

# COURSE SYLLABUS



COURSE TITLE: STAT-116: Elementary Statistics

CLASS SECTION: 001

TERM: WINTER 2023

COURSE CREDITS: 4

DELIVERY METHOD(S): Face-to-Face

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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For COVID-19 information please visit <https://legacy.camosun.ca/covid19/index.html>

*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: Fan Wu

EMAIL: [WuF@camosun.ca](mailto:WuF@camosun.ca)

OFFICE: E252

HOURS: Monday 14:30 - 15:30 and Thursday 12:30 PM - 13:20

*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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This course is mainly for students in Criminal Justice, Dental Hygiene, Social Sciences and general arts. Topics include descriptive statistics, probability and probability models, one-and two-sample inferences for population means and proportions, simple linear correlation and regression, categorical data analyses.

### PREREQUISITE(S):

One of:

C in Math 11 ; C- in Pre-calculus 12; C in MATH 072; C in MATH 075; C in MATH 077; C in MATH 135; C in MATH 137

### CO-REQUISITE(S):

Not Applicable

### EXCLUSION(S):

Not Applicable

## COURSE LEARNING OUTCOMES / OBJECTIVES

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Upon completion of this course a student will be able to:

1. Identify problems in our society for which statistical analyses are suitable.
2. Compute and interpret descriptive statistics.
3. Solve basic probability problems. Distinguish between continuous and discrete probability distributions. Perform calculations involving various probability distributions including Binomial and Normal distributions.
4. Estimate the population mean and population proportion, and determine sample size.
5. Estimate the difference between two means, or two proportions.
6. Test hypotheses about a mean, a proportion, a difference of two means, or a difference of two proportions.
7. Perform basic correlation and simple linear regression analysis.
8. Perform basic categorical data analysis.
9. Perform basic statistical data analysis with the aid of a computer software package.

## REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

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### Texts and Notes:

- 1) Open Source PDF textbook: OpenIntro Statistics 4<sup>th</sup> edition by David M Diez et al. Free pdf download at <https://www.openintro.org/book/os/>
- 2) Course Notes, posted on the D2L page
- 3) STAT 116 Excel Lab tutorial manuals, posted on the D2L page.

**Other:** A Sharp EL-531 Scientific Calculator

## 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.

WEEK and DATE RANGE	COVERAGE IN TEXTBOOK	PRACTICE PROBLEMS FROM TEXTBOOK (ANSWERS ARE IN APPENDIX A)	*MOMs DUE TUESDAYS **LAB HW DUE WEDNESDAYS ALL BY 11:59 PM	TESTS ALL ON THURSDAYS
Week 1	Day 1 intro, 1.1 - 1.4, 2.1	1.1, 1.3, 1.5, 1.7, 1.9, 1.13, 1.15, 1.17, 1.19, 1.21, 1.25, 1.27, 1.35, 1.37, 1.41, 1.43		
Week 2	2.1, 2.2,	2.1, 2.5, 2.9, 2.13, 2.17, 2.21, 2.27, 2.31, 2.33	MOM 1 (1.1-1.3)	
Week 3	Ch8	8.3, 8.5, 8.7, 8.11, 8.13, 8.15, 8.17, 8.19, 8.21, 8.25, 8.37, 8.39(b-f)	MOM 2 (1.4-2.2) Lab intro (in D2L)	
Week 4	Review 1, Ch3	3.1, 3.5, 3.7, 3.9, 3.11	MOM 3(ch8)	<b>Midterm 1 (ch1,2,8)</b>
Week 5	Ch3	3.13, 3.15, 3.23, 3.25, 3.29(a), 3.33, 3.39	Lab HW1	
Week 6	4.1, 4.3	4.1, 4.3, 4.5, 4.7 4.17(a), 4.19(a, b), 4.23(a)	MOM 4(ch3)	
Week 7	Reading Break		MOM 5 (4.1) Lab HW2	
Week 8	5.1, 7.1	5.1, 5.3, 5.5, 7.1, 7.3, 7.7, 7.11	MOM 6 (4.1, 4.3)	
Week 9	Review 2, 7.1	7.15, 7.17, 7.19, 7.21	MOM 7 (5.1) Lab HW 3	<b>Midterm 2 (ch3,4,5)</b>
Week 10	7.1,7.2			
Week 11	7.3,7.5	7.23, 7.29, 7.35, 7.37, 7.51, 7.57	MOM 8 (7.1) Lab HW4	
Week 12	6.1, 6.2	6.5, 6.7, 6.9, 6.11, 6.13, 6.15, 6.19, 6.21	MOM 9 (7.2, 7.3)	
Week 13	Review 3. 6.4	6.37, 6.41	Lab HW5	<b>Midterm 3 (ch7,6.1)</b>
Week 14	Final review		MOM 10 (ch6) Lab Final	

\*MOM = My Open Math online assignments are at <https://www.myopenmath.com>,

\*\* Lab HW assignment dropboxes can be found on D2L under the **Assignments** section.

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 noticed is required. Deadlines scan 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

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DESCRIPTION	WEIGHTING
10 Assignments	10%
6 Labs	10%
3 Midterms	40%
Lab Final	10%
Final Exam	30%
	<b>TOTAL</b>
	100%

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 [Grade Review and Appeals](#) policy for more information.

<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

If you miss a test/quiz due to a family emergency or illness, the weight of the test will be put on other exams of the same category or the final exam *provided* the instructor is notified *before* the test and all assignments are completed satisfactorily. NO late assignments or labs will be accepted.

## COURSE GUIDELINES & EXPECTATIONS

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Your success in this course will depend heavily on your commitment to **regularly** working on practice problems. For each week of the course, you should expect to spend between 5 and 10 hours a week working on practice problems.

Being able to “do math” is a skill, and like any skill, it needs regular practice to flourish. As the gap between a student’s practice sessions increases, the amount of practice time needed in order to make progress will also increase. For maximum efficiency with your learning, you should aim to practice, even just a little bit, every day.

### Excel Labs

This course includes computer lab sessions designed to familiarize students with the use of a computer program to perform data analysis and the procedure of reporting data analysis results. Microsoft Excel with add-ins Data Analysis ToolPak will be used for this purpose. The lab tutorials which also contains lab assignments can be found on the D2L page.

**Homework:** *“I hear and I forget. I see and I remember. I do and I understand.”* The homework for this course includes: 1) MyOpenMath (MOM) online assignments, 2) Lab assignments, and 3) Suggested practice problems from the textbook. *In order to get a full understanding of the course materials, it is necessary to complete all the homework on time. It is essential to review the notes and do homework after every class and to keep up consistently. This course is cumulative, **cramming does not work.***

## Midterms and Reviews

There will be three midterms. Before each of the 3 midterms, there will be a review session and a set of review problems to practice.

## Desire2Learn (D2L)

This class has the assistance of D2L, an online course management system. Please visit this *open site* for D2L tutorials even if you have used D2L before: <https://elearningtutorialscamosun.opened.ca/>. All course related materials and announcements will be available in D2L. It is your responsibility to subscribe to the notifications on D2L and check the site regularly.

## SCHOOL OR DEPARTMENTAL INFORMATION

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### Math Lab (Help Centre)

The Math Labs are staffed with instructional assistants available for **free** help. Hours of operation and other details can be viewed at <https://camosun.ca/services/academic-supports/help-centres/math-help>

## 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/>.

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>

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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>

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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.

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## COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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### 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 Integrity

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

### Academic Progress

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.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” (<http://camosun.ca/learn/calendar/current/procedures.html>) 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://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/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 250-3703841

### 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.

**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.