Double Degree

Actuarial Studies / Science

3154  |  192 Units of Credit

Overview

The Bachelor of Actuarial Studies / Bachelor of Science is a 4 year dual degree program which will meet the needs of students wanting a program of study in science, complemented with a strong, focused actuarial studies program. As part of this program students will complete a major stream in science, and a sequence of actuarial studies courses within the UNSW Business School.

With approval, students with an appropriate academic record may also enrol in a separate 1 year Honours program in the field of actuarial studies, or a separate 1 year Honours program within UNSW Science.
Faculty
UNSW Business School
Faculty of Science

Campus
Kensington

Study Level
Undergraduate

Typical duration
4 Years

Intake Period
Term 1, Term 2, Term 3

Academic Calendar
3+ Calendar

Minimum Units of Credit
192

Award(s)
Bachelor of Actuarial Studies - BActSt
Bachelor of Science - BSc

UAC Code
424350

CRICOS Code
080474C
Learning Outcomes

3586 - Actuarial Studies

1. Business knowledge: Students will make informed and effective selection and application of knowledge in a discipline or profession, in the contexts of local and global business.

2. Problem solving: Students will define and address business problems, and propose effective evidence-based solutions, through the application of rigorous analysis and critical thinking.

3. Business communication: Students will harness, manage and communicate business information effectively using multiple forms of communication across different channels.

4. Teamwork: Students will interact and collaborate effectively with others to achieve a common business purpose or fulfil a common business project, and reflect critically on the process and the outcomes.

5. Responsible business practice: Students will develop and be committed to responsible business thinking and approaches, which are underpinned by ethical professional practice and sustainability considerations.

6. Global and cultural competence: Students will be aware of business systems in the wider world and actively committed to recognise and respect the cultural norms, beliefs and values of others, and will apply this knowledge to interact, communicate and work effectively in diverse environments.

7. Leadership development: Students will develop the capacity to take initiative, encourage forward thinking and bring about innovation, while effectively influencing others to achieve desired results.

3970 - Science

1. 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.

Professionals  Global Citizens

2. 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.

Scholars  Leaders

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

Scholars

4. Effective and appropriate communication in both professional (intra and inter disciplinary) and social (local and international) contexts.

Scholars

5. Research, enquiry and analytical thinking abilities including the ability to construct new concepts or create new understanding through the process of enquiry, critical analysis, problem solving and research.

Scholars  Leaders  Global Citizens

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

Scholars  Professionals

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 3586
Actuarial Studies

Program 3970
Science
Double Degree Structure

Students must complete 192 UOC.

Bachelor of Actuarial Studies/Science degree normally consists of 192 UOC.

These UOC are made up of:

Actuarial Studies component (96 UOC)
1. Level 1 Actuarial Studies Core Courses (42 UOC) (Please note: MATH1151 and MATH1251 are completed under the Science component of the Double Degree)
2. Level 2 Actuarial Studies Core Courses (18 UOC) (Please note: ACTL2131 may be substituted by MATH2901 and MATH2931, please see below)
3. Level 3 Actuarial Studies Electives (18 UOC)
4. Business School Elective (18 UOC)

Bachelor of Science (96 UOC)
1. An approved Bachelor of Science major; and
2. Science elective courses

Actuarial Studies Majors

3586 - Actuarial Studies

Students may elect to complete ACTLE1 or MATHE1 in addition to their Actuarial Studies program requirements.

Students completing these majors will still need to complete the program requirements such as Level 1 and 2 core course as well as Level 3 electives. Students cannot declare an additional Business major/minor as well.

These majors will require UOC to be taken from the Business School elective course requirement and an additional 12-18 UOC is to be completed on top of the 96 UOC for the Actuarial component to complete these majors. Please see the Progression Plans and consult the Business School Student Centre if you are interested in completing either of these majors.

MAJOR:

ACTLE1  |  48 UOC
Actuarial Risk Management and Analytics
Optional Second Major/Minor

3586 - Actuarial Studies

Students may use their Business electives to complete an optional major or minor. Students may choose a maximum of one major or minor listed below.

Please note: Completion of an additional major/minor within the combined Actuarial Studies degree may result in more UOC required for degree completion.

**MAJOR:**

<table>
<thead>
<tr>
<th>Code</th>
<th>UOC</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTA1</td>
<td>48</td>
<td>Accounting</td>
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<td>COMMF1</td>
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<td>Real Estate Studies</td>
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<td>ECONF1</td>
<td>48</td>
<td>Business Economics</td>
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<tr>
<td>ECONI1</td>
<td>48</td>
<td>Business Strategy &amp; Econ Mngmt</td>
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<tr>
<td>ECONJ1</td>
<td>60</td>
<td>Financial Economics</td>
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<tr>
<td>FINSA1</td>
<td>48</td>
<td>Finance</td>
</tr>
<tr>
<td>FINSR1</td>
<td>48</td>
<td>Financial Technology</td>
</tr>
<tr>
<td>IBUSA1</td>
<td>48</td>
<td>International Business</td>
</tr>
</tbody>
</table>
INFSA1 | 48 UOC
Information Systems

MARKA1 | 48 UOC
Marketing

MGMTA1 | 48 UOC
Management

MGMTH1 | 48 UOC
Human Resource Management

TABLA1 | 48 UOC
Business Law

TABLC1 | 48 UOC
Taxation

MINOR:

ACCTA2 | 30 UOC
Accounting

ECONF2 | 30 UOC
Business Economics

FINSA2 | 30 UOC
Finance

FINSR2 | 30 UOC
Financial Technology

IBUSA2 | 30 UOC
International Business
Students must complete at least one Science major selected from the list below. Students should declare their major prior to commencing Stage 2 courses.

