

Creation date: March 26, 2021

Revision date:

## SAMPLE COURSE OUTLINE

### Course Code, Number, and Title:

STAT 2281: Probability and Elementary Mathematical Statistics

### Course Format:

[Course format may vary by instructor. The typical course format would be:]

Lecture 4.0 h + Seminar 0.0 h + Lab. 0.0 h

**Credits:** 3.0

**Transfer Credit:** For information, visit [bctransferguide.ca](http://bctransferguide.ca)

### Course Description, Prerequisites, Corequisites:

Probability, conditional probability, random variables, moments and moment generating functions, discrete distributions including the binomial, hypergeometric and Poisson distributions, continuous distributions including the exponential, uniform, Chi-square, Beta, and Normal Distributions, Central Limit Theorem, applications to statistics including sampling, model building, and hypotheses testing.

Prior exposure to a course like STAT 1181 is recommended.

Prerequisite(s): A minimum "C-" grade in one of the following: MATH 1271, 1273, 1274, or 1275. Prerequisites are valid for only three years.

### Learning Outcomes:

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

- Solve a variety of problems relating to probability and interpret the results
- Describe and apply a variety of discrete and continuous probability distributions
- Compute probabilities related to the joint, marginal, and conditional distributions of discrete & continuous random variables
- Evaluate probabilities using distributions of functions of continuous random variables
- State the Central Limit Theorem and explain its role in statistical inference

**Instructor(s):** TBA  
**Office:** TBA  
**Office Hours:** TBA

**Phone:** (604) 323-XXXX  
**Email:** TBA

“This Sample Course Outline is for planning purposes only”.

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### Textbook and Course Materials:

[Textbook selection may vary by instructor. An example of texts and course materials for this course might be:]

For textbook information, visit [https://mycampusstore.langara.bc.ca/buy\\_courselisting.asp?selTerm=3|8](https://mycampusstore.langara.bc.ca/buy_courselisting.asp?selTerm=3|8)

Note: *This course may use an electronic (online) instructional resource that is located outside of Canada for mandatory graded class work. You may be required to enter personal information, such as your name and email address, to log in to this resource. This means that your personal information could be stored on servers located outside of Canada and may be accessed by U.S. authorities, subject to federal laws. Where possible, you may log in with an email pseudonym as long as you provide the pseudonym to me so I can identify you when reviewing your class work.*

### Assessments and Weighting:

**Final Exam** 40%

**Other Assessments** 60%

[An example of other assessments might be:]

Homework 10%

Quizzes 20%

Midterms 30%

### Grading System:

Specific grading schemes will be detailed in each course section outline.

Minimum Overall (%)	96	85	80	77	73	68	63	58	53	48
Minimum Final Exam (%)	90	80	75	70	65	60	55	50	45	-
Grade in Course	A+	A	A-	B+	B	B-	C+	C	C-	D

### Topics Covered:

[Topics covered may vary by instructor. An example of topics covered might be:]

- Introduction
- Probability
- Discrete Random Variables
- Continuous Random Variables
- Multivariate Probability Distributions
- Function of Random Variables
- Sampling Distributions and Central Limit Theorem
- Hypothesis Testing

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

**College Policies:**

[E1003 - Student Code of Conduct](#)

[F1004 - Code of Academic Conduct](#)

[E2008 - Academic Standing - Academic Probation and Academic Suspension](#)

[E2006 - Appeal of Final Grade](#)

[F1002 - Concerns about Instruction](#)

[E2011 - Withdrawal from Courses](#)

**Departmental/Course Policies:**

*Information unavailable, please consult Department for details.*