Centre for Actuarial Studies

Department of Economics

Master of Actuarial Science
Master of Actuarial Science (enhanced)
Master of Actuarial Science (extended)

Students' Guide 2026

19 February 2026

Contents

1. Introduction

The Centre for Actuarial Studies has produced this guide to assist students **commencing the Master of Actuarial Science, Master of Actuarial Science (extended) and Master of Actuarial Science (enhanced) in 2026**. The guide is intended to provide information on various questions that you may have as you complete your studies, as well as give you some general information about the assistance available to you.

The guide is divided into a number of sections. A short description of each section is set out below, while the various issues that are addressed can be quickly accessed by use of the contents page.

2. *Course Planning*

   This section includes details about the subjects you should take as part of your degree.

3. *Actuarial Subjects*

   This section outlines a number of issues that are specifically related to the subjects offered by the Centre for Actuarial Studies.

4. *Other Issues*

   This section covers miscellaneous issues that you may find important, such as how to find out about potential employment opportunities, where you can seek assistance if you are struggling to cope with your course and what the Actuarial Students' Society does.

5. *Qualifying as an Actuary*

   This section provides an overview of how to qualify as a Fellow or Associate of the Actuaries Institute. It includes information about how subjects offered as part of your degree correspond with subjects required by the Actuaries Institute and how exemptions can be obtained from Actuaries Institute subjects. Details on how to join the Actuaries Institute are also contained in this section.

6. *Staff of the Centre for Actuarial Studies*

   Centre staff contact details are included in this section, as well as their photos.

   We hope you find this guide useful and informative. It may be updated from time-to-time. If you have any suggestions about how the guide can be improved, please pass them to the staff at the Centre for Actuarial Studies.

You should note that while this guide is intended to provide information to you, it is not a legal document and does not replace or override the guidelines and information set out in official University publications.

The Centre for Actuarial Studies is not responsible for any actions taken by you on the basis of information set out in this document. You should refer to official University publications and information tools for complete up to date information and direction.

2. Course Planning

2.1. Master of Actuarial Science

You need to complete 150 credit points to complete the Master of Actuarial Science degree. Most University of Melbourne subjects are worth 12.5 points. The Master of Actuarial Science degree has eight core subjects (including two capstone subjects) and four elective subjects.

The following advice is based on the assumption that a student wishes to obtain as many exemptions as possible from the professional exams of the Actuaries Institute. What you actually study will depend on your previous studies.

The eight core subjects together with three electives specified later cover all material for the Foundation Program of the Actuaries Institute.

For students who have previously studied Probability and Statistics, a sample course plan with three semesters of study is shown below.

Course Plan for the Three Semesters	
First Semester	
ACTL90001 (core)	Mathematics of Finance I
ACTL90006 (core)	Life Insurance Models I
ACTL90023 (elective)	Data Analytics in Insurance 1
ACCT90042 (elective)	Accounting and Finance for Actuaries
Second Semester	
ACTL90002 (core)	Mathematics of Finance II
ACTL90007 (core)	Life Insurance Models II
ACTL90005 (capstone)	Life Contingencies
ACTL90021 (core)	Topics in Insurance and Finance
Third Semester	
ACTL90003 (core)	Mathematics of Finance III
Elective	
ACTL90020 (capstone)	General Insurance Modelling
ACTL90022 (elective)	Economics for Actuaries

Electives that count for exemptions are:

ACTL90022 Economics for Actuaries (CB2, Foundation Program)
ACCT90042 Accounting and Finance for Actuaries (CB1, Foundation Program)

2.2. *Master of Actuarial Science (enhanced)*

You need to complete 200 credit points to complete the Master of Actuarial Science (enhanced) degree. Most University of Melbourne subjects are worth 12.5 points. The Master of Actuarial Science (enhanced) degree has eight core subjects (including two capstone subjects) and eight elective subjects.

