

## CAMOSUN COLLEGE COURSE OUTLINE Spring 2004

### MATH 116 Elementary Statistics

#### Section P001

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**Calendar Description:** This course is designed for students in criminal justice and social science programs.

**Topics:** descriptive statistics, probability and probability distributions, the normal distribution, estimating population means and proportions, hypothesis testing, goodness of fit, linear correlation and regression, and non-parametric statistics.

**In-Class Workload:** 8 lectures and 1 computer lab each week.

**Out-of-Class Workload:** 8 – 12 hours per week.

**Textbook:** Triola, Goodman and Law, Elementary Statistics, Second Canadian Edition, Addison-Wesley, 2002.

#### Course Summary:

##### Topic Sections

Introduction 1.1 – 1.4

Descriptive Statistics 2.1 – 2.7

Probability 3.1 – 3.4, 4.1 – 4.4

Normal Probability Distributions 5.1 – 5.5

Estimates and Sample Sizes 6.1 – 6.4

Hypothesis Testing 7.1 – 7.5

Chi-Squared Tests 10.1 – 10.3

Tests Comparing Two Parameters 8.1 – 8.3, 8.6

Correlation and Regression 9.1 – 9.3

Non-parametric Tests 13.1 – 13.3 if time permits

**Lab:** This course includes lab sessions designed to familiarize students with the use of a computer as a tool for statistical analysis. The computer software used is Statistics Program for Social Scientists (SPSS). You must have a computer account and a lab manual ready before your first lab. The lab manual is available in the bookstore at Lansdowne Campus. A lab assignment will be assigned for each lab session. A take-home Lab Final Examination will be given near the end of term.

**Against All Odds: Inside Statistics Video Series:** The college purchased this video series to assist studying for this course. Each video focuses on one topic from this course. Each video can be signed out at the front desk of the library as a reserved item.

**Calculator:** A scientific calculator is required for this course. It must be able to perform: (1) Normal scientific calculations, (2) Single-variable statistical calculations and (3) Two-variable statistical calculations including correlation and linear regression. For example, SHARP EL-531V Advanced D.A.L. (~ \$15) is a suitable calculator.

**Homework:** Homework problems for this course are posted on the website:

<http://ccins.camosun.bc.ca/~chen/math116hw.htm>. The “required” problems will be collected (for checking completion) on test days. A student must label homework with section number, page number and question number clearly. It is also the responsibility of the student to mark the homework with the answers given in the back of the textbook. Mark answers with either a check sign or an “X” with correction. All required homework problems from the sections that will be examined by a test are to be collected right before the start time of the test.

**Example/Practice Tests:** There will be an example-test-session in class during a lecture period. Students would benefit most by coming to the example-test-session having reviewed the sections of material covered by the test. Students are encouraged to ask questions and to discuss among peers during the sessions. There is also a practice test which is take-home and discussed in the lecture prior to the test.

**Evaluation:** 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 all material covered in the course.

**All tests must be written during the scheduled period and no late assignments will be accepted.**

Component Date mark mark\*

Test 1 May 11, 2004 10% 0%

Test 2 May 20, 2004 10% 0%

Test 3 June 3, 2004 10% 0%

Test 4 June 16, 2004 10% 0%

Lab Assignments Weekly 10% 0%

Final Exam Part I:

Lab Final (take home)

Second to last week of term 10% 10%

Final Exam Part II:

Regular (3 hours)

TBA 40% 90%

\* The student's evaluation may be solely based on the results of the final examinations provided that all class-assignments and lab-assignments are completed to the instructor's requirements.

**NOTE: Final examinations will be held from June 21 to June 23. Students must be available to write at the scheduled time.**

**Grading:**

A+ : 95 – 100% B+ : 80 – 84% C+ : 65 – 69% F : 0 – 49%

A : 90 – 94% B : 75 – 79% C : 60 – 64%

A- : 85 – 89% B- : 70 – 74% D : 50 – 59%