

## **Cedar Crest College**

### **Probability and Statistics – MATH 110 (3 credits)**

Spring 2009

Tuesday 7:00 – 9:30 P.M.

Blaney Hall Administration Building, 2 (BHA 2)

**Instructor:** Mr. Scott Fritchman

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**Office Hours:** by appointment only

#### **Course Description:**

This course the collection, organization, analysis, and interpretation of data in the context of applications from such fields as business, education, political science, economics, psychology, sociology, nutrition, and medicine. The importance of experimental design and sampling techniques are studied and stressed throughout the course. Elementary probability theory is introduced as well as the following theoretical distributions: binomial, normal, and Student's T. An algebra background is required as well as a scientific or statistical calculator (I like the TI-XS a good value at \$15.99).

#### **Course Outcomes:**

Students will demonstrate critical reasoning and problem solving skills within the following contexts:

- Discussing statistics as a necessary way of understanding a world that is increasingly number and information oriented.
- Examining how statistics can be distorted and misused.
- Emphasizing ways information can be simplified and described.
- Stressing the importance of experimental design and sampling techniques particularly as they apply to a student's chosen discipline and research interests.
- Exploring useful methods of making predictions based upon available information considering elementary probability theory and the following important theoretical distributions: binomial, normal, Student's T, and chi-square.
- Demonstrating technological competence in the use of statistical software and the ability to evaluate and explain the generated output.

**Required Text:**

Bluman, Allan G., Elementary Statistics: A Step by Step Approach, 7<sup>th</sup> edition, McGraw Hill, 2009.

ISBN 978-0-07-353497-8

**Assessment:**

There will be weekly quizzes given in the course as well as a mid-term and final exam. The lowest quiz grade will be dropped. Each of these items (Quiz, 1<sup>st</sup> Exam and 2<sup>nd</sup> Exam) will be worth 1/3 of your grade. The exams will be like a 1<sup>st</sup> half of the course exam and 2<sup>nd</sup> half of course exam.

The grading scale is as follows:

A	93 and up	C+	77-80
A-	90-93	C	73-77
B+	87-90	C-	70-73
B	83-87	D+	67-70
B-	80-83	D	60-67
F	Below 60		

Attendance in class is expected of all students and mandatory on exam days, but it will not be factored numerically into your grade. Make-up exams will be given only with prior notification and documentation of a legitimate excuse. All assignments are due in-class on the due date and will not be accepted otherwise without prior notification and documentation of a legitimate excuse.

**Notes:**

- I fully support the Cedar Crest College Honor Code and the Classroom Protocol code as stated in the Customs Book. Appropriate classroom behavior is implicit in the Cedar Crest College Honor Code. Such behavior is defined and guided by complete protection for the rights of all students and faculty to a courteous, respectful classroom environment. That environment is free from distractions such as late arrivals, early departures, inappropriate conversations and other behaviors that might disrupt instruction and/or compromise students' access to their Cedar Crest College education.
- **Cell phones should be turned off for the duration of the class period.**

- Collaboration on daily homework is expected and encouraged, but any work turned in for a final grade should be your own. Violations of the college plagiarism policy will be reported to the dean and result in a grade of zero for the particular assignment/exam.
  
- It is vitally important for you to keep current with the work. Students who fall behind early quickly find themselves in a hole that is very difficult, if not impossible, to get out of. I'm more than willing to meet with you during office hours to help you succeed. You must make the effort and make an appointment.
  
- The format of the course will be lecture/discussion with much emphasis on in class work/homework discussion.
  
- It will be beneficial for you to have read the day's material prior to class. You may not totally understand it at first but then you will be seeing it a second time during lecture.
  
- Students with documented disabilities who may need academic accommodations should discuss these needs with me prior to the first two weeks of class. Any student who wishes to request accommodations should contact the Advising Center.
  
- There will be NO makeup quizzes for ANY reason. The lowest quiz grade will be dropped.

**Tentative Schedule:**

1/19/2010 1-3 and other Chapter 1 selections, 2-1

1/26/2010 2-2, 2-3 (Quiz #1)

2/2/2010 3-1, 3-2 (Quiz #2)

2/9/2010 3-3, 3-4 (Quiz #3)

2/16/2010 4-1, 4-2 (Quiz #4)

2/23/2010 4-3, review (Quiz #5)

3/2/2010 Mid-term Exam

3/9/2010 NO CLASS

3/16/2010 4-4, 4-5

3/23/2010 5-1, 5-2 (Quiz #6)

3/30/2010 5-3, 6-1 (Quiz #7)

4/6/2010 NO CLASS

4/13/2010 7-1, 7-2 (Quiz #8)

4/20/2010 8-1, 8-2 (Quiz #9)

4/27/2010 8-3 (Quiz #10)

5/4/2010 Review (Quiz #11)

TBD Final Exam (Tentative Date 5/11/2009 will be scheduled by Registrar's office)