The following advice is based on the assumption that a student wishes to obtain as many exemptions as possible from the professional exams of the Actuaries Institute. What you actually study will depend on your previous studies.

The eight core subjects, together with three electives specified later, cover all material for the Foundation Program of the Actuaries Institute. There are three elective subjects that cover half of the Actuary Program of the Actuaries Institute. Permission to enrol in these three subjects is required from the Program Director, and these subjects must not be taken in the first year of the degree.

For students who have previously studied Probability and Statistics, a sample course plan with two years of study is shown below.

First Year	
First Semester	
ACTL90001 (core)	Mathematics of Finance I
ACTL90006 (core)	Life Insurance Models I
ACTL90023 (elective)	Data Analysis in Insurance 1
ACCT90042 (elective)	Accounting and Finance for Actuaries
Second Semester	
ACTL90002 (core)	Mathematics of Finance II
ACTL90005 (capstone)	Life Contingencies
ACTL90007 (core)	Life Insurance Models II
ACTL90021 (core)	Topics in Insurance and Finance
Second Year	
First Semester	
ACTL90003 (core)	Mathematics of Finance III
ACTL90010 (elective)	Actuarial Practice and Control I
ACTL90020 (capstone)	General Insurance Modelling
ACTL90022 (elective)	Economics for Actuaries
Second Semester	
ACTL90008 (elective)	Statistical Techniques in Insurance
ACTL90011 (elective)	Actuarial Practice and Control II
ACTL90019 (elective)	Data Analytics in Insurance 2
Elective	

Electives that count for exemptions are:

ACTL90008 Statistical Techniques in Insurance (CS1, Foundation Program)
ACTL90022 Economics for Actuaries (CB2, Foundation Program)
ACCT90042 Accounting and Finance for Actuaries (CB1, Foundation Program)
ACTL90010 Actuarial Practice and Control I (ACC, Actuary Program)
ACTL90011 Actuarial Practice and Control II (ACC, Actuary Program)
ACTL90019 Data Analytics in Insurance 2 (DSP, Actuary Program)

*2.3. Master of Actuarial Science (*extended*)*

You need to complete 200 credit points to complete the Master of Actuarial Science (extended) degree. Most University of Melbourne subjects are worth 12.5 points. The Master of Actuarial Science (extended) degree has eight core subjects, two capstone subjects and six elective subjects.

The two-year Master of Actuarial Science (Extended) is designed to provide non-actuarial graduates, who do not have a background in probability and statistics, with their initial education in actuarial studies. It's suitable for graduates who have mathematical specialisations (e.g. mathematics, physics or engineering) in their undergraduate studies.

The following advice is based on the assumption that a student wishes to obtain as many exemptions as possible from the professional exams of the Actuaries Institute. What you actually study will depend on your previous studies.

The program is designed to provide exemptions towards the Foundation Program of the Actuaries Institute.

For students without previous studies in Probability and Statistics, a sample course plan with two years of study is shown below.

First Year	
First Semester	
ACTL90001 (core)	Mathematics of Finance I
MAST20004 (core)	Probability
ACCT90042 (elective)	Accounting and Finance for Actuaries
ACTL90022 (elective)	Economics for Actuaries
Second Semester	
ACTL90002 (core)	Mathematics of Finance II
MAST20005 (core)	Statistics
ACTL90021 (core)	Topics in Insurance and Finance
Elective	
Second Year	
First Semester	
ACTL90003 (core)	Mathematics of Finance III
ACTL90006 (core)	Life Insurance Models I
ACCT90023 (elective)	Data Analytics in Insurance 1
ACTL90020 (capstone)	General Insurance Modelling
Second Semester	
ACTL90005 (capstone)	Life Contingencies
ACTL90007 (core)	Life Insurance Models II
ACTL90008 (elective)	Statistical Techniques in Insurance
ACTL90019 (elective)	Data Analytics in Insurance 2

Electives that count for exemptions are:

ACTL90008 Statistical Techniques in Insurance (CS2, Foundation Program)
ACTL90022 Economics for Actuaries (CB2, Foundation Program)
ACCT90042 Accounting and Finance for Actuaries (CB1, Foundation Program)
ACTL90019 Data Analytics in Insurance 2 (DSP, Actuary Program)

3. Actuarial Subjects

There are a number of issues that are specifically related to the subjects offered by the Centre for Actuarial Studies. Information about these is set out below.

