

AS9424B Course Outline

1. Course Information

Title: Short-term Actuarial Mathematics I

Lecture hours and location: MWF 9:30 am-10:30 am; WSC 240

Office hours: MWF 10:30 pm-11:30 am.

Classes Start	Reading Week	Classes End	Study day(s)	Exam Period
Jan 6	Feb 17 – 21	Apr 4	Apr 5-6	Apr 7-30

Jan 14: Last day to add a second-term half course or drop a course without showing WDN

Mar 30: Last day to withdraw from a second-term half course without academic penalty.

Course Description: In this course, we study mathematic models for insurance loss frequency, severity, and aggregate losses. We also study the effects of policy modifications in detail.

This course covers part of the materials required by SOA's FAM and ASTAM exams.

2. Instructor Information

Instructors	Email	Office	Phone	Office Hours
Dr. Jiandong Ren	jren6@uwo.ca	WSC219	88209	MWF 10:30-11:30am

Students must use their Western (@uwo.ca) email addresses when contacting their instructors.

3. Code of Conduct for Canadian Institute of Actuaries (CIA)

The CIA accreditation program will not apply to Graduate programs in Western. If you plan to become a fully qualified actuary, then you will need to continue to write and pass the preliminary exams of the SOA.

In addition to the university's internal policies on conduct, including academic misconduct, candidates pursuing credits for writing professional examinations shall also be subject to the Code of Conduct and Ethics for Candidates in the CIA Education System.

<https://www.cia-ica.ca/publications/223159e/>

4. Course Materials

Textbooks

- (1) Klugman, S.A., Panjer, H.H. and Willmot, G.E. (2019). Loss Models: From Data to Decisions, 5th edition, Wiley. Current price on Amazon.ca CAD 213. The textbook is also required by AS4824/9824: STAM II.
- (2) [ASTAM-22-23](#): *Chapter 5* of Quantitative Enterprise Risk Management, 2022, by Hardy, M.R. and Saunders, D. Cambridge University Press, ISBN: 978-1009098465

Reference books

Edward (Jed) Frees: [Loss Data](#) Analytics

Topics covered:

Chapters 2-9 of Textbook (1) and most of the textbook (2).

Course Website

All course material will be posted to OWL Brightspace: <https://westernu.brightspace.com/>

Students are responsible for regularly checking the course OWL site (<https://westernu.brightspace.com/>) for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance with the course OWL site, they can seek support on the [OWL Brightspace Help](#) page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Technical Requirements

SOA-approved non-programmable calculators are required for the midterm tests and the final exam.

5. Methods of Evaluation

Assignments

Some practice questions will be assigned in class to help students understand the material. These questions are important in the preparation for the midterms and the final exam.

Midterms or Tests

Three midterm tests will be given on **Jan 31**, **Feb 28**, and **Mar 21**, respectively, during regular class time. Each midterm is 50 minutes long. The materials covered in the midterm tests are all cumulative.

Final Exam

There will be a 3-hour final exam. Its date and time will be announced by the registrar's office, usually near the first part of March. Students are required to wait until the final exam schedule is posted before planning for travel. Exams will NOT be moved to accommodate students who ignore this requirement.

Both the midterm and the final exams are closed books. The overall course grade will be calculated as listed below:

Midterm Exam 1	15%
Midterm Exam 2	15%
Midterm Exam 3	15%
Final Exam	55%

SOA-approved non-programmable calculators are allowed for the midterm tests and the final exam.

Note that this course is cross-listed with its undergraduate version AS3424. Exam questions for AS9424 may differ by up to 10% from those for AS3424.

General information about missed coursework

You must provide valid documentation for medical-related absences or adequate supporting documentation for non-medical absences to the instructor as soon as possible and no later than 48 hours after the missed assessment.

Documentation for medical illness, when required, must include the completion of a Western Student Medical Certificate (SMC) or, where that is not possible, equivalent documentation, by a health care practitioner.

Evaluation Scheme for Missed Assessments

There will be no make-up exams for a missed midterm. For those who do legitimately miss a midterm and provide the required supporting documentation, the standard practice will be that the weight of the missed midterm will be reassigned to the final exam. If your reason is not deemed valid, then you will receive a mark of 0.

If you miss the Final Exam and your Academic Consideration has been granted, you will be allowed to write the Special Examination (the name given by the University to a makeup Final Exam). See the Academic Calendar for details (under [Special Examinations](#)), especially for those who miss multiple final exams within one examination period.

Additional Statements

Religious Accommodation

When conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible but not later than two weeks prior to the writing or the examination (or one week prior to the writing of the test).

Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays:

<https://www.edi.uwo.ca>.

Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf.

Academic Policies

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf,

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic-related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at

http://academicsupport.uwo.ca/accessible_education/index.html

if you have any questions regarding accommodations.

Learning-skills counsellors at Learning Development and Success (<https://learning.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: <https://www.uwo.ca/se/digital/>.

Additional student-run support services are offered by the USC, <https://westernusc.ca/services/>.