Notes:
1. Students in 4076 Science/Education can only choose from the following majors: Biology, Chemistry, Ecology, Geography, Mathematics for Education, Pathology, Physics, Physiology. All other majors in 3970 are not permitted.
2. Students are not permitted to take the Bioinformatics major BINFB1 when taking the degree in dual award mode with the Bachelor of Engineering (Bioinformatics) program.

MAJOR:

ANATA1  |  72 UOC
Anatomy

BINFB1  |  96 UOC
Bioinformatics
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<td>Genetics</td>
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<tr>
<td>BIOCM1</td>
<td>84 UOC</td>
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<tr>
<td>Molecular and Cell Biology</td>
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<td>BIOSG1</td>
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<td>Ecology</td>
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<tr>
<td>BIOSJ1</td>
<td>78 UOC</td>
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<tr>
<td>Biology</td>
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<tr>
<td>BIOTA1</td>
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<tr>
<td>Biotechnology</td>
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<td>CHEMA1</td>
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<td>Chemistry</td>
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<td>FOODH1</td>
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<td>Food Science</td>
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<td>GEOGG1</td>
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<td>Geography</td>
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<tr>
<td>GEOLS1</td>
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<td>Earth Science</td>
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<td>MATHN1</td>
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<tr>
<td>MATHV1</td>
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<td>MICRB1</td>
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<td>PATHA1</td>
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<td>PHARA1</td>
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<tr>
<td>PHSLA1</td>
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<td>PHYS1</td>
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<td>PSYCA1</td>
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<tr>
<td>VISNA1</td>
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</table>
# Minors

3970 - Science

Students may choose to complete an optional minor in one of the following areas, using their Science and/or free electives. Please note that students in 4076 Science Education are NOT permitted to declare a minor.

## MINOR:

<table>
<thead>
<tr>
<th>Code</th>
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<tr>
<td>ANATB2</td>
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<tr>
<td>ARCYB2</td>
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<td>Palaeosciences</td>
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<tr>
<td>BIOCD2</td>
<td>42</td>
<td>Molecular Biology</td>
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<tr>
<td>BIOSD2</td>
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<td>Biology</td>
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<tr>
<td>CHEMD2</td>
<td>48</td>
<td>Chemistry</td>
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<tr>
<td>CLIMA2</td>
<td>42</td>
<td>Climate Science</td>
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<tr>
<td>GEOLF2</td>
<td>36</td>
<td>Geology</td>
</tr>
<tr>
<td>MATHC2</td>
<td>36</td>
<td>Mathematics</td>
</tr>
<tr>
<td>MATHD2</td>
<td>36</td>
<td>Statistics</td>
</tr>
</tbody>
</table>
MSCIH2 | 36 UOC
Marine Science

PATHB2 | 42 UOC
Pathology

PHARB2 | 48 UOC
Pharmacology

PHSLB2 | 48 UOC
Physiology

PHYSC2 | 48 UOC
Physics

PSYCM2 | 36 UOC
Psychology

VISNB2 | 36 UOC
Vision Science

**Level 1 Core Courses**

3586 - Actuarial Studies

Students must take 54 UOC of the following courses.

Please note: For students completing Actuarial Studies/Computer Science, Actuarial Studies/Science or Actuarial Studies/Advanced Maths (Hons). MATH1151 & MATH1251 are compulsory core courses that count towards the other degree component. Therefore, students must complete and additional 12 UOC of UNSW Business School electives to satisfy the 96 UOC depth component.

ACCT1501 | 6 UOC
Accounting and Financial Management 1A

ACCT1511 | 6 UOC
Accounting and Financial Management 1B

**ACTL1101 | 6 UOC**
Introduction to Actuarial Studies

**ECON1101 | 6 UOC**
Microeconomics 1

**ECON1102 | 6 UOC**
Macroeconomics 1

**FINS1613 | 6 UOC**
Business Finance

**MATH1151 | 6 UOC**
Mathematics for Actuarial Studies and Finance 1A

**MATH1251 | 6 UOC**
Mathematics for Actuarial Studies and Finance 1B

**MGMT1001 | 6 UOC**
Managing Organisations and People

**Level 2 Core Courses**

3586 - Actuarial Studies

Students must take 18 UOC of the following courses.