3.1. Syllabus

The subjects offered by the Centre for Actuarial Studies are set out in the University Handbook, see

https://handbook.unimelb.edu.au/faces/htdocs/user/search/SimpleSearch.jsp .

3.2. Assessment

How are the actuarial subjects assessed?

Like most University subjects, actuarial subjects are assessed by the lecturer in charge in accordance with the criteria set out in the University Handbook.

All subjects are currently assessed by an end of semester examination, and most subjects also have a mid-semester examination and assignments forming part of the assessment.

Grades (and marks) are set by the lecturer in charge and scrutinised by all Centre Staff at an examiners' meeting before results are released.

Hurdle requirement: To pass subjects with a final exam hurdle requirement, students must pass all the final exams. This is not required in ACTL90010 and ACTL90011 from 2022 onwards.

Are marks for all students standardised?

No. Marks in each subject are not adjusted to fit a specified distribution. This means that if all students achieve a standard of H1, then all students will receive this grade. Likewise, if no student achieves the performance required for an H1 grade, this grade will not be awarded.

What can I do if I do not agree with the final grade that I receive?

If you have concerns with your assessment in a particular subject, you can request to view your exam paper. Such a request should be made as soon as you know the result.

To do this, you need to complete a form detailing the reasons why you wish to view your paper. This form is available on the Economics Department web site after the end of each semester. Staff will arrange a time for you to view your paper.

You should note, however, that the University has issued a directive to staff that a mark should not change unless an answer has not been marked or marks have been incorrectly added. Viewing an exam script is not an opportunity to argue for more marks. It is simply an opportunity to receive high level feedback about your performance.

Can I apply for special consideration?

If your circumstances are such that you are unable to sit an examination or if you believe that your performance has been affected by some significant event, you can apply for special consideration.

To apply for special consideration, you must complete the application online through your Student Portal at https://my.unimelb.edu.au and return the Health Professional Report (HPR) Form.

Before completing an online application, students should read the Special Consideration information available at

https://students.unimelb.edu.au/your-course/manage-your-course/exams-assessments-and-results/special-consideration

There are time limits involved in submitting an application for Special Consideration. If you are awarded a special exam, you will have to sit this exam at very short notice within the supplementary exam period.

3.3. Resources

What resources are available to me to assist my study program?

Each lecturer will outline resources that are available for specific subjects. These will include prescribed texts and recommended reading lists. Items such as tutorial questions, past examination papers and popular reading materials may also be available on reserve at the Giblin Eunson Library, depending on the lecturer in charge.

From a general perspective, actuarial texts are available in the Baillieu Library and in the Giblin Eunson Library under the Dewey code 368. Actuarial journals are available online from the library.

The Centre for Actuarial Studies home page on the internet is also a useful resource, with links to relevant websites. The website address is

http://fbe.unimelb.edu.au/economics/ACT .

What computer resources are used in Actuarial Studies?

Software used in actuarial subjects includes Excel, the **R** Project for Statistical Computing, and Python. Access to the internet is also available via the University computer network.

Where are the computer laboratories and what are their hours of operation?

GSBE students have access to the Graduate Computing Laboratory, Level 4, The Spot, and to the FBE Student Open Access Computing Space in 233 Bouverie St. Opening hours are subject to change.

Where are the libraries?

The Giblin Eunson Library is located on the ground floor of the FBE building, 111 Barry St.

The Baillieu Library is adjacent to the Arts West building. Library opening hours change over time and are different during non-teaching periods; current opening hours are posted on http://library.unimelb.edu.au/hours .

