

**ACTUARIAL SCIENCE 1021B**

*Introduction to Financial Security Systems –January-April 2018*

**Instructor Information**

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Office Hours : Mondays, 9:30-11:00 and Thursdays, 1:30 - 3:00.  
Any changes/additions to these hours will be announced in class/posted on OWL/

Lecture Hours: 8:30-9:30 a.m. M/W/F in P&AB 148.

**Course Description**

The nature and cause of financial security and insecurity; public, private and employer programs and products to reduce financial insecurity, including social security, individual insurance and annuities along with employee pensions and benefits.

**Prerequisites/Corequisites:** None

**Textbooks:**

1. There is a CUSTOM TEXTBOOK on sale at the UWO bookstore (about \$85)
  - It contains the relevant pages from the textbook “Morneau Sobeco Handbook of Canadian Pension and Benefit Plans” (16<sup>th</sup> Edition)
2. Various articles on course OWL web page

**Course Objectives:**

What is financial/economic security? At an individual level it refers to your own sense that you can satisfy your basic needs/wants now and in the future

Key question of this course:

**How do we achieve economic security? And what does an actuarial science perspective have to offer in answering this question?**

- Actuaries use math and statistics to create theoretical models of the world around them
- They apply these concrete skills to real life situations and to problems like analyzing future financial events; they create and price insurance products and help design and give advice on government social security programs and company employee benefit plans
- In AS1021 you’ll learn about many social insurance programs & private insurance plans that require actuaries in their creation; such as retirement savings plans, employer pension plans, government social security programs, long-term care insurance, health insurance plans & disability insurance
- The work of actuaries is critical to understanding some of the key components available to Canadians that help them achieve financial security

This course is intended to give you some insight into what constitutes, and what are the causes of, financial insecurity. You will then gain knowledge of the various programs and products that are available to help reduce financial insecurity. You will gain an appreciation for the differences between social/governmental programs and private programs, both on the individual and employer level.

This course is also intended to give you some background on financial products and programs that actuaries have been and are currently involved with so as to give you a “picture” of what actuarial science is all about.

## **Course Outline:**

<b>Topic</b>	<b>Readings **</b>	<b>Where</b>
<b>Module 1. What is financial security and financial insecurity</b>		
Overview of causes	Economic Security and Insecurity Basic Principles of Social Insurance	OWL
Rationale for Social Insurance/Comparison to Private Insurance	Class Notes	
<b>Module 2. Old Age</b>		
Individual – Retirement savings plans	Chapter 14 – pg 415-418:421-425:432-434 See course web page for link	Morneau Handbook** OWL
Employer – Pension plans Group RRSP's	Chapter 1: pg 3 - 24, Chapter 3, Chapter 9:pg 259-273; Chapter 14: pg 418-421	Morneau Handbook
Government – CPP/QPP, OAS, GIS	Chapter 2 See course web page for link	Morneau Handbook OWL
Long Term Care	Long-Term Care Insurance	OWL
<b>Module 3. Poor Health – Medical Needs</b>		
Individual – Individual Health Insurance	Class Notes	
Employer – Group Plans	Chapter 20	To be provided
Government – Provincial hospital plans	Chapter 17 See course web page for link	Morneau Handbook OWL
<b>Module 4. Poor Health – Disability</b>		
Individual – Individual disability insurance	Disability Income Insurance	OWL
Employer – STD and LTD plans	Chapter 21	Morneau Handbook
Government – Worker's Compensation, CPP	Chapter 18 See course web page for link	Morneau Handbook OWL
<b>Module 5. Premature Death</b>		
Overview, principles, importance, definitions	Study notes	OWL
Government – CPP and WC	Review of previous material	
Individual – Individual Insurance	Study notes	OWL
Employer – Group Insurance	Chapter 23	Morneau Handbook
<b>6. Other topics (if or as time permits)</b>		
Insurance Contracts, Employment Insurance, other topics	Study notes	OWL

\*\* custom textbook

**\*\* any updates to reading will be well communicated as we work through the term**

## **Assessment**

### **1. Two Tests**

There will be TWO ONE HOUR tests held during CLASS times on the following dates:

**Monday February 12<sup>th</sup> , 8:20 a.m. to 9:20 a.m.**

**Monday March 19<sup>th</sup> , 8:20 a.m. to 9:20 a.m.**

There will be NO makeup for either test. If you miss either test (for a reason validated by your faculty), the weight will be moved to the final exam.

