



**School of Arts & Science
MATHEMATICS DEPARTMENT**

**MATH 116
Elementary Statistics
2013 WINTER**

COURSE OUTLINE

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

(a)	Instructor:	Susan Chen
(b)	Office:	E260
(c)	Phone:	250-370-3497
(d)	Email:	chen@camosun.ca
(e)	Webpage:	http://sites.google.com/site/susanstats/
(f)	Desire2Learn page	http://online.camosun.ca/
(g)	Office Hours:	MWF 1:30 – 2:30PM, Tu&Th 9:30 – 10:30AM

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, 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	Textbook De Veaux, Velleman and Bock, Intro Stats, Third Edition, Pearson Addison Wesley, 2009
(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>
Exploring and Understanding Data	1- 6
Exploring Relationships Between Variables	7- 9
Gathering Data	12 - 13
Probability	14, 17
From the Data at Hand to the World at Large (Inference about proportions)	18 - 21
Learning about the World (Inference about means)	23
Inference When Variables are Related	26

iClickers: We will be using i>Clicker 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 will be used for this purpose. The lab instructions along with 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 are two sets of homework assignments for this course. Set #1 consists of Assignment Worksheets. They will be submitted for credit. Set #2 is a list of exercise problems from the textbook. Answers for these problems are given in the textbook. Solutions are available in the student solutions manual. *In order to get a full understanding of the course materials, it is necessary to complete both sets of homework. It is essential to do homework after every class and to keep up consistently. **Cramming does not work for this course, unfortunately.***

Tests and Practice Tests

There will be three tests. Before each of the 3 tests, there will be a practice test. You are encouraged to ask questions and to work together with peers during these practice test sessions. The practice tests and their solutions are posted on Desire2Learn. *You will benefit most from these practice tests if you have all notes reviewed, all homework problems completed and a summary sheet made before you attempt the 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 daily iClicker participation. Keeping up is an essential part of any statistics course as 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 Math Department page <http://camosun.ca/learn/programs/math/>. Find out what hours work for you best (when the lab is the least busy).

Desire2Learn (D2L)

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

D2L URL: <http://online.camosun.ca>

e.g., John Smith, birthday: April 7, 1989

Username: firstname.lastnameof-birth

Username: john.smith07

Password: MMDDYY of your birthdate

Password: 040789

5. Basis of Student Assessment (Weighting)

Score 1	
iClicker	5%
Assignments and Labs	20%
3 Tests	35%
Lab Final	10%
Cumulative Final Exam (3 hrs)	30%

Score 2	
Lab Final	10%
Cumulative Final Exam (3 hrs)	90%

To earn an A+ in this course, you must obtain at least 90% on both Score 1 and Score 2. For all other grades, your course grade will be the higher of Score 1 and Score 2 if all labs and assignments have been completed in a satisfactory manner; otherwise, your course grade will be Score 1.

Please refer to the **Pace Schedule** for tentative *tests dates* and lab/homework *due dates*.

All tests must be written during the scheduled times. In the event that you missed a test due to family emergency or illness, the weight of the test will be put on the final exam if the instructor is notified before the event. NO late assignments will be accepted for credit. Final examinations will be scheduled by the college and they will take place during April 15-20, and April 22- 23. You must be available to write the final examination at the scheduled time. Holidays 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, 80)	C+	[65, 70)	F	[0, 50)
A	[85, 90)	B	[73, 77)	C	[60, 65)		
A-	[80, 85)	B-	[70, 73)	D	[50, 60)		

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

It is the student's responsibility to become familiar with the content of Academic Policies and Procedures at <http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.pdf> 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.bc.ca.