CAMOSUN COLLEGE	***School of Arts & Science*** ***MATHEMATICS DEPARTMENT*** **MATH 116-01 and 03** **Elementary Statistics** **2008 WINTER**

COURSE OUTLINE

The Approved Course Description is available on the web @
http://www.camosun.bc.ca/learn/calendar/math.html#MATH116
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)	Location:	E260
(c)	Phone:	370-3497
(d)	Email:	chen@camosun.bc.ca
(e)	Webpage:	http://chen.disted.camosun.bc.ca
(f)	Desire2Learn page	http://online.camosun.ca/
(g)	Office Hours:	On my webpage, Math 116 Desire2Learn, and my office door.

2. Intended Learning Outcomes

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 Edition, Pearson AddisonWesley, 2006
		Notes
		  Susan Chen, "Power Point Slides", Camosun College Print Shop
		Lab Manual
		  Calver, Chen, and Salloum, "*Math 116 Lab Manual",* Camosun College Print Shop

(b)	**Other**	A Sharp EL-531 Scientific Calculator.

4.   Course Content

Topic	Chapters
Exploring and Understanding Data	1- 6
Exploring Relationships Between Variables	7- 10
Gathering Data	11 - 13
Randomness and Probability	14 - 17
From the Data at Hand to the World at Large (Inference about proportions)	18 - 22
Learning about the World (Inference about means)	23 - 25
Inference When Variables are Related	26 - 27
Analysis of Variance and Multiple Regression	28 time permitting

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 it via website: **http://online.camosun.ca.** Your **username** is: **firstname.lastnamedate-of-birth.** E.g., **john.smith07** is the username for John Smith who was born on Feb 7th. Your initial **password** is: **changeme.** All course related materials, such as practice tests, tests answers, your marks, lab assignments dropbox, announcements etc. will be available on D2L. It is your responsibility to check it regularly.

SPSS Labs: This course includes six computer lab sessions designed to familiarize students with the use of a statistics software as a tool for statistical analysis. The six computer lab sessions are scheduled for the Friday of weeks 1, 2, 3, 5, 10, and 12. The statistics software we use is Statistics Program for Social Scientists (SPSS). You must have a lab manual ready before your first lab. The required lab manual is available in the bookstore at Lansdowne Campus. A lab assignment is assigned for each lab session, except the first session. Lab assignments are due by the following Thursday. A take-home Lab Final Examination will be given in the 13th week of the semester.

Math Labs, E224 and E342: There are two Math Labs (or Help Centres) on the Lansdowne campus to assist students in all Math courses. Lab hours are posted on the lab doors. Identify the times that work for you best and use the Math Labs as much as you can, either for help or simply doing your homework there! Students who have used the labs found the lab assistants to be very helpful.

Against All Odds: Inside Statistics Video Series: This series has one video for almost every topic of this course. These videos can be viewed on the website http://www.learner.org/resources/. To play a video you do the following: click on Against All Odds: Inside Statistics, scroll down to find the video title that you would like to view and then click on the VOD icon. You will need sound. You will be asked to sign up with your email account (any email account).

Calculator policy: A Sharp EL-531 scientific calculator is required. (The model number on the packaging might be EL-531W.) This is the **only** calculator that will be allowed for tests and

examinations in almost all Math courses. This calculator is available at the Lansdowne Bookstore, and many other stores such as Staples and Office Depot.

Homework: Homework problems for this course are posted on Math 116 Desire2Learn page. In order to get a full understanding of the course materials you should at least do all the basic exercises of each chapter as soon as a chapter is finished.

It will be very helpful if you can schedule at least 30 minutes each day for completing the homework. Ask questions before you get frustrated or behind. Please try to understand what you are doing when you work through each problem. Try to attempt each problem before you look at the solutions. Please remember the objective of doing homework is to gain a better understanding of the course material.

The key for gaining good understanding (and therefore a good grade!) in this course is to thoughtfully work through each homework problem after every class and to keep up consistently. Cramming does not work for this course, unfortunately.

Practice Tests: There will be a practice test session on the day before each test. Students are encouraged to ask questions and to work together with peers during these sessions. Solutions for these practice tests will be posted on Math 116 Desire2Learn page after each session. You would benefit most from these practice tests if you come to the practice tests with the notes reviewed, all homework problems completed, and a summary sheet made.

5. Basis of Student Assessment (Weighting)

A tentative schedule for the tests and their percentages as that of the final grade are given in the table below. Each test covers material learned between this test and the previous test. The final exam covers the entire course. One information sheet is allowed for each test and the final examination.

Test 1	Thursday, 4th week, January 31	10%
Test 2	Thursday, 7th week, February 21	10%
Test 3	Thursday, 11th week, March 20	10%
Test 4	Wednesday, 14th week, April 10	10%
Lab assignments		10%
Lab Final (take home)	Week 13	10%
Final Examination (3 hours)	Time and room TBA	40%

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 a note (email or paper) was sent to the instructor before the test time. NO late homework or late lab assignments will be accepted for credit. Final examinations will be scheduled by the college and they will take place during April 14-19 and April 21-22. You must be available to write the final examination at the scheduled time.

6. Grading System

In order to pass the course (D or higher), a student must score a minimum of 40% on the final examination. The grade scheme is as follows:

Final Grade = the higher of (Score1, Score2)   where

Score1 = 10%(lab) + 40 % (tests) + 10%(lab final) + 40%(final exam)

$$\text{Score 2} = \begin{cases} 10\%(\text{lab final}) + 90\%(\text{final exam}) & \text{if all lab assignments have been completed satisfactorily} \\ 0 & \text{otherwise} \end{cases}$$

Standard Grading System (GPA)

%	Grade	Grade Point Value	Description
90 – 100 85 – 89 80 – 84	A+ A A-	9 8 7	Exceptional, outstanding or excellent performance. Student shows initiative and an insightful grasp of theory and technique.
77 – 79 73 – 76 70 - 72	B+ B B-	6 5 4	Very good or good performance. Student shows a good overall grasp of theory and technique or an excellent grasp in some areas balanced by a satisfactory grasp in others.
65 – 69 60 - 64	C+ C	3 2	Satisfactory performance. Student shows a satisfactory grasp of theory and technique. Students may experience some difficulty being successful in courses for which this course is a prerequisite.
50 – 59	D	1	Marginal performance. Student has a weak grasp of theory and technique, which is insufficient to take courses for which this course is a prerequisite.
0 - 49	F	0	Unsatisfactory performance. Student should either repeat the course or enroll in a course at a lower level.

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 **camosun.ca** or information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	*Incomplete*: 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	*In progress*: A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	*Compulsory Withdrawal:* 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.

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.bc.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

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.bc.ca.

STUDENT CONDUCT POLICY

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.