

# School of Arts & Science – Mathematics Department MATH 116 – 002 (Elementary Statistics)

H 116 – 002 (Elementary Statist

#### **WINTER 2008**

The Approved Course Description is available on the Internet at http://www.camosun.bc.ca/calendar/current/web/math.html It is strongly recommended that you keep this outline for your records.

#### 1. Instructor Information

| Instructor:   | Geoff Salloum   |
|---------------|---|
| Office:       | E266  |
| Office Hours: | I have at least one hour set aside everyday. Please find them on my website.  |
| Email:        | salloumg@camosun.bc.ca  |
| Phone:        | 250.370.3504  |
| Website:      | http://gsalloum.googlepages.com   |
| Class Times:  | 1130 – 1220 Monday, Wednesday, Thursday, Friday in Y219.<br>1130 – 1220 on some Tuesdays (see lab schedule below) in E100 and E103. |

# 2. Prerequisites

C+ in MATH 072, or a C in MATH 073 or Math 11 or Applications of Math 12, or a C- in Math 12, or assessment.

## 3. Course Objectives

Upon completion of this course you should 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 a computer software package.

## 4. Required Materials

- 1. Intro Stats (2<sup>nd</sup> edition), De Veaux, Velleman, and Bock. Addison Wesley, 2005.
- 2. SPSS version 15.
- 3. Math 116 Lab Manual, Calver, Chen, and Salloum. Camosun College Print Shop.
- 4. Sharp EL 531 Calculator (only calculator allowed for tests and examinations)

## 5. Grade Allocation

Percentage grades will be converted to letter grades as follows:

| A+ | [90, 100] | B+ | [77, 80) | C+ | [65, 70) | F | [0, 50) |
|----|-----------|----|----------|----|----------|---|---------|
| А  | [85, 90)  | В  | [73, 77) | С  | [60, 65) |   |         |
| A- | [80, 85)  | B- | [70, 73) | D  | [50, 60) |   |         |

Note that March 10, 2008 is the last day to withdraw from this course without a failing grade appearing on your transcript. If you desire a grade of *Audit* in the course, you will need to make this change by March 10, 2008.

# 6. Evaluation

Score 1

| 10% |
|-----|
| 40% |
| 10% |
| 40% |
|     |

| Take home Lab Final           | 10% |
|-------------------------------|-----|
| Cumulative Final Exam (3 hrs) | 90% |

Your final course grade will be the maximum of Scores 1 and 2 if all lab assignments have been completed and submitted on time. Otherwise, your final grade will be Score 1. Note that in order to pass this course (D or higher), you must obtain a final examination score of 40% or higher.

A tentative schedule for the test dates is given below:

| Test 1 | Test 2 | Test 3 |
|--------|--------|--------|
| Feb 8  | Mar 7  | Apr 4  |

# 7. Tentative Syllabus

| Торіс                                       | Chapters |
|---|----------|
| Exploring and Understanding Data            | 1 - 6    |
| Exploring Relationships Between Variables   | 7 – 9    |
| Gathering Data                              | 11 – 13  |
| Randomness and Probability                  | 14 – 17  |
| From the Data at Hand to the World at Large | 18 - 22  |
| Learning About the World                    | 23 – 25  |
| Inference When Variables are Related        | 26       |

# 8. Labs and Assignments

This course includes 5 lab sessions held on some Tuesdays (Jan 15, Jan 22, Feb 5, Mar 4, and Mar 25) in E100 and E103. The labs are designed to familiarize you with the use of a computer as a tool for statistical analysis. The computer software we use is Statistics Program for Social Scientists (SPSS). You must have a computer account and lab manual ready before your first lab. Each lab session includes a lab assignment that is due 8 days after the lab dates above.

## 9. Attendance

Showing up to class is arguably the easiest and most important thing you can do to help your college experience. **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. Also, there are two math help centers on the Lansdowne campus staffed by instructional assistants available for free for students who would like help or would like to work with others. They are located in rooms E224 and E342.

There will be no rewrites for missed tests. If a test is missed for any reason, then the percentage of your final grade allocated to that test will be added onto your final exam provided that you do well on the missed material on the final exam. Finally, be sure not to schedule anything for April until you know your exam schedule. It is possible to have an exam up to and including April 22, 2008.

#### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available to assist you throughout your learning. This information is available in the College calendar, at Student Services or the College web site at camosun.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, Student Services, and on the College web site in the Policy Section.

Score 2