

MATH 116 – D01 (Elementary Statistics) Course Outline



SCHOOL OF ARTS AND SCIENCE
MATHEMATICS DEPARTMENT
FALL 2008

The approved course description is available on the web at:

<http://camosun.ca/learn/calendar/current/web/math.html#MATH116>

It is recommended that you keep this outline for your records as it will not be stored indefinitely.

1. Instructor Information

Instructor:	Geoffrey Salloum
Office Hours:	See my website and office door. You can also contact me for an appointment.
Location:	Ewing 266
Phone:	250.370.3504 (not a good way to contact me)
Email:	salloumg@camosun.bc.ca (Try gsalloum@gmail.com if I do not respond within 24 hours)
Websites:	http://gsalloum.googlepages.com http://online.camosun.ca (Username: firstname.lastname##, where ## is the day of the month you were born on. Password: mmddy of your birthdate. E.g., albert.einstein14 and 031479.)

2. Intended Learning Outcomes

Upon completion of this course students will be able to:

- Identify problems in our society for which statistical analyses are suitable.
- Compute and interpret descriptive statistics.
- Solve basic probability problems. Distinguish between continuous and discrete probability distributions. Perform calculations involving probability distributions including the Binomial and Normal distributions.
- Estimate the population mean and population proportion, and determine sample size.
- Estimate the difference between two means, or two proportions.
- Test hypotheses about a mean, a proportion, a difference of two means or two proportions.
- Perform basic correlation and simple linear regression analysis.
- Perform basic categorical data analysis.
- Perform basic statistical data analysis with the aid of a computer software package.

3. Required Materials

- Text: Intro Stats (2nd or 3rd ed), DeVeaux, Velleman, and Bock. Addison – Wesley, 2008
- SPSS (version 15 or 16)
- Lab Manual: Calver, Chen and Salloum, "Math 116 Lab Manual," Camosun Print Shop.
- Calculator: Sharp EL-531 Scientific (**only** calculator that may be used for examinations).

4. Course Content /Information

Lab Assignments and Discussion Boards: This course includes five lab assignments each worth 2% of your final grade. The lab assignments are designed to familiarize you with the use of a computer as a tool for statistical analysis. The computer software we use is called Statistics Program for Social Scientists (SPSS). The lab assignments are included in the lab manual and once complete can be handed in online using the "dropbox." A lab final worth 10% of your final grade will be distributed near the end of the term and can also be handed in using the online dropbox.

Five percent of your final grade is allocated to class participation in an online message board. Full marks will be given to students who post at least three messages before December 4. Credit will only be given for messages in which the poster asks a question to fellow students or provides some useful advice. Note that I will not be regularly monitoring the board, so please e-mail directly if you have an urgent request.

Tests: Three tests, each worth five percent of your final grade, are to be completed online. Test dates are given below and you may start the test at any time within a 24 hour window; however, once started, you will have to complete the test within 120 minutes. Test grades will not be released until the 24 hour window has expired and after that time all students who have not completed the test will be unable to do so. The test dates and areas of coverage are as follows:

Test 1 (Chapters 1 – 9): Oct 3, Test 2 (Chapters 11 – 18): Oct 30, Test 3 (Chapters 19 – 25): Nov 28

There will be no rewrites for missed tests. If a test is missed for **any** reason, then the portion 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). While the tests will only cover material learned since the previous test, the final exam will be cumulative. Note that the final exam will be written in person at the College and may be scheduled for a date as late as December 16, 2008.

Attendance and Suggested Problems: Keeping up is an essential part of any statistics course as much of the material builds on itself. This is especially important in an online course, where you have more control over the pace of the material. A more detailed pacing schedule is available online, but you will need to complete approximately two chapters per week in order to keep pace. If you feel yourself falling behind at any point during the term, then please do not hesitate to 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.

This course will cover most of the material in the first 26 chapters of the text above. A more detailed list of topics is given below. A list of suggested problems from the text (not to be submitted for grading) are available online for each chapter we complete, and working through these problems is perhaps the best way to ensure that you understand the material.

Topic	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

5. Basis of Student Assessment (Weighting)

Final Grade* = Max (Score1, Score2), where

Score1 = 10% (labs) + 10% (lab final) + 5% (participation) + 15% (tests) + 60% (final exam), and

Score2 = $\begin{cases} 10\% (\text{lab final}) + 90\% (\text{final exam}) & \text{if all labs have been completed satisfactorily} \\ 0 & \text{otherwise} \end{cases}$

*Note that in order to pass this course (D or higher), you must obtain a final exam score of 50% or higher.

6. Grading System and Other Information

Standard Grading System (GPA)

Percentage	Grade	Grade Point Value	Description
90 - 100	A+	9	Exceptional, outstanding or excellent performance. Student shows initiative and an insightful grasp of theory and technique.
85 - 89	A	8	
80 - 84	A-	7	
77 - 79	B+	6	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.
73 - 76	B	5	
70 - 72	B-	4	
65 - 69	C+	3	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.
60 - 64	C	2	
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	Minimum level has not been achieved.

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 E-1.5 at camosun.ca for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> 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	<i>In progress:</i> A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. (For these courses a final grade will be assigned to either the 3 rd course attempt or at the point of course completion.)
CW	<i>Compulsory Withdrawal:</i> 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.

LEARNING SUPPORT AND SERVICES FOR STUDENTS

Several services are available to assist students throughout their learning. See the College calendar, Student Services or 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, at Student Services and on the College web site in the Policy Section.