Students may replace ACTL2131 with the two courses MATH2901 Higher Theory of Statistics and MATH2931 Higher Linear Models. If students make this replacement, MATH2901 will count towards ACTL2131, and MATH2931 will be counted towards a major where this course is required or as a Business elective.

Please note: If you are studying Actuarial Studies/Science or Actuarial Studies/Advanced Maths (Hons), and wish to count MATH2901 and MATH2931 toward Science or Advance Maths (Hons) degree, you must complete more Business elective courses to achieve meet the minimum Business School Course requirement.
ACTL2102  |   6 UOC
Foundations of Actuarial Models

ACTL2111  |   6 UOC
Financial Mathematics for Actuaries

ACTL2131  |   6 UOC
Probability and Mathematical Statistics

Level 3 Actuarial Electives

3586 - Actuarial Studies

Students must complete 18 UOC of the following courses.

ACTL3141  |   6 UOC
Actuarial Models and Statistics

ACTL3142  |   6 UOC
Actuarial Data and Analysis

ACTL3151  |   6 UOC
Life Contingencies

ACTL3162  |   6 UOC
General Insurance Techniques

ACTL3182  |   6 UOC
Asset-Liability and Derivative Models

ACTL3191  |   6 UOC
Superannuation and Retirement Benefits

ACTL3192  |   6 UOC
Retirement Saving and Spending Over the Lifecycle

Science Elective Courses
3970 - Science

Students must take at least 12 UOC of the following courses.

- any Anatomy course
- any Aviation course
- any Biotechnology & Biomolecular Sciences course
- any Biological, Earth & Environmental Science course
- any Biochemistry course
- any Biological Science course
- any Biotechnology course
- any Chemistry course
- any Climate Science course
- any Computer Science course
- any Food Technology course
- any Geoscience course
- any Mathematics course
- any Materials Science and Engineering course
- any Microbiology course
any Marine Science course

any Neuroscience course

any Optometry course

any Pathology course

any Pharmacology course

any Physiology course

any Physics course

any Psychology course

any Faculty of Science course

any Medical Science course

any Vision Science course

**Business School Elective**

3586 - Actuarial Studies

Students must complete additional Business School electives to meet the 96 UOC of Business courses required for the Actuarial Studies component of the degree.

Please note: For students in Actuarial Studies/Law only 6 UOC of Business School electives are required. For students in Actuarial Studies/Computer Science, Actuarial Studies/Science or Actuarial Studies/Adv Math (Hons), 18 UOC of Business School electives are required.

any course offered by UNSW Business School
Level 2 Maturity Requirements

3970 - Science

Students must have completed 30 UOC before taking any of the following courses.

any level 2 course

Level 3 Maturity Requirements

3970 - Science

Students must have completed 72 UOC before taking any of the following courses.

any level 3 course

any level 6 course

Minimum Faculty UOC

3586 - Actuarial Studies

Students must complete a minimum of 96 UOC of UNSW Business School courses.

any course offered by UNSW Business School

Maximum Level 1 UOC

3586 - Actuarial Studies

No more than 60 UOC of Level 1 Business courses will be counted towards the degree.

any level 1 course

Minimum Science UOC

3970 - Science

Students must complete a minimum of 96 UOC of the following courses.

any Anatomy course
any Computer Science course

any Food Technology course

any course offered by Faculty of Science

any Neuroscience course

any Pathology course

any Pharmacology course

any Physiology course

**Level 1 Science UOC**

3970 - Science

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

any level 1 course offered by Faculty of Science

**Maximum Level 1 UOC**

3970 - Science

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

**Requirements for Double Degree Actuarial Studies/Law**

3586 - Actuarial Studies

Law students are permitted to complete any TABL course offered in the Taxation major, with the exception of TABL1710 and TABL2741, as part of the Actuarial Studies
component of their program but are NOT permitted to complete any other TABL course.

**Mathematics Requirements for Double Degree**

3586 - Actuarial Studies

1. MATH1151 Mathematics for Actuarial Studies and Finance 1A (6 UOC) replaces MATH1141 Higher Mathematics 1A (6 UOC)
2. MATH1251 Mathematics for Actuarial Studies and Finance 1B (6 UOC) replaces MATH1241 Higher Mathematics 1B
   This applies to any stream that requires either of these courses.

3. If MATH1041 Statistics for Life and Social Sciences (6 UOC) is a requirement in a stream, it is replaced by one of the following three courses:
   - ACTL2131 Probability and Mathematical Statistics (6 UOC)
   - MATH2801 Theory of Statistics (6 UOC)
   - MATH2901 Higher Theory of Statistics (6 UOC)

**Level 2 and 3 Maturity Requirements**

3586 - Actuarial Studies

Students must have completed 24 UOC before taking any Level 2 courses. Students must have completed 48 UOC before taking any Level 3 courses.

**Double Counting**

3970 - Science

Students cannot complete a minor with the same name as their nominated major, and Level II and III courses cannot be double-counted between majors and minors. More than one minor may be completed subject to the limit on double-counting. Students must declare their minor(s) before their final term.

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