

COURSE OUTLINE		
<b>TERM: Spring 2025</b>	<b>COURSE NO: BADM 210</b>	
<b>INSTRUCTOR:</b>	<b>COURSE TITLE: Business Statistics</b>	
<b>OFFICE: LOCAL:</b> <b>E-MAIL: @capilanou.ca</b>	<b>SECTION NO(S):</b>	<b>CREDITS: 3.0</b>
<b>OFFICE HOURS:</b>		
<b>COURSE WEBSITE:</b>		

Capilano University acknowledges with respect the Lilwat7úl (Lil'wat), xʷmə ꞵkʷəyəm (Musqueam), shíshálh (Sechelt), Sḵwxwú7mesh (Squamish), and Səlílwətaʔ/Selilwitulh (Tseil-Waututh) people on whose territories our campuses are located.

### COURSE FORMAT

Three hours of class time, plus an additional hour delivered through on-line or other activities for a 15-week semester, which includes two weeks for final exams. May be offered online or in mixed mode format.

### COURSE PREREQUISITES

15 credits of 100-level or higher course work including BADM 102 and BCPT 123

### CALENDAR DESCRIPTION

This course provides a strong foundation in basic business statistics to enable students to convert solutions into practical business recommendations. It covers some of the most commonly used methods for: converting raw data into meaningful information (Descriptive Statistics), computing the chance that a certain event will occur in the future (Probability), drawing conclusions about a population based on sample data (Inferential Statistics), and determining whether a relationship between two variables exists and, if so, how strong this relationship is (Simple Linear Regression and Correlation).

### COURSE NOTE

BADM 210 is an approved Numeracy Course for Cap Core requirements.

BADM 210 is an approved Science & Technology course for Cap Core requirements.

BADM 210 is an approved Quantitative/Analytical course for baccalaureate degrees.

### REQUIRED TEXTS AND/OR RESOURCES

Textbook: Lind D., Marchal W., Wathen S., Waite C. (2022). *Basic Statistics for Business and Economics* (Seventh Canadian Edition). Toronto: McGraw-Hill. (or similar textbook).

Spreadsheet applications such as Excel will be used to support calculations. The recommended calculator is TI BA II Plus.

Supplementary materials will be posted on eLearn.

### **COURSE STUDENT LEARNING OUTCOMES**

**On successful completion of this course, students will be able to do the following:**

1. Identify business situations appropriate for statistical analyses and discuss the findings using the accepted technical terminology.
2. Use the methods of the descriptive statistics to summarize and present data numerically, graphically, and symbolically.
3. Utilize probability theory to determine the likelihood of events, as well as calculate probabilities for discrete and continuous probability distributions within business problems-solving contexts.
4. Apply inferential statistics methods to determine an appropriate sampling method, calculate the required sample size, construct sampling distributions of the sample mean, compute confidence intervals, and conduct tests of hypotheses about population parameters.
5. Use correlation and simple linear regression to analyse the strength and the type of association between variables.

**Students who complete this Numeracy course will be able to do the following:**

1. Apply both analytical and numerical skills to solve problems.
2. Summarize and analyze data in quantitative forms.
3. Interpret and draw conclusions from an analysis of quantitative data.
4. Represent quantitative information in a variety of forms (e.g. symbolically, visually, numerically, and verbally).
5. Incorporate quantitative evidence in support of an argument.

**Students who complete this Science and Technology course will be able to do the following:**

1. Apply numerical and computational strategies to solve problems.
2. Evaluate scientific information (e.g. distinguish primary and secondary sources, assess credibility and validity of information).
3. Demonstrate how a problem, concept, or process can be modelled numerically, graphically, or algorithmically.
4. Participate in scientific inquiry and communicate the elements of the process, including making careful and systematic observations, developing and testing a hypothesis, analyzing evidence, and interpreting results.

**COURSE CONTENT:**

<b>Date</b>	<b>Topics and Readings</b>
Week 1	Course Introduction. What is statistics, types of statistics, types of variables?
Week 2-3	Describing Data: frequency distributions, graphic representations, measures of central tendency, dispersion, and position.
Week 4	Probability Concepts: experiments, principles of counting, rules of addition and multiplication, contingency tables, and tree diagrams.
Week 5	Discrete Probability Distributions: mean and std. deviation of a probability distribution, binomial probability distribution.
Week 6-7	Continuous Probability Distributions: uniform and normal probability distributions. Continuous Probability Distributions: normal approximation to the binomial distribution.
Week 8	Sampling Distributions: reasons to sample, methods for random sampling, sampling distribution of the sample mean and sample proportion.
Week 9	Estimation & Confidence Intervals: std. deviation known, std. deviation unknown, C.I. for a proportion, and sample size.
Week 10	One-Sample Test of Hypothesis: one- and two-tailed tests of significance about sample mean and proportion.
Week 11	Two-Sample Test of Hypothesis: independent samples and hypothesis tests for difference between two means and between two proportions.
Week 12	Two-Sample Test of Hypothesis: pooled t-test and dependent samples.
Week 13	Linear Regression and Correlation: correlation and regression analyses.
Week 14-15	<b>Final Exam Period</b>

**EVALUATION PROFILE**

Assessment	Percentage of final grade	Learning Outcome(s)
Assignments (I)*	20%	1, 2, 3,
Term Test 1 (I)	15%	1, 2, 3
Term Test 2 (I)	15%	3, 4
Project (T)**	15%	1, 2, 3, 4, 5
Final Exam (I)	35%	4, 5
Total	100%	

\*I stands for individual and T stands for team.