3.4. Prizes and Scholarships

Are there any scholarships available for actuarial students?

The Faculty of Business and Economics offers some scholarship assistance to students with good academic records. These are awarded independently of the Centre for Actuarial Studies. For more details, please refer to:

https://fbe.unimelb.edu.au/scholarships

4. Other Issues

4.1. Calculators in Exams

The university's policy is that the only calculator allowed from 1 January 2017 is

Casio FX82 (with or without any suffix)

Please note FX8200 is NOT an allowed calculator for exams. The Centre takes this policy very seriously. Any student found to be in breach of this policy will be disciplined.

4.2. Potential Employment

Vacation Work

A number of employers offer vacation work to students over the summer break. These short-term jobs can lead to offers of full-time employment in the longer term.

You can approach firms directly to see if they have any openings for you on either a vacation or full-time work basis. A list of potential employers can be obtained from the Actuarial Students' Society.

Employment on Graduation

Actuaries work with a number of employers, including:

- consulting firms
- life insurance companies
- general insurance companies
- health insurance companies
- investment companies
- merchant banks
- stockbrokers
- governments
- universities

Job opportunities with employers seeking graduates may be announced during lectures.

The Actuarial Students' Society organises a number of functions to facilitate meetings between students and actuaries and these are also a valuable source of job opportunities.

4.3. Guidance and Assistance

You may need some help with a number of issues throughout your studies. You may be having some problems in planning your course or you may wish to discuss career opportunities. You may simply be falling behind in your studies due to circumstances beyond your control and you may need someone to talk to.

Student Counselling

The University provides a student counselling service located at Level 2, 138 Cardigan Street in Carlton. The contact number is (03) 8344 6927 or see

http://services.unimelb.edu.au/counsel .

Language Skills

If English is not your first language, you may require some assistance to ensure that your written work is grammatically correct. The English as a Second Language (ESL) program can provide you with assistance in this area.

Go to http://languages-linguistics.unimelb.edu.au/areas/esl .

4.4. Actuarial Students' Society

The Actuarial Students' Society is a student body which operates independently of the Centre for Actuarial Studies. The major aim of the Society is to bring the students closer to the actuarial community. They organise a variety of functions with practicing actuaries working in business, including guest lectures, formal luncheons and the annual "Contact Night". These functions provide a great opportunity for students to meet potential employers and can lead to job opportunities.

The Society's other major objective is to create an enjoyable sociable atmosphere for actuarial students via BBQs, pizza nights, movie nights and an end of year party. Their events are announced to students in class, and their website is

http://www.melbourneactuary.com .

4.5. Keeping Up to Date

It is important that you use your university email account and check it regularly.

5. Exemptions and Qualification Pathway

5.1. Exemptions

What are the exemption subjects and what level is required?

If you complete certain subjects at the University of Melbourne and achieve a sufficiently high standard, you will be recommended for exemption from the corresponding Actuaries Institute subjects.

Guides on exemption from professional exams and pathway to qualification are detailed here https://fbe.unimelb.edu.au/economics/act/courses/exemption_information

The tables below set out the correspondence between subjects studied in BCom and the Honour year and the Actuaries Institute's subjects.

Institute Subject		University Subject
Foundation Program		
CM1	Actuarial Mathematics 1	ACTL90001 Mathematics of Finance I ACTL90005 Life Contingencies
CM2	Financial Engineering and Loss reserving	ACTL90021 Topics in Insurance and Finance ACTL90002 Mathematics of Finance II ACTL90003 Mathematics of Finance III
CS1	Actuarial Statistics 1	MAST20004 Probability MAST20005 Statistics ACTL90008 Statistical Techniques in Insurance
CS2	Risk Modelling and Survival Analysis	ACTL90006 Life Insurance Models I ACTL90007 Life Insurance Models II ACTL90020 General Insurance Modelling
CB1	Business Finance	ACCT90042 Accounting and Finance for Actuaries
CB2	Business Economics	ACTL90022 Economics for Actuaries
Actuary Program		
Actuarial Control Cycle		ACTL90010 Actuarial Practice and Control I ACTL90011 Actuarial Practice and Control II
Data Analytics Principles		ACTL90019 Data Analytics in Insurance 2

5.2. Qualification pathway

How do I qualify as an Actuary?

