

CAMOSUN COLLEGE School of Arts & Science Department of Mathematics & Statistics

> STAT-116-D01 Elementary Statistics Fall 2020

# **COURSE OUTLINE**

The course description is available on the web @ http://camosun.ca/learn/calendar/current/web/stat.html

Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

#### 1. Instructor Information

| (a) Instructor   | Chedo Barone   |  |  |
|------------------|--|--|--|
| (b) Office hours | Tues - Fri (2:30PM - 3:30PM), or by appointment. Held on Blackboard Collaborate; link is posted on D2L |  |  |
| (c) Location     | Online   |  |  |
| (d) Phone        | Alternative:   |  |  |
| (e) E-mail       | baronec@camosun.ca   |  |  |
| (f) Website      | D2L (login at online.camosun.ca)   |  |  |

# 2. Intended Learning Outcomes

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.

#### 3. Required Materials

(a) Texts

- Open Source PDF textbook: OpenIntro Statistics 4<sup>th</sup> edition by David M Diez et al. Free download at <u>https://www.openintro.org/stat/textbook.php</u>. Hard copies are sold in the Camosun Bookstore at Lansdowne.
- 2. Course Notes, available on D2L
- 3. STAT 116 Excel Lab tutorial manuals, available on D2L.
- (b) Other

A Sharp EL-531 Scientific Calculator, or an online Statistics Calculator, e.g.,

- 1) for computing Mean and Standard Deviation: <u>https://www.calculator.net/statistics-calculator.html</u>
- 2) for Regression Equation: <u>https://www.socscistatistics.com/tests/regression/default.aspx</u>

# 4. Course Content and Schedule

For the schedule of Assignments and Tests, please see the Stat 116 Schedule, posted on D2L.

Content: We will be covering Chapters 1 - 8 of the text, in the order: 1,2,8,3,4,5,7,6

| Topic                             | Chapter |
|-----------------------------------|---------|
| Introduction to Data              | 1       |
| Summarizing Data                  | 2       |
| Probability                       | 3       |
| Distributions of Random Variables | 4       |
| Foundations for Inference         | 5       |
| Inferences for Categorical Data   | 6       |
| Inferences for Numerical Data     | 7       |
| Introduction to Linear Regression | 8       |

#### 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 D2L.

All Camosun College current students with a valid Camosun ID number qualify for a free Office 365 subscription. Go to <u>http://camosun.ca/services/its/other-services.html</u> for more details.

**Assignments**: See the schedule for the due dates for the assignments. On the indicated day, the assignment is due to be submitted before 11:59PM.

**Late Assignments:** You may submit an assignment the day after the due date, for 80% of the value of the assignment, or two days after the due date for 60% of the value of the assignment. Assignments will not be accepted more than two days after the due date.

For example, if the assignment is due on a Friday, then I will accept late submissions on Saturday and Sunday, but will not accept late submissions on Monday or later.

Late Labs: Late lab assignments will not be accepted for marking.

# 5. Basis of Student Assessment (Weighting)

**Assignments:** Assignment 0 (worth 1%), and Assignments 1-8 (each worth 5%), for a total of 41% **Labs:** 6 labs, worth 14% **Tests:** 3 tests, each worth 15%, for a total of 45%

Please see the Stat 116 Schedule, posted on D2L for the dates of the assignments and tests.

# 6. Grading System

| Χ | Standard Grading System (GPA)   |  |
|---|---------------------------------|--|
|   |                                 |  |
|   | Competency Based Grading System |  |

# 7. Recommended Materials to Assist Students to Succeed Throughout the Course

#### Math Lab (Help Centre)

Math lab **E224** is staffed with instructional assistants available for **free** help. Please email <u>themathlabs@gmail.com</u> to arrange an appointment. Lab hours can be viewed at <u>http://camosun.ca/services/help-centres/</u>

### 8. College Supports, Services and Policies



#### Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <u>http://camosun.ca/about/mental-health/emergency.html</u> or <u>http://camosun.ca/services/sexual-violence/get-support.html#urgent</u>

#### **College Services**

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <u>http://camosun.ca/</u>

#### **College Policies**

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <a href="http://camosun.ca/about/policies/">http://camosun.ca/about/policies/</a>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

#### A. GRADING SYSTEMS http://camosun.ca/about/policies/index.html

Template Published by Educational Approvals Office (VP Ed Office) Page 3 of 4 The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

| Percentage | Grade | Description                          | Grade Point<br>Equivalency |
|------------|-------|--------------------------------------|----------------------------|
| 90-100     | A+    |                                      | 9                          |
| 85-89      | A     |                                      | 8                          |
| 80-84      | A-    |                                      | 7                          |
| 77-79      | B+    |                                      | 6                          |
| 73-76      | В     |                                      | 5                          |
| 70-72      | B-    |                                      | 4                          |
| 65-69      | C+    |                                      | 3                          |
| 60-64      | С     |                                      | 2                          |
| 50-59      | D     |                                      | 1                          |
| 0-49       | F     | Minimum level has not been achieved. | 0                          |

#### 2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

| Grade | Description   |  |
|-------|---|--|
|       |   |  |
| СОМ   | The student has met the goals, criteria, or competencies established for this course, practicum or field placement.   |  |
| DST   | The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement. |  |
| NC    | The student has not met the goals, criteria or competencies established for this course, practicum or field placement.  |  |

# **B.** Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <a href="http://camosun.ca/about/policies/index.html">http://camosun.ca/about/policies/index.html</a> for information on conversion to final grades, and for additional information on student record and transcript notations.

| Temporary<br>Grade | Description  |
|--------------------|--|
| I                  | <i>Incomplete</i> : A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.   |
| IP                 | <i>In progress</i> : A temporary grade assigned for courses that are designed to have<br>an anticipated enrollment that extends beyond one term. No more than two IP<br>grades will be assigned for the same course.   |
| CW                 | <i>Compulsory Withdrawal</i> : A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement. |