

**ACTU 386**  
 Actuarial Math Lab II  
**Winter 2021**

**Instructor:** Nicolas Gandolfo, ASA  
 Email: [nicolas.gandolfo@concordia.ca](mailto:nicolas.gandolfo@concordia.ca)

**Preface:** **Due to exceptional circumstances, this course will be taught and all assessments will be done completely ONLINE.**

**Extraordinary Circumstances:** In the event of extraordinary circumstances and pursuant to the Academic Regulations, the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the changes.

**Office Hours:** TBA via Zoom (accessible through the course Moodle page).

**Class Schedule:** Thursday 18:00-20:15 via Zoom (accessible through the course Moodle page). There will be video lecture via Zoom during the scheduled course hours and the class notes will be subsequently posted on Moodle.

**Text:** There is no required text.

**Course Evaluation:** Assignments 100%. No midterm/final exam.

**Introduction to Excel (5 weeks) – 35% of the overall score for the course**

Excel			
Introduction to the Basic Concepts Relative to a Pension Plan <ul style="list-style-type: none"> <li>• Types of pension plans</li> <li>• Normal Cost</li> <li>• Actuarial Liability</li> </ul>	Commonly Used functions Lookup functions Move, Copy and Edit methods Window Options	Creating a chart Formatting a chart Functions related to dates Find and Replace functions Sort functions Subtotal functions AutoFilter functions Pivot Table functions Protection features	Control objects Functions related to text VBA – User defined functions Iterative functions Comments Data Form functions Audit functions Error messages
Excel Environment Others actuarial uses of Excel	Undo function Help functions		

**Introduction to Access (5 weeks) – 35% of the overall score for the course**

Access			
Access Environment Creating a database Editing a table Getting info in and out of a database	Creating Forms Sort and Filter functions Queries SQL queries	Keeping the information accurate Reports Sharing the database Security	Pages and Modules

**Introduction to Axis (3 weeks) – 30% of the overall score for the course**

Axis	
Introduction to the basic concepts relative to life insurance <ul style="list-style-type: none"> <li>○ Definition of life insurance</li> <li>○ Different types of coverage available                             <ul style="list-style-type: none"> <li>▪ term vs Whole life</li> <li>▪ universal vs. traditional</li> <li>▪ lapse supported product</li> </ul> </li> </ul> Actuarial roles in an insurance company	Introduce the concept of modules, datasets Learn how to navigate within AXIS Describe the concepts of Funds, Subfunds and Cells Describe the mechanics of a cell Learn to use certain functionalities: overrides, filters, etc... Work through a case study of how Axis can be used to price a simple life insurance plan.

**Academic Integrity and the Academic Code of Conduct**

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: [concordia.ca/students/academic-integrity](http://concordia.ca/students/academic-integrity)." [Undergraduate Calendar, Sec 17.10.2]

**Behaviour**

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

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**Extraordinary circumstances**

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