Completing the Master of Actuarial Science degree does not mean that you are qualified as an actuary. Rather, you will have some actuarial skills and may be part-way through the

qualification process. The governing body of the actuarial profession sets the criteria necessary to qualify as an actuary.

The requirements to qualify as an actuary depend on which professional body you join, *e.g.* Australian, British or American. However, all professional bodies generally require you to complete two types of examination: core examinations that equip you with the basic skill set necessary for an actuary; and practical examinations where you are required to apply the basic skill set and use judgment in a practical environment.

To qualify as a Fellow of the Actuaries Institute (FIAA), you must complete three areas of study.

Foundation Program

The Actuaries Institute requires you to complete the *Foundation Program* which includes six subjects: CS1, CS2, CM1, CM2, CB1 and CB2. These six subjects corresponded to subjects taught at the University of Melbourne. If you performed sufficiently well, you were recommended for exemption from the subjects offered by the Actuaries Institute (see exemptions).

Actuary Program

The aim of this part of the qualification is to introduce a generalised actuarial approach to a range of commercial problems. It introduces areas of practice and provides an insight into how actuarial techniques can be used in non-traditional fields.

The Actuaries Institute requires students to complete the *Actuary Program* which comprises four subjects:

- Actuarial Control Cycle
- Data Science Principles
- Asset and Liability Management
- Communication, Modelling and Professionalism

The University of Melbourne offers ACTL90010 Actuarial Practice and Control I, and ACTL90011 Actuarial Practice and Control II for the exemption of the Actuarial Control Cycle and ACTL90019 Data Analytics in Insurance 2 for the exemption of Data Science Principles. A high enough average mark must be achieved in university subjects in order to obtain an exemption from subjects in the *Actuary Program* (see exemptions).

Asset and Liability Management and Communication, Modelling and Professionalism are delivered by the Actuaries Institute.

Fellowship Program

The Fellowship Program is examined directly by the Actuaries Institute and is not currently taught in universities. It covers topics in various actuarial practice areas, such as banking, investments, risk management, life insurance, general insurance, health insurance, retirement income systems, and data science and AI. The *Fellowship Program* comprises three half-year modules delivered in an online format. Student experience will be enriched through improved learning resources, teaching, assessment, and feedback. More details may be found on the Actuaries Institute's website:

https://www.actuaries.asn.au/education-program/fellowship.

Is the FIAA qualification recognised in other countries?

The Actuaries Institute currently holds mutual recognition agreements with the following actuarial associations:

Canadian Institute of Actuaries (CIA)
Casualty Actuarial Society (CAS)
Institute and Faculty of Actuaries (IFoA)
Institute of Actuaries of India (IAI)
New Zealand Society of Actuaries (NZSA)
Society of Actuaries (SoA)
Society of Actuaries in Ireland (SAI)
Actuarial Society of South Africa (ASSA)

If you have obtained FIAA from the Actuaries Institute, you can apply for consideration as a Fellow of an actuarial association listed above under corresponding mutual recognition agreements.

How to become an Associate of the Actuaries Institute?

To become an Associate of the Actuaries Institute, you need to:

- Pass all components of the new Actuary Program; and
- Complete one year of relevant work experience.

How does *Foundation Program* correspond with international courses?

