CENTRAL WASHINGTON UNIVERSITY
Syllabus - Math 332 - Discrete Models - Winter 2010
10:00 - 10:50 AM   /   MTWR - BOUILLON 109

Professor:	Dr. Jane Whitmire
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Office:	Bouillon 123
Office Hours:	M 1:00-1:50PM, WED 7:00-7:50AM, F 10:00-10:50AM
Textbook:	Discrete Dynamical Systems; Mathematics, Methods, and Models
Author:	Arney, Giordano, & Robertson
Prerequisites:	Math 272 & Math 265 with a grade of C or better

Course Description

This course will examine some meaningful applications of discrete mathematical models to use at the secondary school level. Discrete mathematics includes sets, functions and relations, matrix algebra, combinatorics and finite probability, graph theory, finite differences and recurrence relations, logic, mathematical induction, and algorithmic thinking. Other topics often considered part of discrete mathematics are Boolean algebra, the mathematics of social choice, linear programming, combinatorics, and number theory. Because of this diversity of topics, it is preferable to view discrete mathematical modeling simply as the mathematics that is necessary for decision making in noncontinuous situations. Discrete mathematics has evolved as the computer has evolved. Discrete mathematics is the kind of mathematics one needs to know to communicate with a computer as designer, programmer, or user. It is necessary for all students, regardless of their choice of career path, to receive some instruction in discrete mathematics so that they will be able to function as informed citizens of an increasingly technological society.

Course Objectives

• Extend knowledge and understanding of mathematical concepts in difference equations and linear algebra.

• Develop mathematical skills to formulate and solve difference equations and systems of equations

• Recognize and identify mathematical patterns of change in real-world contexts, specifically, to see situations where a difference equation or system of equations can be used to describe behavior.

• Design and interpret mathematical models using difference equations and systems to capture the essence of real-world phenomena.

•Develop skills to effectively use computing, information, and communication technologies.

Homework

Homework is due, in class, the second class period after the assignment is given. Late homework will not be accepted. It is essential to keep up in the course. Since accidents, car problems, court appearances, deer hunting season, illness, job interviews, oversleeping, overtime, tournaments, and weather happen, the lowest two homework grades will be dropped.

DO NOT email homework. DO NOT staple different assignments together. Make sure different assignments are separated. All homework will be completed in pencil, on one side of (preferably engineering) paper, and in numerical order. Homework that involves a computer (*MATHEMATICA, EXCEL, or MAPLE*) component should be attached to the back of the corresponding written assignment. The professor reserves the right to refuse homework assignments that do not meet all criteria.

Exams

Exam dates are Monday February 1, 2010 and Monday March 1, 2010. Exams are comprehensive and cover all material discussed in class since the previous exam. Completing the exam in the time allotted is part of the exam. Taking an exam is an important part of the course. Nevertheless, scheduling complications sometimes occur. An alternate procedure for taking an exam due to a scheduling complication must be arranged in advance. One such make-up will be allowed for each student. This policy will not changed due to any circumstances.

Final Exam

The final MUST be taken to pass the course. The final is comprehensive, covers all material discussed in class, and is to be taken at the time scheduled by Central Washington University. Completing the final in the time allotted is part of the final. The final exam for Winter 2010 is Tuesday March 16, 2010 from 8 am to 10 am.

Grading

Everyone is graded the same way. NO EXCEPTIONS. Letter grades A/A-/B+/B/B-/C+/C/C-/D+/D/D-/F are based on a strict 93-100/90-92.9/87-89.9/83-86.9/80-82.9/77-79.9/73-76.9/70-72.9/67-69.9/63-66.9/60-62.9/BELOW 60 cutoff. Grades are not rounded either up or down.

Problems are graded on a 10-point scale: (A) 9 or 10; (B) 8; (C) 7; (D) 6; (F) 0 to 5. Problems are graded by the clear and evident content of what is actually written down and nothing more. Your solution to a problem must clearly show a grasp of relevant concepts as well as a correct result for full credit. Organization counts. Neatness counts. If an approach is specified in a problem, then that approach must be used (as indicated by procedures written on the paper) in solving the problem. If no approach is specified, then any valid method is acceptable.

Keep all exams, homework, quizzes, and other graded material for study and for verifying records on Blackboard. The course grade can be calculated at any time by calculating a weighted average with the following proportions:

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\begin{aligned}
Quizzes &\longrightarrow 10\% \\
Homework &\longrightarrow 30\% \\
Exams &\longrightarrow 30\% \\
Final &\longrightarrow 30\%
\end{aligned}
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Special Needs Statement

As soon as possible, students with disabilities who wish to set up academic adjustments in this class should provide a copy of their "Confirmation of Eligibility for Academic Adjustments". Eligible students without this form should contact the Disability Support Services Office by visiting Bouillon 205, emailing dssrecept@cwu.edu, or calling the phone number 509-963-2171.