CAMOSUN COLLEGE	***School of Arts & Science*** ***MATHEMATICS DEPARTMENT*** **MATH 116-01** **Elementary Statistics** **2010 FALL**

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, and applications using SPSS.

Please note: this outline will be electronically stored for five (5) years only. It is strongly recommended students keep this outline for your records.

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:	1:30 – 2:30 pm Monday - Friday

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 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, Second or Third Edition, Pearson Addison Wesley, 2009 **Lab Manual** Math 116 Lab Manual, Camosun College Print Shop
(b)	**Other**	A Sharp EL-531 Scientific Calculator. *No other calculators are allowed for tests and the final examination.*

4. Course Content and Other Course Information

Course Content

Topic	Chapters
Exploring and Understanding Data	1- 6
Exploring Relationships Between Variables	7- 10
Gathering Data	12 - 13
Randomness and 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 - 25
Inference When Variables are Related	26

Pace Schedule

week	chapters	week	chapters
1	Intro, 1, 3, Lab intro	8	18, review
2	4, 5, lab 1	9	19, test 2 (ch 7-9, 14-18, Thursday)
3	6	10	20, lab 4
4	7, test 1 (ch 1-6, Thursday), lab 2	11	21, 23
5	8, 9	12	24, 25, 26, lab 5
6	14,15	13	26, test 3 (ch 19-21, 23-26, Thursday)
7	16,17, lab 3	14	12, 13, review

SPSS Labs

This course includes seven computer lab sessions designed to familiarize students with the use of a computer as a tool for statistical analysis. The statistics software we use is called Statistics Package for the Social Scientists (SPSS), which is bundled with new textbooks. *You must have a lab manual ready before your first lab*. The required lab manual is available in the bookstore at Lansdowne Campus and on D2L. A lab assignment is assigned for each lab session, except for the Lab Intro session. The labs will be held in the computer lab E115 on the following days:

	Lab Intro	Lab1	Lab2	Lab3	Lab4	Lab5	Lab Final
Labs	Sept 10	Sept 17	Oct 1	Oct 15	Nov 12	Nov 26	Dec 3
Due dates		Sept 23	Oct 7	Oct 21	Nov 18	Dec 2	Dec 9

Homework

"*I hear, I forget. I do, I understand.*" Doing homework is an essential part of studying a Statistics course and Math 116 is no exception. A set of homework problems is suggested for each chapter. It is important that you complete these problems once the materials are studied in class.

It will be very helpful if you can schedule at least 30 minutes each day for *reading the text* and completing the suggested homework problems. This textbook is easy to understand. It is clear and will likely answer most of your questions. Ask questions or consult the text and/or the solutions manual before you get frustrated. Try to attempt each problem before you look at the solutions.

In order to gain a good understanding (and therefore a good grade!) in this course, it is **essential** that you thoughtfully work through each homework problem after every class and to keep up consistently.
Cramming does not work for this course, unfortunately.

Quizzes and Tests

There will be a quiz following the completion of every three or so chapters. Quiz problems will be largely based on homework problems. 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. Solutions for these practice tests will be posted on Desire2Learn after each session. *You will benefit most from these practice tests if you come to these sessions with the notes reviewed, all homework problems completed, and a summary sheet made.*

Attendance
*Attendance is required***.** Showing up to classes is the easiest and most important thing you can do to help you succeed the course. **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 speak to me. ***Only students with good attendance can have the lowest quiz dropped.***

Math Labs
There are two math labs (help centers), **E224** and **E342,** on the Lansdowne campus staffed by instructional assistants available for **free tutoring.**

Desire2Learn (D2L)
This class has the assistance of D2L, an online course management system. Every student who is registered for this class has access to D2L. All course related materials, such as slides, practice tests and their answers, marks, and announcements will be available on D2L. It is your responsibility to check it regularly.

D2L URL: http://online.camosun.ca
Username: firstname.lastname*date-of-birth*
Password: MMDDYY of your birthdate

e.g., John Smith, birthday: April 7, 1989
Username: john.smith07
Password: 040789

5. Basis of Student Assessment (Weighting)

Score 1

5 Labs	10%
Quizzes	14%
3 Tests	36%
Lab Final	10%
Cumulative Final Exam (3 hrs)	30%

Score 2

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

Your final grade will be the higher of Score 1 and Score2. Note that in order to obtain a grade of C or higher, you must have a final examination score of 40% or more.

All tests and quizzes must be written during the scheduled times. In the event that you missed a test or quiz due to family emergency or illness, the weight of the test or quiz will be put on the final exam *if* the instructor is notified *before* the event. NO late lab assignments will be accepted for credit. Final examinations will be scheduled by the college and they will take place during December 13-18, & December 20-21. You must be available to write the final examination at the scheduled time.

6. Awards
Among other Mathematics awards, we now have a Statistics Award ($500). You can find out more information about the awards on this page: http://camosun.ca/learn/programs/math/scholarships.html.

7. 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)		

8. Recommended Materials or Services to Assist Students to Succeed Throughout the Course
There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School administration Office, at Student Services and on the College web site in the Policy Section. 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.