

**Math 130 (Finite Math)**

**Fall 2012**

**Office: Black 225-35**

**Office hours: M-Th 8:00 AM**

**Or by appointment**

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**Course Overview:** At CWU, Finite math is one of the courses that can be selected to satisfy the reasoning requirement for graduation. It is real-world applicable and serves to prepare students for research and statistical courses at a later date.

It has been said that Finite math is for the information age. Finite math courses originated in the 1950's with the common orientation of studying finite, or discrete (between 0 & 1) numbers, problems as opposed to the continuous problems investigated in Calculus. Finite Math courses typically include logic, set theory, counting principles, statistics and decision making

**Course Materials:**

*Finite Mathematics, introductory probability & statistics* (Owen & Cutlip)

Mathxl (access code provided)

**Topics covered:**

1. Counting and probabilities
  - a. Sorting and counting of data, samples, or populations
  - b. Defining sample spaces and events
  - c. Set notation, the additive law, and the complement
  - d. Conditional probability
  - e. Bayes' theorem
  - f. Using the complement (reliability of systems).
2. Variables and probability distributions
  - a. Describing random variables
  - b. Measuring dispersion
  - c. Binomial distribution
  - d. Normal distribution
3. Introduction to Statistics
  - a. Graphical methods
  - b. Measures of Central Tendency
  - c. Measures of dispersion
  - d. Confidence intervals
4. Using statistical tables
  - a. Binomial probability distributions
  - b. Standard normal distribution table

CWU posted grade scale will be used

Student outcomes will include comprehension of topics as demonstrated by completion of assigned homework, quizzes, projects, and exams. Application of topics related to probability and statistics will be demonstrated by successful completion of projects.

**Evaluation and Assessment:** Math xl will provide opportunity to collect grades for selected problems (homework) that are untimed and have multiple opportunities to get the correct answer and, also for timed, single opportunity responses (quizzes). In addition there will be two exams (plus the final) and three projects. Grades for each of these will be combined to give a final course grade. Homework in math xl may be a joint effort, but quizzes are to be individual work (violating this could be cause for failure). The projects will be completed in groups. Students may use a 3x5 card on the exams and may use up to 3 cards on the final. Problems from our text are assigned, but not turned in for a grade and worksheets are frequently completed in class. Test problems will come from the course text. Students desiring to “retake” a test must show completed homework for the chapter (showing appropriate work, not just answers) and can improve by up to 2 letter grades or score up to an 89. The retake must be taken within one week of the original test.

### **Necessities**

1. Participation- students are expected to be in class and participate in class activities and to respond to questions from the instructor. A reminder is always in order that math is not a “spectator sport”.
2. Scientific calculator (TI- 83 is recommended)
3. Regular communication through office “hours”, email, or phone call.
4. Provide course feedback through formal and informal surveys (formal surveys will be confidential).

**Calendar & Assignments:** Are found under the “Syllabus” tab on Blackboard

### **Blackboard:**

Course materials will be posted on Blackboard and all resources and links will also be available on Blackboard. To login to Blackboard, go to <https://courses.cwu.edu/> and enter your CWU username and password. Once there, click on this course (Math 130 Finite Math). Under “Course Documents” on the left side of the page, you will find links to Resources.

NOTE: each quarter students are invited to have dinner with my family. The dates for this quarter have not been set but will be in October (likely Wednesday evenings and the menu will be either spaghetti or potato bar and salad. Students from my other classes will be invited to attend one of the two evenings (there will be students from my other classes).