

# MATH 332

## Discrete Models

Meets 10:00-10:50, MTW, Hertz 121; F, Bouillon 103

### Course Philosophy

In this course, we will learn problem-solving in the context of analysing discrete mathematical models

### Student Outcomes

Students successfully completing Math 332 will demonstrate operations and connections among content areas via multiple representations.

**Instructor:**  
**Michael A. Lundin**

Central Washington University  
Department of Mathematics,  
400 East 8th Avenue  
Ellensburg, WA

### Course Content

Week 1:  
Foundations, Countability, Well-ordering, Equivalence Relations

Week2:  
Sequences and Limits, Explicit vs Recursive, Newton's Root Finder

Week 3:  
Discrete Dynamical Systems

Week 4:  
Discrete Dynamical Systems

**Exam 1**

Week 5:  
Applied Dynamical Systems

Week 6:  
Differential vs Difference equations

Week 7:  
Numerical Integration on

### Course Requirements

#### Quizzes

Brief Quizzes will be given approximately once per week.

#### Homework Notebooks

#### Homework

1. will be assigned almost every day;
2. must be presented in an inexpensive PAPER folder, which will be collected two times during the quarter;
3. must be presented in order of the *day of assignment* with "Day n" written in the upper right hand corner of the first page of that day's assignment; and
4. must be complete, neat, and correct to receive full credit:

2 pts-mostly complete, neat, work shown supports solutions

1 pt-substantial content missing, not neatly presented, or work does not support solutions

0 pts-substantial missed

98926-7424  
Bouillon Hall  
Room 108D

e-mail:  
[lundin@cwu.edu](mailto:lundin@cwu.edu)

### Office Hours

MTWThF 11:10-  
12:00

If you need to meet at any other time, please make an appointment with me. I use e-mail to avoid playing "phone tag."

Please talk to me if you need special accommodations due to a disability.

Calculators  
and Excel

Week 8:  
Solving ODEs  
on Calculator  
and Excel

### Exam 2

Week 9:  
Geometric  
Series and  
Base  
Conversions

Week 10:  
Routes,  
Paths, and  
Euler Circuits

**Final Exam:  
Time to be  
determined.**

work, not submitted

### Exams

There will be two mid-term exams and a final exam.

### Attendance, Missed Tests, Assignments

Class attendance is expected, and I will pass out a roll sheet every class day. (Class attendance is a reasonable predictor of grades in this course.) I expect tests to be taken on schedule and assignments to be completed the day after they are assigned. Correct them with feedback, and place them in your notebook in order of assignment day. *Assignments, quizzes, and tests may be made up **only** if the student and instructor agree on a time **before** a deadline.*

Assessments	Percent of Final Grade	Final Point Distribution	Final Grade
Written Homework	15%	93-100%	A
Quizzes	15%	90-92%	A-
2 Midterm Exams	40%	87-90%	B+
Final Exam	30%	83-86%	B
		80-82%	B-
		77-79%	C+
		73-76%	C

70-72%	C-
67-69%	D+
63-66%	D
60-62%	D-
Below 60%	F