematics (Honours) and Computer Science degrees lend themselves well to each other. While the Advanced Mathematics (Honours) degree focuses on an in-depth understanding of pure and applied mathematics, the computer science degree looks at the design, construction and uses of computer systems. Your mathematics study will assist with the manipulation of data as well as the development of algorithms in computer science. There is no better degree to combine your passion for mathematics as well as computer systems.
<table>
<thead>
<tr>
<th>Faculty</th>
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<tbody>
<tr>
<td>Faculty of Science</td>
<td></td>
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<tr>
<td>Faculty of Engineering</td>
<td></td>
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<tr>
<td>Campus</td>
<td>Kensington</td>
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<tr>
<td>Study Level</td>
<td>Undergraduate</td>
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<tr>
<td>Typical duration</td>
<td>5 Years</td>
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<tr>
<td>Intake Period</td>
<td>Term 1, Term 3</td>
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<tr>
<td>Academic Calendar</td>
<td>3+ Calendar</td>
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<tr>
<td>Minimum Units of Credit</td>
<td>240</td>
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<tr>
<td>Award(s)</td>
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<tr>
<td>Bachelor of Science (Advanced Mathematics) (Honours) - BSc(AdvMath)(Hons)</td>
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<td>Bachelor of Science -</td>
<td>BSc</td>
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<tr>
<td>UAC Code</td>
<td>429331</td>
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<td>CRICOS Code</td>
<td>088865A</td>
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Learning Outcomes

3956 - Advanced Mathematics (Honours)

1. Capability and motivation for intellectual development; including capacity for creativity, critical evaluation, entrepreneurship and demonstrating a commitment to their own learning, motivated by personal autonomy, accountability, curiosity and an appreciation of the value of learning.

2. Effective and appropriate communication in both professional (intra and interdisciplinary) and social (local and international) contexts.

3. Information literacy including the ability to make appropriate and effective use of information and information technology relevant to their discipline.

4. Research, enquiry and high level analytical thinking abilities including the ability to construct new concepts or create new understanding through the process of enquiry, critical analysis and problem solving, including constructing a research project, that demonstrates technical skills in research and design.

5. Independently identify and formulate solutions to complex problems with intelligence, initiative and judgement in scholarship that demonstrates advanced knowledge and critical thinking of the underlying principles and concepts in Mathematics and Statistics, and knowledge of research principles and methods.

6. Teamwork, collaborative and management skills including the ability to recognise opportunities and contribute positively to collaborative scientific research, and to demonstrate a capacity for self management, teamwork, leadership and decision making based on open-mindedness, objectivity and reasoned analysis in order to achieve common goals and further the learning of themselves and others.

7. Appreciation and respect of the social, cultural and global context of science with an ability to communicate across cultures and to develop an international professional network.

8. Ethical, social and professional understanding including the ability to critically
reflect upon broad ethical principles and codes of conduct in order to behave consistently with a personal respect and commitment to ethical practice and social responsibility, multicultural, cultural and personal diversity.

Leaders Global Citizens

Graduate Capabilities:

For more information on Graduate Capabilities, please click on this link.
Stand Alone Programs

Click on the link below to find out more about each individual program.

Program 3956
Advanced Mathematics (Honours)

Program 3778
Computer Science
Double Degree Structure

Students must complete 240 UOC.

1. An approved Advanced Mathematics (Honours) major and
2. SCIF1131;
3. 48 units of credit Honours Year; and
4. Science elective courses
5. 96 UOC of Computer Science courses

Major Specialisation Requirements

3956 - Advanced Mathematics (Honours)

Students must complete at least one of the specialisations below.

MAJOR:

MATHA1 | 90 UOC
Applied Mathematics

MATHP1 | 90 UOC
Pure Mathematics

MATHU1 | 90 UOC
Advanced Statistics

Honours Specialisation Requirements

3956 - Advanced Mathematics (Honours)

Students must complete at least one of the specialisations below.

HONOURS:

MATHAH | 48 UOC
Applied Mathematics

MATHPH | 48 UOC
Pure Mathematics
MATHTH | 48 UOC
Statistics

**Majors**

3778 - Computer Science

COMPA1 is the default stream, and will be used if no other stream is selected.

**MAJOR:**

**COMPA1 | 96 UOC**
Computer Science

**COMPD1 | 96 UOC**
Computer Science (Database Systems)

**COMPE1 | 96 UOC**
Computer Science (eCommerce Systems)

**COMPI1 | 96 UOC**
Computer Science (Artificial Intelligence)

**COMPJ1 | 96 UOC**
Computer Science (Programming Languages)

**COMPN1 | 96 UOC**
Computer Science (Computer Networks)

**COMPS1 | 96 UOC**
Computer Science (Embedded Systems)

**COMPY1 | 96 UOC**
Computer Science (Security Engineering)

**Level 1 Core Course**
3956 - Advanced Mathematics (Honours)

Students must take the following course.

**SCIF1131** | 6 UOC
Introductory Skills for Science

**Level 2 Maturity Requirements**

3956 - Advanced Mathematics (Honours)

Students may commence Level 2 courses upon successful completion of 30 UOC of Level 1 courses.

any level 2 course

**Level 3 Maturity Requirements**

3956 - Advanced Mathematics (Honours)

Students may commence Level 3 courses upon successful completion of 72 UOC.

any level 3 course

**Maximum Level 1 UOC**

3956 - Advanced Mathematics (Honours)

A maximum of 72 UOC of Level 1 courses can be taken, including any General Education or mainstream Level 1 course taken to fulfil either the General Education or the Free Elective requirement.

any level 1 course

**Minimum Level 1 Science Courses**

3956 - Advanced Mathematics (Honours)

Students must complete a minimum of 24 UOC of the following courses.

any level 1 Anatomy course

any level 1 Computer Science course
any level 1 Food Technology course

any level 1 course offered by Faculty of Science

any level 1 Neuroscience course

any level 1 Pathology course

any level 1 Pharmacology course

any level 1 Physiology course

**Minimum Level 3 Science Courses**

3956 - Advanced Mathematics (Honours)

Students must complete a minimum of 30 UOC of the following courses.

any level 3 Anatomy course

any level 3 Computer Science course

any level 3 Food Technology course

any level 3 course offered by Faculty of Science

any level 3 Neuroscience course

any level 3 Pathology course

any level 3 Pharmacology course

any level 3 Physiology course

any level 3 Medical Science course
Maximum Level 1 Electives UOC

3778 - Computer Science

Students may only undertake a maximum of 60 UOC of the following courses.

any level 1 course

Major Declaration

3956 - Advanced Mathematics (Honours)

Students must complete exactly one approved Bachelor of Science (Advanced Mathematics) (Honours) major, and this must be declared before enrolling in Level III courses. Students cannot undertake a double major in this program.

Please read the Double Degree Program rules as some specific rules apply to particular Double Degree combinations.

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.
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