

# Actuarial Practice AS 4426F / AS 9426A Course Outline

## 1. Course Information

### Course Information

Course Name: Actuarial Practice

Course Number: AS 4426F and AS 9426A

Term: Fall 2022

Location: UCC 67

Time: Tue 8:30 AM – 10:30 AM, Thu 8:30 AM – 9:30 AM

### List of Prerequisites

A minimum mark of 60% in [Actuarial Science 2427A/B](#). Restricted to students who have completed all courses specifically mentioned in the Major in Actuarial Science module.

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 if you are dropped from a course for failing to have the necessary prerequisites.

## 2. Instructor Information

Instructor	Email	Office	Phone	Office Hours
Ashley McAlpine	amcalpi3@uwo.ca	WSC 274	Ext 82771	Tues 11 AM – 12 PM

Students must use their Western (@uwo.ca) email addresses when contacting their instructors. Please contact your instructor through OWL messaging.

If you plan on meeting me during my office hours, please email me in advance to schedule an appointment. This will reduce timing conflicts with other students.

## 3. Course Syllabus, Schedule, Delivery Mode

Introduction to the major areas and issues of actuarial practice, including insurance and annuity product design, pricing and valuation, analysis of the cost of pensions and other employee benefits, asset liability management, enterprise risk management, and professionalism.

### Learning Outcomes

Upon successful completion of this course, students will be able to:

- Understand the various types of insurance products sold in the Canadian market

- Calculate and interpret the results of different reserving methods
- Perform a product design and pricing analysis
- Understand the distinguishing characteristics of both defined contribution and defined benefit pension plans
- Calculate the cost components of a defined benefit pension plan
- Understand the various risks that large scale enterprises face

#### Lecture Schedule:

<b>Week 1</b> - Sept 8	Introduction
<b>Week 2</b> - Sept 13 & 15	Types of Insurance Contracts
<b>Week 3</b> - Sept 20 & 22	Actuarial Standards of Practice, and Financial Elements of Life Insurance and Annuity Contracts
<b>Week 4</b> - Sept 27 & 29	Elements of the Gross Premium Calculation
<b>Week 5</b> – Oct 4 & 6	Measuring Profitability
<b>Week 6</b> - Oct 11 & 13	Life and Annuity Non-forfeiture Benefits
<b>Week 7</b> - Oct 18 & 20	Investment Income Tax and Required Capital
<b>Week 8</b> - Oct 25 & 27	Reinsurance
<b>Week 9</b> - Oct 31 to Nov 6	Reading Week
<b>Week 10</b> - Nov 8 & 10	Pricing, Reserving, and Profitability
<b>Week 11</b> - Nov 15 & 17	Introduction to Pensions, Government Pension Programs
<b>Week 12</b> - Nov 22 & 24	Employer Sponsored Programs, and Pension Funding Basics
<b>Week 13</b> - Nov 29 & Dec 1	Enterprise Risk Management Introduction
<b>Week 14</b> - Dec 6 & 8	Guest Speaker and Review

#### 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, affected course content will be delivered entirely online, either synchronously (i.e. at the times indicated in the timetable) or asynchronously (i.e. 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

Students are required to purchase the following e-book:

<https://www.actexamdriver.com/orderselection.aspx?id=453138583>

#### **Actuarial Aspects of Individual Life Insurance and Annuity Contracts (Third Edition)**

By Albert Easton

Actex Publications (2014)

Students are also required to purchase a digital Imprint package from the bookstore which contains other source materials.

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

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 by phone at 519-661-3800 or ext. 83800.

### **Technical Requirements**

For students who are starting the semester abroad, or in the event of a COVID-19 resurgence, the following technical requirements apply:

- Stable internet connection
- Computer with working microphone
- Zoom

## **5. Methods of Evaluation**

The overall course grade will be calculated as listed below:

Assignments (3)	75%
Final Exam	25%

- Assignment 1 (25%) – Due Oct 6  
Topic: Professionalism and an introduction to life insurance
- Assignment 2 (25%) – Due Nov 10  
Topic: Life insurance pricing and valuation, making observations, inferences, and decisions
- Assignment 3 (25%) – Due Dec 8  
Topic: Pension design and valuation, making observations, inferences, and decisions
- Final Exam (25%) – To be scheduled by the Office of the Registrar (exam period: Dec 10 to 22)  
Format: In person, closed-book, written answer test with cumulative course coverage

### **Rounding of Marks Statement**

Across the Sciences Undergraduate Education programs, we strive to maintain high standards that reflect the effort that both students and faculty put into the teaching and learning experience during this course. All students will be treated equally and evaluated based only on their actual achievement. ***Final grades*** on this course, irrespective of the number of decimal places used in marking individual assignments and tests, will be calculated to one decimal place and rounded to the nearest integer, e.g., 74.4 becomes 74, and 74.5 becomes 75. Marks WILL NOT be bumped to the next grade or GPA, e.g. a 79 WILL NOT be bumped up to an 80, an 84 WILL NOT be bumped up to an 85, etc. The mark attained is the mark you achieved, and the mark assigned; requests for mark “bumping” will be denied.

## 6. Student Absences

If you are unable to meet a course requirement due to illness or other serious circumstances, please follow the procedures below.

### **Assessments worth less than 10% of the overall course grade:**

For work worth less than 10% of the total course grade, the instructor is empowered to grant academic considerations without referring the student to their academic counsellors. If an assessment was missed for valid reasons, the instructor will arrange for a make-up opportunity.

### **Assessments worth 10% or more of the overall course grade:**

For work totalling 10% or more of the final course grade, you must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. For further information, please consult the University's medical illness policy at

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_medical.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf).

The Student Medical Certificate is available at

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf).

Late assessments without approval from academic counselling will be subject to a late penalty of 20%/day, and assessments that are submitted 5 or more days late will not be graded.

Late assessments with approval from academic counselling should be submitted within 24 hours of the last approved day of absence.

### **Absences from Final Examinations**

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (e.g. more than 2 exams in 23-hour period or more than 3 exams in a 47-hour period).

## 7. Accommodation and Accessibility

### **Religious Accommodation**

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at

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

## 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](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf).

## 8. Academic Policies

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

In accordance with policy,

[https://www.uwo.ca/univsec/pdf/policies\\_procedures/section1/mapp113.pdf](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:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf).

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

In the event of another health lock-down, the final exam in this course will be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at:

<https://remoteproctoring.uwo.ca>.

## 9. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling 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](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](mailto: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](http://academicsupport.uwo.ca/accessible_education/index.html)

if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<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/>.