

# COURSE SYLLABUS



COURSE TITLE: Quantitative Methods

CLASS SECTION: D02

TERM: Summer 2023

COURSE CREDITS: 3

DELIVERY METHOD(S): Synchronous Online

For COVID-19 information please visit <https://camosun.ca/about/covid-19-updates>

Camosun College campuses are located on the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.

Learn more about Camosun's [Territorial Acknowledgement](#).

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*Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.*

## INSTRUCTOR DETAILS

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NAME: Joel Tamosiunas

EMAIL: TamosiunasJ@camosun.ca

OFFICE: Virtual via Zoom: <https://camosun-ca.zoom.us/j/63812696436>

HOURS: 5:00 to 5:50 PM Tuesday/Thursday (before class)

*As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.*

## CALENDAR DESCRIPTION

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Students will apply a number of statistical techniques used for business decision-making. They will learn to solve business problems and make related predictions using simple and multiple regressions, exponential smoothing, non-parametric statistical procedures, analysis of variance, seasonal and enumerative data, linear programming, and inventory control models.

## COURSE LEARNING OUTCOMES / OBJECTIVES

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

1. Utilize appropriate tools to support quantitative problem solving.
2. Apply the F-distribution and the concept of analysis of variance (ANOVA) to compare the means of multiple populations and make inferences about the relative variances of two populations.
3. Develop simple and multiple linear regression models for analyzing cross-sectional data.
4. Apply the chi-squared distribution and non-parametric methods to hypothesis testing and the analysis of ranked data.
5. Use and explain concepts related to statistical quality control.
6. Construct and use indices to compare data.
7. Choose appropriate time series methods and use them to forecast in-sample and out-of-sample data.

## REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

**Text:** You are NOT REQUIRED to purchase a textbook for this course.

If you *would like* a textbook to accompany the course materials, then I recommend *Statistical Techniques in Business & Economics* (any edition) by Lind Marchal and Wathen. Also available in the Canadian edition and a custom print edition under these titles:

- (Canadian ed.) *Basic Statistics for Business & Economics* by Lind et al., Waite and Murphy
- (Custom ed.) *Elementary Statistics/Quantitative Methods – Custom Print for Camosun BUS 230/231*

**Other:** [REQUIRED] Microsoft Excel 2016 or newer. Camosun students can obtain this software to use at home for free: <http://camosun.ca/services/its/other-services.html>

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## COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor. Course content will be released at the beginning of the week in which that unit is covered.

WEEK or DATE RANGE		TOPIC	Notes
1	May 1 to 5	Confidence Intervals & Hypothesis Testing Review	
2	May 8 to 12	Tests of Variance	
		ANOVA	
3	May 15 to 19	Analysis of Nominal Data	
			Midterm Exam 1 – May 18
4	May 22 to 26	Analysis of Ranked Data	
		Bivariate Regression	
5	May 29 to June 2	Multiple Regression	
6	June 5 to June 9		Midterm Exam 2 – June 6
		Index Numbers, Seasonality & Filtering	
7	June 12 to June 16	Time Series Regression & Forecasting	
		Statistical Quality Control	
June 19 to 21		Exam Period	Final Exam – Date TBA

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced notice is required. Deadlines can be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

## EVALUATION OF LEARNING

**Exams:** You will write 3 equally weighted exams during the semester. The exams will be written remotely (online) via D2L. Exams 1 and 2 will take place during regularly scheduled class on the dates below, while Exam 3 will take place during the final exam period at a TBD time and date. More information regarding the exam formats and coverages as well as allowed/required materials will be posted to D2L.

EXAM	DATE	DESCRIPTION/EXPECTED COVERAGE	WEIGHT
1	May 18	Confidence Intervals, Basic Hypothesis Tests, Tests of Variance & ANOVA	33.3%
2	June 6	Analysis of Nominal & Ranked Data, Bivariate Regression	33.3%
3	TBD	Multiple Regression, Index Numbers, Seasonality, Time Series & Quality Control	33.3%
			<b>TOTAL</b>
<p>If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf">Grade Review and Appeals</a> policy for more information. <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf">http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf</a></p>			100%

