

## Economics 311 (L02) (Computer Applications in Economics)

Instructor: Taylor MacPherson  
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Lecture Location: Delivered over ZOOM  
Lecture Days/Time: TR 17:00 – 18:15

Office: SS 338  
Office Hours: M: 2:00-3:00, F: 1:00-2:00,  
or by appointment

Winter 2023

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### Course Description:

The main goal of this blended learning course is to provide proficiency in practical applications of economics using computers. Students learn about the elementary and advanced features of spreadsheets using Excel and using the economic databases to find economic data. Examples will be drawn from Engineering Economics and Financial Economics.

### Course Learning Outcomes:

By the end of the course students are supposed to be

- Literate in Excel (comprehend terminology, apply appropriate techniques) for various types of data summaries and analysis
- Able to obtain data from various sources and import it into Excel. This includes selecting and using the appropriate format for graphing different types of data;
- Able to explain the time value of money, the underlying concepts, and to assess loans, mortgages, bonds, term deposits and other business projects using multiple methods in Excel;
- Able to defend his/her choice of the most profitable alternative, and to perform a sensitivity analysis using advanced Excel techniques;
- Able to use advanced Excel database tools to compile, summarize, and organize data including PivotTables

**Course Outline:**

<b>Introduction and Lecture 1</b>	
Jan 10 – 12, 2023	Introduction to Spreadsheets with Graphs and Charts. Graphing and summarizing data using Excel.
<b>Lecture 2</b>	
Jan 17 – 24, 2023	Managing Data <ul style="list-style-type: none"> <li>• Organizing Data Sets</li> <li>• Data Analysis and Functions</li> <li>• Charts</li> </ul>
<b>Lecture 3</b>	
Jan 26 – Feb 14, 2023	Basic Concepts of Financial Economics, Financial Tools and Functions <ul style="list-style-type: none"> <li>• Interest Rates</li> <li>• Mortgage Loans</li> <li>• Present Worth Analysis</li> </ul>
Feb 23, 2023	<b>Midterm Test</b>
<b>Lectures 4 &amp; 5</b>	
Feb 16 – March 2, 2023	Project Evaluation <ul style="list-style-type: none"> <li>• Cash Flow Analysis</li> <li>• Sensitivity Analysis</li> </ul>
<b>Lectures 6 – 9</b>	
March 7 – 30, 2023	Database Management Applications <ul style="list-style-type: none"> <li>• Database Tools</li> <li>• Statistical Functions</li> <li>• Statistical Functions for Databases</li> <li>• Pivot Tables</li> <li>• Pivot Charts</li> </ul> Downloading economic data from CANSIM II, OECD, and other web sources and importing it into Excel.
<b>If Time Allows – Lecture 10</b>	
April 4 – 11, 2023	Visual Basic for Applications <ul style="list-style-type: none"> <li>• Basics of programming in Excel</li> <li>• Review</li> </ul>

**Prerequisites/corequisites:**

Economics 201.

**Required Textbook(s):**

None.

**Recommended Textbook(s):**

Carey, P. (2020). *New Perspectives Microsoft® Office 365 & Excel 2019: Comprehensive*. Nelson Publisher.

**Books on Reserve:**

The list of reserve titles, if any, is posted at the course D2L site.

**Desire2Learn:**

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <http://d2l.ucalgary.ca> through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. These e-mails go to your University of Calgary e-mail addresses only.

**Grade Determination:**

MIDTERM EXAM	20%
FINAL EXAMINATION	35%
Assignments (3)	30%
TERM PROJECT	15%
	<hr/>
	100%

**Examination Details:**

The midterm will be multiple choice / fill-in-blank completed online in D2L. The exam is designed and intended to be completed in 75 minutes. The exam will be OPEN book. The common assessment time will be during class on February 23<sup>rd</sup>. For students who cannot write during the common assessment time the exam will be available the evening of the previous lecture before the exam date, being Tuesday, February 21<sup>st</sup> at 17:00. Students who cannot write the midterm exam during class time must send an email to the instructor indicating that they will write at the alternative time at least 24 hours before the alternative midterm time. If students experience difficulties within the common assessment time, the student must contact the instructor by email immediately to arrange an appropriate resolution. This resolution may involve additional time for completion of the exam or an alternative time to complete the exam.

The final examination will be comprehensive and scheduled by the Registrar. The exam is designed and intended to be completed in two hours. The exam will be OPEN book. The final exam will be a multiple choice / fill-in-blank exam completed online in D2L. Students will have three hours to complete the exam. The common final exam time begins three hours before the end time of the Registrar's scheduled final exam for this course. If the exam time scheduled by the Registrar ends at 14:00, the online exam will begin at 11:00. For students who cannot sit the exam during the common exam window one alternate exam time will be scheduled during the 24-hours before the end of the Registrar's scheduled final exam for this course and will be communicated by instructor during the last week of the classes. Students who cannot write the final exam at the time scheduled by the Registrar's Office are required to notify the instructor that they will write at the alternative time by email to the instructor 48 hours before the end of the Registrar's scheduled final exam window. Students unable to write the final exam at either time must request a deferred exam. If students experience difficulties within the common assessment time, the student must contact the instructor by email immediately to arrange an

appropriate resolution. This resolution may involve additional time for completion of the exam or an alternative time to complete the exam.

**Assignments:**

Assignments will be posted to D2L, and you are expected to submit your answers to these assignments online using D2L. If you are unable to submit electronic answers to assignments for valid reasons (for example, for medical reasons) please seek an accommodation from me. This accommodation will allow you to submit a hand-written assignment instead. Hand-written assignments will only be accepted from students that have been given a prior accommodation or that have experienced exceptional circumstances.