\*\*Spreadsheets will be used to complete the Team Project.

**GRADING PROFILE**

A+	=	90-100	B+	=	77-79	C+	=	67-69	D	=	50-59
A	=	85-89	B	=	73-76	C	=	63-66	F	=	0-49
A-	=	80-84	B-	=	70-72	C-	=	60-62			

**Incomplete Grades**

Grades of Incomplete "I" are assigned only in exceptional circumstances when a student requests extra time to complete their coursework. Such agreements are made only at the request of the student, who is responsible to determine from the instructor the outstanding requirements of the course.

**Late Assignments**

Are at the discretion of the instructor, please consult with your instructor beforehand.

**Missed Exams/Quizzes/Labs etc.**

Make-up exams, quizzes and/or tests are given at the discretion of the instructor. They are generally given only in medical emergencies or severe personal crises. Some missed labs or other activities may not be able to be accommodated. Please consult with your instructor.

**Attendance**

Students are expected to attend all classes and associated activities, as specified by the delivery format.

## English Usage

Students are expected to proofread all written work for any grammatical, spelling and stylistic errors. Instructors may deduct marks for incorrect grammar and spelling in written assignments.

## Electronic Devices

Students may use electronic devices during class for notetaking only as specified by the instructor.

## On-line Communication

Outside of the classroom, instructors will (if necessary) communicate with students using either their official Capilano University email or eLearn; please check both regularly. Official communication between Capilano University and students is delivered to students' Capilano University email addresses only.

## UNIVERSITY OPERATIONAL DETAILS

### Tools for Success

Many services are available to support student success for Capilano University students. A central navigation point for all services can be found at: <https://www.capilanou.ca/student-services/>

**Capilano University Security:** download the [CapU Mobile Safety App](#)

### Policy Statement (S2009-06)

Capilano University has policies on Academic Appeals (including appeal of final grade), Student Conduct, Academic Integrity, Academic Probation and other educational issues. These and other policies are available on the University website.

### Academic Integrity (S2017-05)

Any instance of academic dishonesty or breach of the standards of academic integrity is serious and students will be held accountable for their actions, whether acting alone or in a group. See policy and procedures S2017-05 Academic Integrity for more information: <https://www.capilanou.ca/about-capu/governance/policies/>

Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances, are prohibited and will be handled in accordance with the Student Academic Integrity Procedures.

**Academic dishonesty** is any act that breaches one or more of the principles of academic integrity. Acts of academic dishonesty may include but are not limited to the following types:

**Cheating:** Using or providing unauthorized aids, assistance or materials while preparing or completing assessments, or when completing practical work (in clinical, practicum, or lab settings), including but not limited to the following:

- Copying or attempting to copy the work of another during an assessment
- Communicating work to another student during an examination
- Using unauthorized aids, notes, or electronic devices or means during an examination
- Unauthorized possession of an assessment or answer key

- Submitting of a substantially similar assessment by two or more students, except in the case where such submission is specifically authorized by the instructor

**Fraud:** Creation or use of falsified documents.

**Misuse or misrepresentation of sources:** Presenting source material in such a way as to distort its original purpose or implication(s); misattributing words, ideas, etc. to someone other than the original source; misrepresenting or manipulating research findings or data; and/or suppressing aspects of findings or data in order to present conclusions in a light other than the research, taken as a whole, would support.

**Plagiarism:** Presenting or submitting, as one's own work, the research, words, ideas, artistic imagery, arguments, calculations, illustrations, or diagrams of another person or persons without explicit or accurate citation or credit.

**Self-Plagiarism:** Submitting one's own work for credit in more than one course without the permission of the instructors, or re-submitting work, in whole or in part, for which credit has already been granted without permission of the instructors.

**Prohibited Conduct:** The following are examples of other conduct specifically prohibited:

- Taking unauthorized possession of the work of another student (for example, intercepting and removing such work from a photocopier or printer, or collecting the graded work of another student from a stack of papers)
- Falsifying one's own and/or other students' attendance in a course
- Impersonating or allowing the impersonation of an individual
- Modifying a graded assessment then submitting it for re-grading
- Assisting or attempting to assist another person to commit any breach of academic integrity

### **Sexual Violence and Misconduct**

All Members of the University Community have the right to work, teach and study in an environment that is free from all forms of sexual violence and misconduct. Policy B401 defines sexual assault as follows:

Sexual assault is any form of sexual contact that occurs without ongoing and freely given consent, including the threat of sexual contact without consent. Sexual assault can be committed by a stranger, someone known to the survivor or an intimate partner.

Safety and security at the University are a priority and any form of sexual violence and misconduct will not be tolerated or condoned. The University expects all Students and Members of the University Community to abide by all laws and University policies, including B.401 Sexual Violence and Misconduct Policy and B.401.1 Sexual Violence and Misconduct Procedure (found on Policy page <https://www.capilanou.ca/about-capu/governance/policies/>)

**Emergencies:** Students are expected to familiarise themselves with the emergency policies where appropriate and the emergency procedures posted on the wall of the classroom.