### **2. Written Report**

There will be a short written project due by the end of the term. More information about the report will be given in class and posted on the course web page later in the term.

### **3. Final Exam:**

The final 3-hour exam will be scheduled by the registrar during the final exam period in April.

**Your course grade will be determined as follows:**

<b>Written Report</b>	<b>10%</b>
<b>Test 1</b>	<b>20%</b>
<b>Test 2</b>	<b>20%</b>
<b>Final Exam</b>	<b>50%</b>

### **Course Website Information:**

Sakai/OWL will be used for this course. Please check this webpage regularly for announcements. A copy of the course outline will also be posted, as well as:

- **Lecture notes/class overheads** (some extra notes will be added to the overheads during class time, so you should come to every class to ensure that you obtain all the important notes)
- **Extra readings (for some topics) that will supplement your class notes**
- **Periodic announcements**
- **Sample/past exams/tests and solutions**
- **Important links** to web pages that cover other topics that you are responsible for
- **Written Report Information** (later in the term)

### **Calculators**

Although this is NOT a mathematical course, you may need a pocket calculator for tests and the exam.

### **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.

Cell phones and all other electronic devices are prohibited during tests, quizzes and exams.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at this website: [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) .

### **Classroom Environment**

Our department has adopted a "Mutual Expectations" policy governing the classroom environment and all work submitted by students. See <http://www.uwo.ca/stats/undergraduate/mutual-expectations.html> for the full policy text. In summary, the policy was developed under the premise that all interactions between students and faculty should be governed by the principles of **courtesy, respect and honesty**.

Computers and other technical devices are to be used only for not taking purposes during class and cell phones should be turned off/on mute.

### **Attendance**

Classroom attendance is viewed as an important part of the learning process. Students are advised that excessive absenteeism may result in the student being debarred from the final examination (see Western Academic Calendar).

### **E-mail communication**

Please use e-mail communication only to provide me with information or to ask a question that requires a very brief response. For more lengthy discussions and for discussions on lectures/course material please see me during my scheduled office hours or by appointment. **If you do e-mail me, please e-mail me from your UWO account only** (as e-mails sent from other addresses often get spammed).

## **Policy on Missed Course Requirements and Student Health and Wellness**

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to your Dean's office as soon as possible, and contact your instructor immediately. If accommodation is approved by your Dean's office, your instructor will be notified, then it is your responsibility to make alternative arrangements with your instructor. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately.

For further information please see: [http://www.stats.uwo.ca/accommodation\\_medical.pdf](http://www.stats.uwo.ca/accommodation_medical.pdf). A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility. The form can be found at: <http://www.stats.uwo.ca/medicalform.pdf>. Or, request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services.

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

**Student Health and Wellness:** As part of a successful student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western's Campus Recreation Centre. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music web page <http://www.music.uwo.ca/>, and our own McIntosh Gallery <http://www.mcintoshgallery.ca>. Information regarding health- and wellness-related services available to students may be found at <http://www.health.uwo.ca/>.

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. Campus mental health resources may be found at [http://www.health.uwo.ca/mental\\_health/resources.html](http://www.health.uwo.ca/mental_health/resources.html).

To help you learn more about mental health, Western has developed an interactive mental health learning module, found here: [http://www.health.uwo.ca/mental\\_health/module.html](http://www.health.uwo.ca/mental_health/module.html). This module is 30 minutes in length and provides participants with a basic understanding of mental health issues and of available campus and community resources. Topics include stress, anxiety, depression, suicide and eating disorders. After successful completion of the module, participants receive a certificate confirming their participation.

**Accessibility:** 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 Services for Students with Disabilities (SSD) at 661-2111 ext. 82147 if you have questions regarding accommodation.

**Support Services:** Learning-skills counsellors at the Student Development Centre (SDC) (<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. Additional student-run support services are offered by the USC, <http://westernusc.ca/services>. The Registrarial Services website is <http://www.registrar.uwo.ca>.