Math 216 – Applied Statistics
Course Outline – Sept-Dec 2009, Section 1

Instructor: Angus Argyle
Office: Ewing 266   **Email:** ArgyleA@camosun.bc.ca
Phone: 250 370-3504 **Website:** http://sites.google.com/site/angusargyle/

1. **Classes:** M,W,Th,F 12:30pm - 1:20pm, Young Building, Room 227
    Office Hours: Mondays & Fridays 10:30 – 11:20 am; Tuesdays – Thursdays 1:30 – 2:30 pm,
      and by appointment.

2. Intended Learning Outcomes
Upon completion of this course students will be able to:

a. Compute and interpret descriptive statistics.
b. Perform calculations that apply the basic properties and concepts of probability.
c. Make statistical inferences for one population and two populations.
d. Make statistical inferences for more than two populations (ANOVA).
e. Apply the technique of linear regression in circumstances where appropriate and assess the usefulness of a linear model in these situations using the concept of correlation.
f. Apply basic methods to analyze categorical data.
g. Use the statistical software MINITAB to perform basic data analysis.

3. Required Materials

a. Introduction to the Practice of Statistics (5th or 6th ed.), Moore, et al. Freeman, 2006 or 2009.
b. Math 216 Lab Manual, Calver, Chen and Salloum. (*Free on the course webpage*)
c. Sharp EL – 531 Calculator (only calculator allowed for tests and examinations)

4. Course Content /Information

Computer Labs: This course includes six computer lab sessions held on some Tuesdays throughout the term (Sept 15, Sept 29, Oct 20, Nov 3, Nov 17 and Dec 1) in Ewing 115 from 12:30pm to 1:20pm. 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 Minitab 14 (or 15). **Each lab session includes a lab assignment to be handed in at the start of class on the Thursday 9 days after the corresponding lab session.** A **take-home lab final** will be made available several weeks before the end of the term and will be **due on the final day of class**.

Tests: Three tests are tentatively scheduled for October 2, October 30, and December 3. A practice test (with solutions) will be made available on the course webpage prior to each test. One 8.5"x11" double-sided formula sheet is permitted for each test and the final exam. **There will be no rewrites for missed tests.** If a test is missed for **a medical or family emergency** 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. The final exam may be scheduled for a date as late as December 21, 2009.

Attendance and Practice: Showing up to class is arguably the easiest and most important thing you can do to help your college experience. **For this course in particular, keeping up is essential 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. **Cramming does not work for this course**.

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 224 and 342 in the Ewing Building.

This course will cover most of the material in the first 12 chapters of the textbook. The specific sections from the textbook are listed in the Pacing Schedule. A list of suggested and assigned exercises will be handed out in the first week of class. The **assigned exercises will be submitted for grading** from the text from each chapter we complete. Working through these exercises is perhaps the best way to ensure that you understand the material. The assigned sets of exercises will be due on Sept. 30, Oct. 28, and Nov. 30. **No late assignments or lab assignments will be accepted for credit.**

5. Basis of Student Assessment (Weighting)

Final Grade* = Max (Score1, Score2), where
Score1 = 10% (assignments) + 10% (labs) + 10% (lab final) + 30% (tests) + 40% (final exam), and
Score2 = 10% (lab final) + 90% (final exam) if all labs & assignments have been completed satisfactorily.

*Note that in order to pass this course (D or higher), you must obtain a final examination score of 40% or higher.

6. Grading System

Percentage grades will be converted to letter grades and *grade point* values as follows:

A+: $90 \leq \% \leq 100$ 9   B+: $77 \leq \% < 80$ 6   C+: $65 \leq \% < 70$ 3   F: $0 \leq \% < 50$ 0
A: $85 \leq \% < 90$ 8   B: $73 \leq \% < 77$ 5   C: $60 \leq \% < 65$ 2
A-: $80 \leq \% < 85$ 7   B-: $70 \leq \% < 73$ 4   D: $50 \leq \% < 60$ 1

7. Prerequisites:
   The prerequisite is MATH 109 or Principles of Math 12. If you feel that you might not have the necessary backgrounds please see me in the first week of classes and we will talk about your situation.

8. 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. **The Course Description in the Camosun Calendar is available on the web at http://camosun.ca/learn/calendar/current/web/math.html**

9. Pacing Schedule

Week	Sections (from 6th edition)	Sections (from 5th edition)
1	1.1, 1.2	1.1, 1.2
2	1.3, 2.1, 2.2	1.3, 2.1, 2.2
3	2.3, 2.4, 2.5	2.3, 2.4, 9.1
4	2.6, 3.1, 3.2, and Test 1	2.5, 3.1, 3.2, and Test 1
5	3.3, 3.4, 4.1, 4.2, 4.5	3.3, 3.4, 4.1, 4.2, 4.5
6	4.3, 4.4, 5.1	4.3, 4.4, 5.1
7	Poisson and 5.2	Poisson and 5.2
8	6.1, 6.2, and Test 2	6.1, 6.2, and Test 2
9	6.3, 6.4, 7.1	6.3, 6.4, 7.1
10	7.2, 8.1	7.2, 8.1
11	8.2, 9.1, 9.2	8.2, 9.2, 9.3
12	9.3, 10.1	9.4, 10.1
13	Test 3 and 12.1	Test 3 and 12.1
14	Review	Review