



School of Arts & Science
MATHEMATICS AND STATISTICS DEPARTMENT

STAT 116 001 & 002
Elementary Statistics
2017 Winter

COURSE OUTLINE

The Approved Course Description is available on the web @
<http://camosun.ca/learn/calendar/current/web/stat.html>

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.

1. Instructor Information

Instructor:	Susan Chen
Office:	E260
Office Hours:	MWThF 1:30 – 2:20 PM, Tu 12:30 – 1:20 PM, or by appointment.
Phone:	250-370-3497
Email:	chen@camosun.ca
D2L Website	http://online.camosun.ca/

2. Intended Learning Outcomes

The prerequisite is a C or higher in Principles of Math 11, or Applications of Math 11, or MATH 072, or MATH 135, or assessment. Upon completion of this course the 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, and 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)	Text	A ConnectMath Code for <i>Bluman, Elementary Statistics, A Step by Step Approach, a Brief Version, Seventh Edition, McGraw-Hill Ryerson, 2015</i>
(b)	Other	A Sharp EL-531 Scientific Calculator. <i>No other calculators are allowed for tests and the final examination.</i>

4. Course Content and Other Course Information

Course Content

<u>Topic</u>	<u>Chapters</u>
The Nature of Probability and Statistics	1
Frequency Distributions and Graphs	2
Data Description	3
Probability	4
Discrete Distributions	5
Normal Distribution	6
Confidence Intervals	7
Hypothesis Testing	8
Comparing 2 groups	9
Correlation and Regression	10
Chi-Square Tests	11

iClickers

We will be using the i>Clickers in lectures. i>Clicker is a response system that allows you to respond to questions posed by instructors during class, and you will be graded on your participation and performance. Clickers will be provided in class. You will be assigned with a specific clicker and you will be responsible for returning the clicker to the instructor in each class.

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 MegaStat will be used for this purpose. The lab tutorials which also contains lab assignments can be found on D2L/Content/Labs.

Homework

"I hear and I forget. I see and I remember. I do and I understand." There will be weekly online assignments or worksheets on paper, and it is strongly recommended that students do the suggested problems from the textbook. *It is essential to do homework after every class and to keep up consistently.*
Cramming does not work for this course.

Term Tests and Reviews

There will be three term tests. Before each of the 3 tests, there will be a review session. You are encouraged to ask questions and to work together with peers during these review problem sessions. *You will benefit most from these review sessions if you have all notes reviewed, all homework completed and a summary sheet made before you attempt the practice problems.*

Attendance

Attendance is required. Showing up to classes is the easiest and most important thing you can do to help you succeed the course. **5% of the course is assigned to iClicker participation. Keeping up is an essential part of any statistics course because much of the material builds on itself.** If you feel yourself falling behind at any point during the term, then please do not hesitate to come to speak to me.

Math Lab

You can get **free face-to-face tutoring** from our instructional assistant in the Math Lab **E224**. Lab hours are posted on the lab doors and on the webpage <http://camosun.ca/services/help-centres/math.html>. Visit the lab to find out what hours work for you best.

Desire2Learn (D2L)

This class has the assistance of D2L, an online course management system. All course related materials, such as slides, Lab materials, practice problem sets and their answers, grades, discussion forum and announcements will be available on D2L. It is your responsibility to check it regularly or to subscribe to the notifications on D2L.

5. Basis of Student Assessment (Weighting)

iClicker	5%
Assignments and Labs	15%
3 Tests	40%
Lab Final	10%
Cumulative Final Exam (3 hrs)	30%

Please refer to the **Course Calendar** for tentative tests dates and assignments due dates. **All tests must be written during the scheduled times. In the event that you missed a test due to a family emergency or illness, the weight of the test will be put on the final exam if the instructor is notified before the test. NO late assignments or labs will be accepted. Final examinations will be scheduled by the College and they will take place during April 18-26. You must be available to write the final examination at the scheduled time. Vacations or scheduled flights are not considered as emergencies.**

6. Grading System

Percentage grades will be converted to letter grades as follows:

A+	90 - 100	B+	77 - 79	C+	65 - 69	F	0- 49
A	85 - 89	B	73 - 76	C	60 - 64		
A-	80 - 84	B-	70 - 72	D	50 - 59		

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 E-1.5 at camosun.ca for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary 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, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. (For these courses a final grade will be assigned to either the 3 rd course attempt or at the point of course completion.)
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.

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services, or the College web site at camosun.ca.

8. Academic Integrity

The Department of Mathematics and Statistics prepared a handout named [Student Guidelines for Academic Integrity](#) to help you to interpret college policies involving student conduct, academic dishonesty, plagiarism, etc. It is your responsibility to become familiar with the contents of the document and the college policies it references.

Stat 116 Practice problems from the textbook Bluman 7e Elementary Statistics	
Section	Problems
1-1	1, 3, 5, 9, 11, 13
1-2	1, 3, 5, 7, 19, 23, 25, 27,
1-3	1, 3, 5, 11, 13, 15
2-1	5, 9, 11, 21
2-2	1
2-3	11
2-4	1, 3
3-1	11, 13, 23, 27
3-2	1, 3, 7, 13,
3-3	1, 5, 11ab, 13, 15ac,
4-1	11, 13, 17, 19, 21, 23, 25, 31
4-2	1, 3, 11, 13, 15, 17, 21
4-3	1, 3, 5, 11, 17
5-1	3, 5, 7, 9, 13, 15, 19, 25
5-2	3, 9, 5
5-3	1, 17ab, 19
6-1	3, 5, 7, 11, 13, 21, 27, 31, 35, 39, 41, 43, 45, 47a, 49
6-2	1, 3, 21, 25
6-3	1, 3, 5, 9, 21a
6-4	1, 7, 9, 11
7-1	1, 3, 5, 7acd, 11, 13
7-2	1, 3abd, 5
7-3	1ad, 5, 7
8-1	1, 3, 5, 7, 9, 11abd, 13acd
8-2	3, 5, 23
8-3	1, 3abc, 5ab, 7, 15, 23
8-4	1, 3, 5, 15
8-6	1, 3
9-2	1, 11,
10-1	3, 5, 7
10-2	1, 3, 5, 7, 9
10-3	1, 5, 9, 13,
11-2	3, 5, 15