

AS 3429A / 9429A COURSE OUTLINE

The University of Western Ontario

Fall 2021

1. General Course Information

Course Name: Life Contingencies II

Class Schedule: Mondays, Wednesdays and Fridays from 10:30 to 11:20am (first class on September 8th, 2021)

Prerequisite Requirements

A minimum mark of 60% in each of Actuarial Science 2427A/B and Statistical Sciences 2858A/B. Restricted to students enrolled in any Actuarial Science module.

Pre/Corequisite(s): Statistical Sciences 3657A/B

Warning: Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

2. Instructor Information

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| Instructor | Dr. Xiaoming Liu |
| Office | WSC 215 |
| Email | xliu@stats.uwo.ca |
| Phone | Ext. 88233 |
| Office hours | Tuesdays 9:30-10:20am starting from Sept. 14, 2021 |

TAs Yang Miao (ymiao42@uwo.ca) and Dechen Gao (dgao28@uwo.ca)

3. Course Description/Syllabus

Calendar Description

Single life annuity and life insurance loss random variables and their distributions, with applications to the analysis of benefit premiums and reserves; survival model estimates; mortality Improvement and longevity models.

This course is accredited under the Canadian Institute of Actuaries (CIA) University Accreditation Program (UAP) for the 2021-22 academic year. Achievement of the established exemption grade in this course may qualify a student from exemptions from writing certain preliminary exams. Specifically, a combination of this course, Actuarial Science 3431B (each with a minimum of 80%) and Actuarial Science 2427B (minimum grade of 75%) is required to achieve an exemption for preliminary exam LTAM. A mapping between the course coverage and SOA syllabus can be found in an attached document.

Classes begin: September 8, 2021;
Reading Week: November 1–7, 2021;
Classes end: December 8, 2021

Contingency plan for an in-person class pivoting to 100% online learning

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

4. Course Materials

Textbook: *Actuarial Mathematics for Life Contingent Risks (AMLCR)* by Dickson, C.M.D., Hardy, M.R., and Waters, H.R., **2020, 3rd Edition.**

- Chapters 6 and 7 (excluding 6.10, 7.3.5, 7.6, 7.7, 7.10)
- Chapter 18 (18.1-18.4) and 19

A solutions manual for the *AMLCR* text has been published and can be purchased online from Amazon.

Students are responsible for checking the course OWL site (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

All course material will be posted to OWL: <http://owl.uwo.ca>.

If students need assistance with the course OWL site, they can seek support on the OWL 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

[In the case of having to move the course to online platform](#), I will use Zoom to conduct **synchronous online lectures**, and **OneNote's Class Notebook** to give lecture demonstrations. Should that happen, detailed instruction on how to install and use OneNote will be provided via the OWL coursesite.

[In order to effectively participate online classes and office hours through Zoom](#), students need to have a stable internet connection and computer with working microphone and/or webcam. A digital pen that allows you to write on your computer screen will be very convenient thus desirable to have.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Assignments (2 questions per week roughly, 20 questions in total) 10%

Quizzes (2) 36% (18% of each quiz)

Projects (3) 9% (comprehensive questions will be assigned to groups and given one week to complete. Due dates and times are now scheduled as the midnight 12:00am of Oct. 6th, Nov. 10th and Dec. 3rd).

Final Exam 45%

Note: For students from AS9429, you will receive different questions for projects and need to work on the projects individually.

Two in-class quizzes are scheduled on Oct. 15 (Friday) and Nov 17 (Wednesday) tentatively, subject to the Exam Central's confirmation. Quizzes and final exam are proctored and closed book evaluation.

Students should contact the instructor **within two weeks of starting date of the Fall term if they find a conflict with the provided scheduled above.** There will be no possibility if the conflicts are not mentioned before **September 22, 2021.**

There will be no make-up for quizzes. Should students have approved academic consideration for absence of any quizzes or SRA, the weight will be shifted to other proctored evaluations.

There will be a **three-hour final exam** during the final examination period (to be scheduled by the Office of the Registrar).

6. Accommodation and Accessibility

Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The Academic Accommodation for Students with Disabilities policy can be found at: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf

Academic Consideration for Student Absence

Students will have up to two (2) opportunities during the regular academic year to use an on-line portal to self-report an absence during the semester, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 30% or less of the student's final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:

- for exams scheduled by the Office of the Registrar (e.g., December and April exams)
- absence of a duration greater than 48 hours,
- assessments worth more than 30% of the student's final grade,
- if a student has already used the self-reporting portal twice during the academic year

If the conditions for a Self-Reported Absence are *not* met, students will need to provide a Student Medical Certificate if the absence is medical, or provide appropriate documentation if there are

compassionate grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office to obtain more information about the relevant documentation.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For policy on Academic Consideration for Student Absences - Undergraduate Students in First Entry Programs, see:

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

and for the Student Medical Certificate (SMC), see:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the Western Multicultural Calendar:

<https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (see http://www.registrar.uwo.ca/examinations/exam_schedule.html).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See Academic Calendar for details (under [Special Examinations](#)).

7. Academic Policies

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html>, 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 his/her 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:

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

8. Support Services

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

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 Student Accessibility Services (SAS) at (519) 661-2147 if you have any questions regarding accommodations.

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/>.

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.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.

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

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