Colorado State University--Pueblo
Math 156 — Introduction to Statistics
Spring 2008

Instructor: Susannah Dobson   Office Hours: M 5:30-6:15 PM 235
  Home Phone: 544-2972 (before 9:00pm please)   Office: 549-2190
  Email: sdobson59@yahoo.com   Web Site: www.sdobson.net

Prerequisites: Math 099 (Intermediate Algebra) or equivalent, and a satisfactory score on the departmental placement exam. Math 121 (College Algebra) is strongly recommended.

Textbook: Moore, David S. (2003). *The Basic Practice of Statistics*, 3rd edition.

Course Goals and Objectives
- ❖ The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data.
- ❖ Students will be exposed to four broad concepts in statistics
  - ➢ Exploring Data: Observing patterns and departures from patterns (descriptive statistics: graphical, numerical, and relationships in bivariate data)
  - ➢ Planning a Study: Deciding what and how to measure (Sampling Designs and Experimental Designs)
  - ➢ Anticipating Patterns: Producing models using probability and simulation (Probability models including Normal, and Binomial distributions)
  - ➢ Statistical Inference: (hypothesis testing, confidence intervals)

Students are not only expected to carry out the mathematical analysis of data, but to communicate in writing the meaning of that analysis.

Evaluation Procedures:
Course grades will be based on homework/classwork/case studies, chapter exams, and a comprehensive final exam. Each category will account for the following percentage of the overall grade.

		Final Letter Grade	
Homework/Classwork/Case Studies:	25%	90-100	A
Exams:	45%	80-89	B
Final Exam:	30%	70-79	C
		60-69	D
		0-59	F

Attendance:

Regular attendance and participation is expected of each student. Non-attendance may result in being withdrawn from the class. The Department of Mathematics and Physics night class attendance policy will be followed (please see attached).

Technology:

❖ A calculator is necessary throughout the course and during all quizzes and exams. It should have the capability of performing statistical functions and evaluating logarithmic and exponential functions. TI-83(plus) or TI-84 is strongly recommended.

❖ There will be occasional use of statistical computer software. No previous experience in computing is necessary. Minitab is available in the Mathematics and Physics Building Computer Lab and in other labs across campus. Stat Crunch is a web-based data analysis program that may be useful for both homework and case studies. The web address is www.statcrunch.com . A 6 month subscription is available on the web site for $5.00.

Homework/Classwork/Case Studies:

Homework is the place for students to apply the concepts we discuss in class. There is no substitute for doing the problems on your own. We will discuss homework in class and it is to be used as a study guide for exams.

Please follow the guidelines below for submitting homework.

✓ Homework from the previous week will be collected each Monday in class.

✓ Late homework will count, however a late penalty will be assessed.

✓ Please
  - o Label the upper right-hand corner of your assignment with your name, date submitted, course number, and the number of the homework.
  - o **Staple** all pages together.
  - o Remember that in statistics, the answer is **never** just numbers. All numbers have contextual meaning which **must** accompany your numerical answers. When you answer a question, answer the question and then justify that answer statistically.
  - o Remember that any graphs that are included whether done by hand or software must have:
    - ▪ Title
    - ▪ Axes must be labeled and scaled appropriately

✓ Classwork may consist at times of activities completed with a partner or group and will, on occasion, be collected and evaluated.

✓ Case Studies are additional opportunities for you to demonstrate understanding in multiple concepts in statistics. Any case studies that are assigned will have specific guidelines that will be given at that time.

Exams:

In-class exams will be announced at least 1 week in advance.

- ✓ Calculators will be allowed on all exams. (no sharing of calculators and no use of cell phones)
- ✓ All exams will be closed book, however a formula sheet will be provided
- ✓ A comprehensive final exam will be given during finals week

Academic Integrity: Working together is **highly encouraged**. You will learn a great deal of statistics through conversations about the data. However, these conversations should only form the initial stages of your thinking, with all work submitted your own. All forms of cheating are grounds for an immediate F in the course for all parties involved.

Extra Help: I will be available for additional help on Mondays from 5:30 – 6:15. Additional time may be arranged with instructor. I am also available for help through email or over the phone. The math lab is also available for help. Please do not hesitate to ask for additional help if you need it!

Students with disabilities: The University abides by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, which stipulate that no student shall be denied the benefits of education "solely by reason of a handicap." If you have a documented disability that may impact your performance in this class for which you may require accommodations, please see me as soon as possible to arrange these accommodations. In order to receive this assistance, you must be registered with, and provide documentation of your disability to, the Disability Services Office, which is located in the Psychology Building, Room 232.