Instructor: Karl Wallulis  
Office: 333D Tykeson Hall  
Email: karlw@uoregon.edu  
Class Meetings: 9 - 9:50am, MTWF, University 102

Office Hours:  
Mon & Tue: 4-5pm  
Wed: 12pm-2pm and by appointment


Recommended: A scientific calculator, e.g. TI-30X.

Communication: The best way to get in touch with me outside of class time and office hours is via email (or a Canvas message, which goes to my email). If your email includes your full name, course number and class meeting time, and a clearly stated question, I will generally respond within 24 hours (not including weekends).

I will make all important announcements both in class and as a Canvas announcement. Check Canvas regularly to stay on top of updates, especially if you are absent for a class meeting.

Attendance: Attending class regularly is crucial to academic success. I do not take attendance formally, but if I notice attendance drop below 90% consistently, I will make attendance a component of your final grade (please don’t let it come to this).

If you know you will miss class and...

- There is a graded in-class assessment (Wednesday of Week 2, 4, 6 or 8): email me **before the scheduled assessment time**. You can make up the quiz or exam during office hours after the scheduled time. If you do not email me beforehand, you will not be allowed to make up the assessment and will receive a zero.
- There is **NOT** an in-class assessment: **DO NOT** email me! Obtain notes from a classmate or come to my office hours to find out what you missed.

Graded Components: In this class, you will have weekly homework, in-class group activities, three quizzes and two major exams. The grading breakdown is:

- Homework 10%  
- Group Participation 10%  
- Quizzes 15%  
- Midterm Exam 25%  
- Final Exam 40%
A final grade between 90 and 100% guarantees you an A grade, 80-90% a B grade, etc. (the exact cutoffs may be lower depending on the final distribution, but never higher). Grades within 0.5% of a grade cutoff will be rounded up to the higher grade. Pluses and minuses will be assigned to grades within ≈ 1% of the cutoff.

**Homework:** There are two sets of homework assignments.

(1) Webwork assignments will be submitted by 11:59pm of every Tuesday except Weeks 6 and 10; the first Webwork assignment (Week1) is due Tuesday, April 5th by 11:59 pm. The Week1 problem set is intended to familiarize first-time users with entering answers on Webwork—it does not contain content from the course.

(2) There will also be weekly conceptual homework covering more in-depth problems. In-depth assignments must be turned in class every Friday at the start of class, beginning Week 2.

**Webwork Login**

Log in through the button on the main menu of Canvas labeled “Webwork Login.”
You can also log in directly through [http://webwork.uoregon.edu/webwork2/Math232-33977](http://webwork.uoregon.edu/webwork2/Math232-33977).
You sign in the same way you sign into your UO email account.

**Group Discussion:** Except in the case of in-class assessments (and long-winded lectures), the last 15 minutes or so of every class period will usually be reserved for group discussion of key problems. These will generally be past or future homework problems, with some additional challenge problems to keep things interesting. You will only be graded on participation; no written work will be submitted or graded.

**Quizzes:** There will be three brief quizzes (3 or 4 questions) given in the last 15 minutes of class on the dates of April 6, April 20 and May 18 (Wednesday of Weeks 2, 4 and 8). Quizzes will mainly cover material from the Webwork assignment due the previous night. Quizzes cannot be taken outside of the scheduled class time unless a valid reason for not attending the scheduled time is provided.

**Exams:** You will have a 50-minute in-class midterm in Week 6, tentatively scheduled for Wednesday, May 4th and a 2-hour final exam (cumulative, but favoring content from after the midterm). The final exam will take place on Tuesday, June 7th from 5:00-7:00pm (location TBD). Make-up exams will only be given for a documented emergency discussed with me prior to the exam date.

**Calculators and Notes:** Calculators will not be allowed for any quiz or exam. Quizzes will be closed book/notes. You will be allowed a 3×5” notecard with handwritten notes on both sides for every exam.
Learning Outcomes: By the end of the course, students should demonstrate a thorough understanding of the topics and methods discussed in class. In particular, students who successfully complete this course should be well prepared to do the following:

(1) Set up and solve recurrence relations, especially linear recurrence relations
(2) Use generating functions to represent sequences
(3) Create graph models to represent non-mathematical situations
(4) Identify and describe properties of special graphs, such as trees, complete graphs and bipartite graphs.
(5) Determine whether two simple graphs are isomorphic.
(6) Determine an upper bound for the number of comparisons in a sorting algorithm.
(7) Determine whether a graph has an Eulerian or Hamiltonian path or cycle.
(8) Solve linear congruences.
(9) Use congruence relations to check for errors in printing strings of numbers.
(10) Determine whether a relation is an equivalence relation.
(11) Determine whether a set is partially ordered and identify upper and lower bounds/maximal and minimal elements.

This course meets the University of Oregon Core Education requirements for the Natural Science Area of Inquiry and the specific Methods of Inquiry of “Creative Thinking” and “Written Communication”.

Tentative Schedule:

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**Academic Disruption:** In the event of a campus emergency that disrupts academic activities, course requirements, deadlines, and grading percentages are subject to change. Information about changes in this course will be communicated as soon as possible by email, and on Canvas. If we are not able to meet face-to-face, students should immediately log onto Canvas and read any announcements and/or access alternative assignments. Students are also expected to continue coursework as outlined in this syllabus.

More detailed information about this course’s COVID policy can be found on Canvas under “Important Links & Materials.”

**Accessibility:** For those of you who are currently registered with Accessible Education Center for a documented disability, please present your paperwork to me during the first week of the term (or earlier) so that we can design a plan for you. Those of you with a disability (or who might) but are not registered with AEC should contact them as soon as possible. It is much more likely that measures can be taken to provide adequate special accommodation if the organization is done through AEC. I have attempted to provide documents that are accessible. Please let me know if you need additional accommodations.

**Student Conduct:** I plan to treat every student with respect and, as such, expect my students to show respect for me and for the class as a whole. Violations of the student conduct code results in the incident being included on your student conduct record as well as academic sanctions such as a failing grade on any coursework related to the violation or simply a failing grade in the course. The University of Oregon requires all instances of cheating be reported, no matter how small. For a list of descriptions of cheating, see the [Student Conduct Code](https://provost.uoregon.edu/syllabus-guidelines).

**Discrimination and Harassment:** I am a student-directed employee. For information about my reporting obligations as an employee, please see Employee Reporting Obligations. Students experiencing any form of prohibited discrimination or harassment, including sex or gender based violence, may seek information on safe.uoregon.edu, respect.uoregon.edu, titleix.uoregon.edu, or aaeo.uoregon.edu or contact the non-confidential Title IX office (541-346-8136), AAEO office (541-346-3123), or Dean of Students offices (541-346-3216), or call the 24/7 hotline 541-346-SAFE for help. I am also a mandatory reporter of child abuse.

See [https://provost.uoregon.edu/syllabus-guidelines](https://provost.uoregon.edu/syllabus-guidelines) which goes into more detail about university-wide policies.