Course material dealing with a particular assignment will typically be covered in class at least 3 days before the assignment is due; thus, assignments can be completed at any time up to, and including, the due date. Given these factors, only situations where someone can document illness or domestic affliction for an extended period (i.e., the entire 3 days prior to the due date) would possibly warrant shifting the assignment weight to the final exam. Furthermore, technical problems can be expected to occur with computer systems (and internet availability) so it may be a good idea to not wait until the last minute to submit your assignment.

**Grading Policies:**

The official grading system will be used. See <http://www.ucalgary.ca/pubs/calendar/current/f-1-1.html>.

Students must receive a passing grade on the final exam to pass the course. Students committing academic misconduct during the final exam will not receive a passing grade for the course.

If a student's letter grade on the final exam exceeds their midterm(s) letter grade, the weight of the midterm(s) is (are) transferred to the final exam. The student must have written the midterm(s) or provided supporting documentation for the absence(s). For Winter 2023 the University has suspended the requirement for supporting documentation. Instructors cannot currently ask students for documentation to support absences.

As per the Writing Across the Curriculum Statement in the Calendar, writing and grading thereof will be a factor in the evaluation of student work. See <https://www.ucalgary.ca/pubs/calendar/current/e-2.html>.

Any student work which remains undistributed after the last day of classes will be available to students through the instructor's office during the instructor's office hours.

The final examination will be comprehensive, scheduled by the Registrar, held in a classroom, and last 2 hours. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam <https://www.ucalgary.ca/pubs/calendar/current/g-6.html>. Under no circumstance will this be accommodated by the Department.

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES/TESTS/EXAMS under any circumstances, nor may the quizzes/tests/exams be written early. Students unable to write the quizzes/tests/exams because of documented illness, family emergency, religious observance, or university-sanctioned event will have the weight shifted to the final examination; otherwise a grade of zero will be assigned.

**Reappraisal of Grades:**

*For Reappraisal of Graded Term Work, see Calendar I.2*

<http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

*For Reappraisal of Final Grade, see Calendar I.3*

<http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

**Academic Misconduct and Intellectual Honesty:**

Academic Misconduct refers to student behavior that compromises proper assessment of students' academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

*Statement of Intellectual Honesty, see Calendar K.4*

<https://www.ucalgary.ca/pubs/calendar/current/k-3.html>

*Plagiarism and Other Academic Misconduct*

<https://ucalgary.ca/student-services/student-success/learning/academic-integrity>

**Academic Accommodations:**

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services. SAS will process the request and issue letters of accommodation to instructors. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policies on Student Accommodations are available at <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf> and <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>.

**Freedom of Information and Protection of Privacy (FOIP) Act:**

Personal information is collected in accordance with FOIP. Assignments can only be returned to the student and will be accessible only to authorized faculty and staff. For more information, see <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/faq-privacy-faculty-members.pdf> and <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/faq-privacy-students.pdf>

**Internet and Electronic Communication Device information:**

The use of cell phones for any purpose in class is prohibited. Computers and tablets may be used for note taking only unless otherwise authorized by the instructor.

**Copyright Legislation:**

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Acceptable-Use-of-Material-Protected-by-Copyright-Policy.pdf>. Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

**Recording of Lectures:**

Recording of lectures is prohibited, except for audio recordings authorized as an accommodation by SAS or an audio recording for individual private study and only with the written permission of the instructor. Any unauthorized electronic or mechanical recording of lectures, their transcription, copying, or distribution, constitutes academic misconduct. See <https://www.ucalgary.ca/pubs/calendar/current/e-6.html>.

**Instructor Intellectual Property:**

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed, or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

**Important Dates:**

Please check: <http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>.

**Student Organizations:**

Faculty of Arts Students' Association (F.A.S.A.):

Economics Department Representative

Office: SS 803, E-mail: [econrep@fasaucalgary.ca](mailto:econrep@fasaucalgary.ca) and Web: [www.fasaucalgary.ca](http://www.fasaucalgary.ca).

Society of Undergraduates in Economics:

<https://www.ucalgarysue.com/>.

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students to succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career events such as Industry Night and information sessions, mentorship programs, and social events for members. They invite you to join by contacting SUE at [sue@ucalgarysue.com](mailto:sue@ucalgarysue.com).

**Faculty of Arts Program Advising and Student Information Resources:**

- Have a question, but not sure where to start? The Arts Students' Centre is your information resource for everything in Arts! Drop in at SS102, call them at 403-220-3580, or email them at [artsads@ucalgary.ca](mailto:artsads@ucalgary.ca). You can also visit the Faculty of Arts website at <http://arts.ucalgary.ca/undergraduate> which has detailed information on common academic concerns, including program planning and advice.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625] or visit them in the MacKimmie Library Block.

**Student Support and Resources:**

- See <https://www.ucalgary.ca/registrar/registration/course-outlines> for information on campus mental health resources, the Student Ombuds' Office, Student Success Centre, Safewalk, and Emergency Evacuation and Assembly.
- Online writing resources are available at <https://ucalgary.ca/student-services/student-success/writing-support>.

**Notes:**

1. Students are responsible for all assigned material, e.g., supplementary material posted on D2L, regardless of whether or not the material was covered in class.
2. A detailed list of topics, readings and other resources will be provided. Recommended readings will be drawn from the textbook.

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2022-12-08