School of Arts & Science
Department of Mathematics

Math 219 – Introduction to Probability and Statistics 2
Winter 2005

COURSE OUTLINE

The Approved Course Description is available on the web at: http://www.camosun.bc.ca/calendar/courselist.php#MATH

Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for your records.

1. Instructor Information

(a) Instructor Susan Chen

(b) Office hours: Please find them on my web page

(c) Location: E260

(d) Phone: 370-3497

(e) E-mail: chen@camosun.bc.ca

(f) Website : http://ccins.camosun.bc.ca/~chen/

2. Intended Learning Outcomes

At the end of the course students will be able to:

1. Perform analysis of paired data.
2. Make inferences concerning a difference between population proportions.
3. Make inferences concerning a population variance, or two population variances.
4. Make inferences concerning more than two population means (analysis of variance) with a single factor or with two factors.
5. Compute Type I error, Type II error, and the power of a hypothesis test.
6. Perform correlation and regression analyses, and make inferences about parameters and predictions.
7. Perform basic categorical data analysis.
8. Perform basic non-parametric data analysis.

3. Required Materials

(a) Text:
Devore, Jay L., *"Probability and Statistics for Engineering and the Sciences"*, Sixth edition, 2004

(b) Lab Manual
Chen, *"Math 219 Lab Manual"*, Camosun College Print Shop.

(c) A scientific calculator with statistics mode for two variables

4. Course Content and Other Course Information

	Topic	Sections
Unit 1.	Review: Confidence Intervals and Tests of Hypotheses	7.1-7.3, 8.1-8.5, 9.1-9.2
Unit 2.	Confidence Intervals for the Variance	7.4 plus supplementary notes
Unit 3.	Inference Based on Two Samples	9.3 – 9.5
Unit 4.	The Analysis of Variance	10.1 - 10.3
Unit 5.	Multifactor Analysis of Variance	11.1 - 11.2
Unit 6.	Simple Linear Regression and Correlation	12.1 - 12.5
Unit 7.	Analysis of Categorical Data	14.1 - 14.3
Unit 8.	Distribution-Free Procedures	15.1 - 15.2, 15.4
Unit 9.	Nonlinear and Multiple Regression	13.1 – 13.5 time permitting

Computer Lab: This course includes lab sessions designed to familiarize students with the use of a computer as a tool for statistical analysis. The software package to be used is MINITAB. You must have the Math 219 Lab Manual ready before your first lab. The required lab manual is available in the bookstore at Lansdowne Campus. A lab assignment will be assigned for each lab session. All lab assignments are due in class, six days after they are assigned on the lab day. No late assignments will be accepted. There will be a Lab Final Examination near the end of the semester.

Calculator: A scientific calculator with statistics mode for two variables is required. For example, SHARP EL-531V Advanced D.A.L. ($15 - $20 range) is a suitable calculator. When you purchase a calculator, consider one that has the following functions that are necessary for Math 219: (1) Normal scientific calculations, (2) Single-variable statistical calculations, (3) Two-variable statistical calculations including correlation and linear regression. Different calculators function differently. You will need to learn to use your own calculator using the manual comes with it.

Homework: There are two sets of homework assignments for this course. Set #1 consists of eight (8) Assignment Worksheets. These assignments will be collected and marked for credits. Set #2 consists a list of problems from the textbook. These are for you to practice to get a better understanding of this course (and therefore a better grade).

5. Basis of Student Assessment (Weighting)

A tentative schedule for the tests and their percentages as that of the final grade is given in the table below. Test #1 will cover all materials discussed in class before test #1, and test #2 will cover the rest of the course material. The final exam covers all materials. A student's evaluation may be solely based the results of the final examinations provided that all homework and lab-assignments are completed and submitted on time.

All tests must be written during the scheduled period and no late hw/assignments will be accepted. Final examinations will be held from April 18 to 23 and from April 25 to 26. You must be available to write at the scheduled time.

Test 1	Tuesday, 7th week, February 22	20%
Test 2	Tuesday, 14th week, April 12	20%
Lab Assignments and Homework		10%
Lab Final Exam	TBA	10%
Final Exam	TBA	40%

Final Grade = Max (score1, score2)
where score1 = 10%(hw/lab) + 40% (tests) + 10%(lab final) + 40%(final exam)
score2 = 10%(lab final) + 90%(final exam) *if all lab/hw were completed and submitted on time, otherwise 0.*

6. Grading System

The following percentage conversion to letter grade will be used:

A+ = 95 - 100%	B = 75 - 79%	D = 50 - 59%
A = 90 - 94%	B- = 70 - 74%	F = 0.0 - 49%
A- = 85 - 89%	C+ = 65 - 69%	
B+ = 80 - 84%	C = 60 - 64%	

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, Registrar's Office or the College web site at http://www.camosun.bc.ca

ACADEMIC CONDUCT POLICY

There is an Academic Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.

www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html