## SCHOOL OR DEPARTMENTAL INFORMATION

**Assignment formatting.** The School of Business uses **APA style** for formatting assignments and citing references. Proper citations and formatting using APA style will be required. See Camosun College (2018) Library Citation Guides retrieved from: <http://camosun.ca.libguides.com/apa7>

- Where required by your instructor, submit all assignments into the D2L assignments by your last name.
- In text citations for quotes, paraphrasing, and references must be consistent with APA standards.
- Grammar, spelling, style and APA formatting, citations and referencing will be assessed in your mark.
- All submitted work must be properly referenced to sources where required by your instructor.
- Unless otherwise specified, you are to submit your own work, any work collaborated (unless permitted by the course) will be considered in violation of the college's Student Conduct Policy. See Camosun College (2003) Student Conduct Policy from: <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf>.

**Deadlines and exams.** You must submit your assignments on the due date or as announced. A grade of zero will be assigned to late submissions. There are no additional assignments or make-up exams of any kind if you performed poorly on an assignment, midterm or final exam.

- a) **EXAM DATES WILL NOT BE RESCHEDULED.** Non-attendance on scheduled exam dates results in a zero grade. Exceptions will be made only for medical reasons or extenuating circumstances that must be submitted and then accepted by the instructor. Please advise your instructor promptly.
- b) Students registered through the [Centre for Accessible Learning \(CAL\)](#) should discuss timelines with their instructors at the beginning of each semester.

Please see Camosun College Academic Regulations & Standards for additional information regarding final exam policies: <https://calendar.camosun.ca/content.php?catoid=7&navoid=367#examinations>

## STUDENT RESPONSIBILITY

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Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

## SUPPORTS AND SERVICES FOR STUDENTS

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Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit <http://camosun.ca/students/>.

Support Service	Website
Academic Advising	<a href="http://camosun.ca/advising">http://camosun.ca/advising</a>
Accessible Learning	<a href="http://camosun.ca/accessible-learning">http://camosun.ca/accessible-learning</a>
Counselling	<a href="http://camosun.ca/counselling">http://camosun.ca/counselling</a>
Career Services	<a href="http://camosun.ca/coop">http://camosun.ca/coop</a>
Financial Aid and Awards	<a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>
Help Centres (Math/English/Science)	<a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>
Indigenous Student Support	<a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>
International Student Support	<a href="http://camosun.ca/international/">http://camosun.ca/international/</a>
Learning Skills	<a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>
Library	<a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a>
Office of Student Support	<a href="http://camosun.ca/oss">http://camosun.ca/oss</a>
Ombudsperson	<a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>
Registration	<a href="http://camosun.ca/registration">http://camosun.ca/registration</a>
Technology Support	<a href="http://camosun.ca/its">http://camosun.ca/its</a>
Writing Centre	<a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</a>

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

### Academic Integrity

Students are expected to comply with all College policy regarding academic integrity; which is about honest and ethical behaviour in your education journey. The following guide is designed to help you understand your responsibilities: <https://camosun.libguides.com/academicintegrity/welcome>

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf> for Camosun's Academic Integrity policy and details for addressing and resolving matters of academic misconduct.

### Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](#) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started:

<http://camosun.ca/services/accessible-learning/>

### Academic Progress

Please visit [https://www.camosun.ca/sites/default/files/2021-05/e-1.1\\_0.pdf](https://www.camosun.ca/sites/default/files/2021-05/e-1.1_0.pdf) for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

### Course Withdrawals Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <http://camosun.ca/learn/fees/#deadlines>.

### Grading Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf> for further details about grading.

### Grade Review and Appeals

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

### Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the "Attendance" section under "Registration Policies and Procedures" (<https://camosun.ca/registration-records/policies-and-procedures-students/registration-policies-students>) and the Grading Policy at <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>.

### Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf> to learn more about the process involved in a medical/compassionate withdrawal.

### Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence and Misconduct Policy: <http://www.camosun.ca/sites/default/files/2021-05/e-2.9.pdf> and [camosun.ca/sexual-violence](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto:oss@camosun.ca) or by phone: 250-370-3046 or 250-370-3841

### Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

### Looking for other policies?

The full suite of College policies and directives can be found here: <https://camosun.ca/about/camosun-college-policies-and-directives>

**Changes to this Syllabus:** Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.