Double Degree

Actuarial Studies / Information Systems

3671  |  192 Units of Credit

Overview

Actuarial Studies is concerned about more than just mathematics and numbers. It combines study in mathematics, economics, insurance, finance, statistics and programming. This double degree will allow interested students to complement their Actuarial Studies with business analytics.

The analytics skill set is one of the core sub-disciplines of the actuarial profession. The data analytics space is a rapidly evolving area with broad reaching applications. The advent of big data has led to an explosion in captured data, analytics approaches and businesses harnessing this data to create new industries or reinvent the way existing industries operate. Pursuing a joint program in Information Systems allows students to build up their business analytics skills. This will assist students to use modelling and data analysis techniques on large data sets to discover predictive patterns and relationships for business use. Solid skills in programming will also assist students during their actuarial career and actuarial employers report an unmet demand for candidates who have proficient business analytics skills.
Faculty
UNSW Business School

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 Information Systems - BIS

UAC Code
424350

CRICOS Code
0101081
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.

3979 - Information Systems

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.

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**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 3979
Information Systems
Double Degree Structure

Students must complete 192 UOC.

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.

These majors will require UOC to be taken from Business School electives and/or General Education courses. 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

MATHE1  |  66 UOC
Quantitative Data Science

Optional Additional Major/Minor

3586 - Actuarial Studies

Completion of an additional major is optional. Students may choose a maximum of one specialisations listed below.

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

Students in Actuarial Studies/Economics cannot complete an additional ECON-coded major/minor. They must complete ECONA1, ECONJ1 or ECONE1 to meet their Economics requirements. Similarly, students in Actuarial Studies/Information Systems cannot complete INFSA1 or INFSA2 as an additional major/minor.
<table>
<thead>
<tr>
<th>Code</th>
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<td>COMMF1</td>
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<td>Real Estate Studies</td>
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<tr>
<td>ECONF1</td>
<td>48</td>
<td>Business Economics</td>
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<tr>
<td>ECONI1</td>
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<td>Business Strategy &amp; Econ Mngmt</td>
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<tr>
<td>ECONJ1</td>
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<td>Financial Economics</td>
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<td>FINSA1</td>
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<td>Finance</td>
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<tr>
<td>FINSR1</td>
<td>48</td>
<td>Financial Technology</td>
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<tr>
<td>IBUSA1</td>
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<td>International Business</td>
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<tr>
<td>INFSA1</td>
<td>48</td>
<td>Information Systems</td>
</tr>
<tr>
<td>MARKA1</td>
<td>48</td>
<td>Marketing</td>
</tr>
<tr>
<td>MGMTA1</td>
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<td>Management</td>
</tr>
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<td>TABLA1</td>
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<td>Business Law</td>
</tr>
<tr>
<td>TABLC1</td>
<td>48</td>
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<td><strong>MINOR:</strong></td>
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<td>ACCTA2</td>
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</tr>
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<td>MGMTH2</td>
<td>30</td>
<td>Human Resource Management</td>
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</table>
**Level 1 Core Courses**

3586 - Actuarial Studies

Students must take 54 UOC of the following courses.

**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.

ACTL2102 | 6 UOC
Foundations of Actuarial Models

ACTL2111 | 6 UOC
Financial Mathematics for Actuaries

ACTL2131 | 6 UOC
Probability and Mathematical Statistics

Business Core Courses

3979 - Information Systems

Students must complete 24 UOC of the following courses.

Please note: For students in the Actuarial Studies/Information Systems or Commerce/Information Systems dual degrees; the Business core courses will be covered as part of the Actuarial Studies or Commerce component

Students in Commerce/Information Systems have the option to complete either ECON1203 or MATH1041 for their Business Core Course requirement but should not complete both.

Students in the Actuarial Studies/Information Systems must complete MATH1251 within the Actuarial Studies component which will fulfil the ECON1203/MATH1041 Core Course requirement.

ACCT1501 | 6 UOC
Accounting and Financial Management 1A

ECON1101 | 6 UOC
Microeconomics 1
MGMT1001  |  6 UOC
Managing Organisations and People

One of the following:
ECON1203  |  6 UOC
Business and Economic Statistics

MATH1041  |  6 UOC
Statistics for Life and Social Sciences

**Information Systems core courses**

3979 - Information Systems

Students must take 72 UOC of the following courses.

