

COURSE SYLLABUS



COURSE TITLE: STAT-218-Intro to Probability and Statistics 1

CLASS SECTION:

TERM: 2024F

COURSE CREDITS: 3

DELIVERY METHOD(S): Lecture

Camosun College respectfully acknowledges that our campuses are situated on the territories of the Ləkʷəŋən (Songhees and Kosapsum) and WSÁNEĆ peoples. We honour their knowledge and welcome to all students who seek education here.

INSTRUCTOR DETAILS

NAME: Bree Wilton

EMAIL: wiltonb@camosun.bc.ca

OFFICE: E246

HOURS: Mon – Thurs 10:30 – 11:20, and every other Friday 9:30 – 10:20

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

The field of statistics helps to understand and describe the world around us through the analysis and interpretation of data. Students will learn techniques and methods to help informed decision-making through an introduction to the mathematical foundations of statistical inference. After gaining a foundational understanding of descriptive statistics and probability theory, students will apply this framework to understand and make inferences from data using estimation, hypothesis testing, linear regression and categorical data analysis.

PREREQUISITE(S):

One of:

C in MATH 100

C in MATH 108

CO-REQUISITE(S):

EQUIVALENCIES:

MATH 218

COURSE LEARNING OUTCOMES / OBJECTIVES

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

Compute and interpret descriptive statistics.

Compute and interpret probability and conditional probability.

Compute probability, expectation and variance of a single discrete random variable, or a single continuous random variable. Perform calculations involving binomial, Poisson, normal, or exponential probability distributions.

Perform calculations involving joint probability distributions of two discrete random variables, or random samples.

Compute and interpret interval estimate for the population mean, population proportion, and determine sample size.

Compute and interpret interval estimate for a difference of two means.

Test hypotheses about a mean, a proportion, the difference of two means, and compare multiple means.

Perform basic correlation and simple linear regression analysis.

Perform basic categorical data analysis.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

1. Textbook: Probability and Statistics for Engineers and the Sciences by Devore, any edition 5th and up.
2. Lab Tutorials: Available on D2L.
3. Sharp EL-531 Scientific Calculator. No other calculators are allowed for tests and the final exam.

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

Please see the pacing schedule on D2L. The given schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

Deliverable Dates:

Tests: Sept 17, Oct 1, Oct 15, Oct 29, Nov 12, Nov 26

Labs Assignments: Sept 19, Oct 3, 17, 31, Nov 14

Equity, Diversity and Inclusion Assignment: Dec 5th

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 can be reviewed on the [CAL exams page](#).

<https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams>

EVALUATION OF LEARNING

| DESCRIPTION | WEIGHTING |
|--|--------------|
| Tests | 48% |
| Lab Assignments | 10% |
| Equity, Diversity and Inclusion Assignment | 2% |
| Lab Final | 10% |
| Cumulative Final Exam | 30% |
| | TOTAL |
| | 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>

COURSE GUIDELINES & EXPECTATIONS

Expectations: 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 working on the suggested problems.

Tests: There will be six term tests and these tests count for 48% of your final grade. You may drop your lowest score and your grade for the tests will be calculated using your top 5 test marks. The tests will be written on **Sept 17, Oct 1, Oct 15, Oct 29, Nov 12, Nov 26**. The coverage for each test will be announced during the previous week's class and will also be posted on D2L.

R Labs: This course includes R lab sessions designed to familiarize students with the use of a statistical software to perform data analysis and the procedure of reporting data analysis results. *You will need the lab tutorial for each lab.* The required lab tutorial is available on D2L. A lab assignment follows each lab session. Lab assignments are due by **4:00pm** on the **Thursday** following each lab session. Late labs will be accepted with a penalty of 20% per day until the on-time labs have been handed back, after which I will no longer accept them. There will be **Lab Final exam on Nov 22nd**.

Equity, Diversity and Inclusion Assignment: See Equity, Diversity and Inclusion Assignment handout.

Calculator policy: A Sharp EL-531 scientific calculator is required. This is the *only* calculator that will be allowed for tests and the final examination. This calculator is available at the Lansdowne Bookstore, and some other stores.

Homework: The homework for this course will include suggested exercises posted on D2L and R lab assignments. *In order to get a full understanding of the course materials, which usually leads to a good grade, it is necessary to mindfully complete all sets of homework. It is essential to review notes and do homework each week and to keep up consistently. **Cramming does not work for this course.***

Attendance

Attendance is necessary. Showing up to classes is the easiest and most important thing you can do to help you succeed the course. If you feel yourself falling behind at any point during the term, then please do not hesitate to come to speak to me.

Desire2Learn (D2L)

This class has the assistance of D2L, an online course management system. Most course related materials and announcements will be available on D2L. It is your responsibility to subscribe to the *notifications on D2L* or check it regularly.

Missed Test Policy: Students are expected to make every reasonable effort to write the test at the scheduled time. **A missed test usually counts as a 0**, so if for any reason it appears that you may miss a test,

- **before the test**, talk with the instructor about missing the test, unless an unforeseen emergency makes this impossible, in which case leave a comprehensive message.
- assuming that you qualify for a missed test (for instance, medical or compassionate leave), your grade will be determined using the relevant portion of the final exam. **There will not be any rewrites of tests.**

Please inquire if you have any questions or concerns about your particular situation.

SCHOOL OR DEPARTMENTAL INFORMATION

Math Lab: Math lab E224 is staffed with math tutors available for free help. It is a great idea to do your homework there and get help whenever needed

STUDENT RESPONSIBILITY

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

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 camosun.ca/services.

| Support Service | Website |
|-------------------------------------|---|
| Academic Advising | camosun.ca/services/academic-supports/academic-advising |
| Accessible Learning | camosun.ca/services/academic-supports/accessible-learning |
| Counselling | camosun.ca/services/health-and-wellness/counselling-centre |
| Career Services | camosun.ca/services/co-operative-education-and-career-services |
| Financial Aid and Awards | camosun.ca/registration-records/financial-aid-awards |
| Help Centres (Math/English/Science) | camosun.ca/services/academic-supports/help-centres |
| Indigenous Student Support | camosun.ca/programs-courses/iecc/indigenous-student-services |
| International Student Support | camosun.ca/international |
| Learning Skills | camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills |
| Library | camosun.ca/services/library |
| Office of Student Support | camosun.ca/services/office-student-support |
| Ombudsperson | camosun.ca/services/ombudsperson |
| Registration | camosun.ca/registration-records/registration |
| Technology Support | camosun.ca/services/its |
| Writing Centre | camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills |

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.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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 <https://camosun.ca/sites/default/files/2021-05/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

Camosun College is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging appropriate academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a documented disability and think you may need accommodations, you are strongly encouraged to contact the Centre for Accessible Learning (CAL) and register as early as possible. Please visit the CAL website for more information about the process of registering with CAL, including important deadlines: <https://camosun.ca/cal>

Academic Progress

Please visit <https://camosun.ca/sites/default/files/2023-02/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 <https://camosun.ca/sites/default/files/2021-05/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <https://camosun.ca/registration-records/tuition-fees#deadlines>.

Grading Policy

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.5.pdf> for further details about grading.

Grade Review and Appeals

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

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

(see [Medical/Compassionate Withdrawals policy](#)). Please visit <https://camosun.ca/services/forms#medical> to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence

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 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 Policy: <https://camosun.ca/sites/default/files/2021-05/e-2.9.pdf> and camosun.ca/services/sexual-violence-support-and-education.

To contact the Office of Student Support: 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 <https://camosun.ca/sites/default/files/2021-05/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.