The syllabi of the *Foundation Program* are equivalent to the syllabi of the Core Principles subjects (CS1, CS2, CM1, CM2, CB1, CB2) offered by the IFoA. To obtain credits from IFoA subjects, details may be found at:

https://actuaries.org.uk/qualify/become-an-actuary/transfer-of-prior-learning/

There are also similarities between the course offered by the Society of Actuaries in the USA and the Foundation Program of the Australian course. You can apply for exemptions from some of the Society of Actuaries' subjects if you have completed some or all of the Foundation Program. More details may be found at "Examinations Passed with Other Actuarial Organizations" section in the following link:

https://www.soa.org/education/general-info/default/

6. Staff of the Centre for Actuarial Studies

6.1. Contact Details

The Centre for Actuarial Studies is located on the third floor of the Faculty of Business and Economics Building at the University of Melbourne.

General enquiries:
Telephone: (03) 8344 5289, (03) 8344 5355
Facsimile: (03) 8344 6899
Email: econ-actenquiries@unimelb.edu.au

Postal Address:
The Centre for Actuarial Studies
Department of Economics
The University of Melbourne
Vic 3010

The Centre for Actuarial Studies website is http://fbe.unimelb.edu.au/economics/ACT .

6.2. Members of Staff

Director of the Centre for Actuarial Studies

Prof. Rui Zhou
(03) 8344 8719
rui.zhou@unimelb.edu.au

Professors of Actuarial Studies

Professor Benjamin Avanzi	(03) 8344 8667 b.avanzi@unimelb.edu.au
Professor Shuanming Li	(03) 83445616 shli@unimelb.edu.au
Professor David Pitt	(03) 8344 4728 david.pitt@unimelb.edu.au

Associate Professor in Actuarial Studies

A/Prof. Enrique Calderin	(03) 8344 8176 enrique.calderin@unimelb.edu.au
A/Prof. Ping Chen	(03) 9035 8053 ping.chen@unimelb.edu.au
A/Prof. Han Li	(03) 8344 4655 han.li@unimelb.edu.au
A/Prof. Chong It Tan	chongit.tan@unimelb.edu.au
A/Prof. Xueyuan Wu	(03) 8344 7939 xueyuanw@unimelb.edu.au

Senior Lecturers in Actuarial Studies

Dr. Hamza Hanbali	hamza.hanbali@unimelb.edu.au
Dr. Yuyu Chen	(03) 8344 5928 yuyu.chen@unimelb.edu.au

Lecturer in Actuarial Studies

Mr. Vincent Lau	vincent.lau.1@unimelb.edu.au

Emeritus Professor

Professor David Dickson	dcmd@unimelb.edu.au

Honorary Senior Fellow

Mr. David Heath	dnheath@unimelb.edu.au

Master of Actuarial Science contacts
Academic Program Director

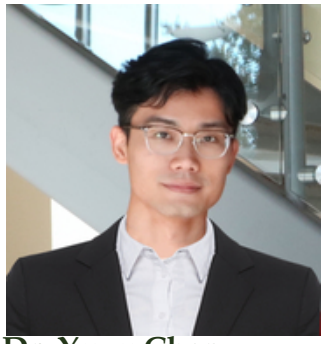
A/Prof. Xueyuan Wu
(03) 8344 7939
xueyuanw@unimelb.edu.au

For ALL enrolment related inquiries, please contact Stop 1.
For general information, please see http://ask.unimelb.edu.au/


Prof. Benjamin Avanzi

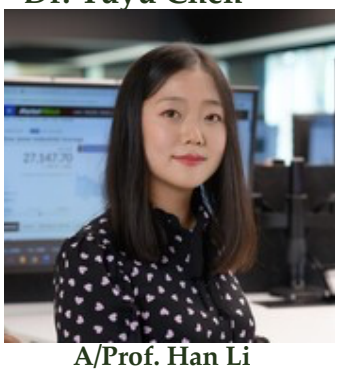

Dr. Enrique Calderin


A/Prof. Ping Chen


Dr. Yuyu Chen


Mr. Vincent Lau


Dr. Hamza Hanbali


A/Prof. Han Li


Prof. Shuanming Li


Prof. David Pitt


A/Prof. Chong It Tan


A/Prof. Xueyuan Wu


Prof. Rui Zhou