INFS1602  |  6 UOC
Digital Transformation in Business

INFS1603  |  6 UOC
Introduction to Business Databases

INFS1609  |  6 UOC
Fundamentals of Business Programming

INFS2603  |  6 UOC
Business Analysis

INFS2605  |  6 UOC
Intermediate Business Programming

INFS2608  |  6 UOC
Database Management & Big Data Infrastructures

INFS2621  |  6 UOC
Enterprise Systems
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<tr>
<th>Course Code</th>
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<th>Course Title</th>
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<tr>
<td>INFS3603</td>
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<td>Introduction to Business Analytics</td>
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<tr>
<td>INFS3604</td>
<td>6</td>
<td>Business Process Management</td>
</tr>
<tr>
<td>INFS3605</td>
<td>6</td>
<td>Information Systems Innovation &amp; Transformation</td>
</tr>
<tr>
<td>INFS3617</td>
<td>6</td>
<td>Networking &amp; Cyber Security</td>
</tr>
<tr>
<td>INFS3634</td>
<td>6</td>
<td>Mobile Applications Development</td>
</tr>
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</table>

**Level 3 Actuarial Electives**

3586 - Actuarial Studies

Students must complete 18 UOC of the following courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>UOC</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ACTL3141</td>
<td>6</td>
<td>Actuarial Models and Statistics</td>
</tr>
<tr>
<td>ACTL3142</td>
<td>6</td>
<td>Actuarial Data and Analysis</td>
</tr>
<tr>
<td>ACTL3151</td>
<td>6</td>
<td>Life Contingencies</td>
</tr>
<tr>
<td>ACTL3162</td>
<td>6</td>
<td>General Insurance Techniques</td>
</tr>
<tr>
<td>ACTL3182</td>
<td>6</td>
<td>Asset-Liability and Derivative Models</td>
</tr>
</tbody>
</table>
Students in the combined Actuarial Studies/Commerce dual degree must complete 42-48 UOC of Business School electives overall depending on the Commerce major.

Students in the combined Actuarial Studies/Economics dual degree must complete 36 UOC of Business School electives overall.

Students in the combined Actuarial Studies/Information Systems dual degree must complete 18 UOC of Business School electives overall.

any course offered by UNSW Business School

Students must complete 6 UOC of General Education for the Actuarial component of the dual degree however must complete 12 UOC of General Education in the degree overall.

Please note: Students enrolled in programs within the UNSW Business School cannot take General Education courses offered by the UNSW Business School (i.e. GENC code). These restrictions also apply to the following courses:

GENL2021 An Introduction to the Australian Legal System
GENL2032 Cyberspace Law 2.0

any General Education course

Students must take at least 6 UOC of any General Education course. 12 UOC of
General Education must be completed overall in the program.

Please note: Students enrolled in programs within the UNSW Business School cannot take General Education courses offered by the UNSW Business School (i.e. GENC code). These restrictions also apply to the following courses:

GENL2021 An Introduction to the Australian Legal System
GENL2032 Cyberspace Law 2.0

any General Education course

**Minimum Faculty UOC Requirement**

3586 - Actuarial Studies

Students must complete 90 UOC of Business School courses within the Actuarial Studies component however must complete 180 UOC of Business School courses across the degree.

any course offered by UNSW Business School

**Minimum Information Systems and Business UOC**

3979 - Information Systems

Students must complete 90 UOC of Business Courses for the Information Systems component of the double degree.

Students in Actuarial Studies/Information Systems will complete 18 UOC of Business School electives overall. Students in Commerce/Information Systems will complete 18-30 UOC of Business School electives (depend on Commerce major) overall.

Students completing Commerce/Information Systems or Actuarial Studies/Information Systems dual degrees must complete, at minimum 180 UOC from the Faculty of Business with another 12 UOC to be completed as General Education for a total of 192 UOC for degree award.

any course offered by UNSW Business School

any course offered by School of Information Systems and Technology Management

**Maximum Level 1 UOC Requirement**

3979 - Information Systems
No more than 72 UOC (not including 12 UOC of General Education courses) in Level 1 courses will be counted towards the degree overall.

Any level 1 course offered by UNSW Business School

Maximum Level 1 UOC

3586 - Actuarial Studies

Students may complete up to a maximum of 72 UOC of Level 1 courses in the overall double degree, excluding Level 1 completed as part of the General Education requirement in the double degree.

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.

Level 2 and 3 Maturity Requirements

3979 - Information Systems

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

SAS Certification Requirements

3979 - Information Systems

Students who have successfully completed these five courses at UNSW are eligible for receiving a joint certification issued by SAS and UNSW as a Business Analyst. For SAS JCP, INFS3603, INFS3830, and INFS3873 need to be completed at UNSW (Course substitutes and cross-institutional studies are not eligible for SAS JCP).

- INFS1603 Introduction to Business Databases (6 UOC)
- INFS2608 Database Management & Big Data Infrastructures (6 UOC)
- INFS3603 Introduction to Business Analytics (6 UOC)
- INFS3830 Social Media and Analytics (6 UOC)
- INFS3873 Business Analytics Methods (6 UOC)

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