NOTE to prospective students: This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course Canvas site for enrolled students and may be more current than this sample syllabus.

Course Name: Discrete Structures in Computer Science
Course Number: CS 225
Credits: 4

Course Description
Formal approach to the logic of Computer Science, including set theory, methods of proof, discrete probability, sequences, recurrence relations, graph theory, and algorithm analysis.

Prerequisites: MTH 111 [C] or Placement Test MPT (24) or Placement Test MPAL (061) or MTH 112* [C] Other Prereqs: for CS Double Degree students: BA/BS and (MTH 111 or MPT>=24 or MPAL>=61)

Course Credits
This course combines approximately 120 hours of instruction, online activities, and assignments for 4 credits.

Learning Resources

Textbook:

Note to prospective students: Please check with the OSU Bookstore for up-to-date information for the term you enroll (OSU Bookstore Website or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the correct ISBN.

Measurable Student Learning Outcomes
At the completion of the course, students will be able to...
1. Construct and interpret propositions expressed using logic expressions.
2. Define properties of and operations on sets, functions and sequences.
3. Determine the correctness of and construct non-inductive proofs.
4. Determine the correctness of and construct inductive proofs.
5. Construct recursive definitions and proofs involving them.
6. Apply basic counting arguments on combinatorial objects.
7. Define and prove properties of graphs and trees.
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Course Content
Topics covered in the course include:
- Logic Expressions
- Non-Inductive Proof Techniques
- Sets, Functions, Sequences and Summations
- Inductive Proofs
- Recursive Definitions
- Combinatorics
- Graphs and Trees

Evaluation of Student Performance
- Homework assignments 15%
- Quizzes 30%
- Midterm 25%
- Final 30%

*REMINDER: A passing grade for core classes in CS is a C or above. A C-, 72 or below, is not a passing grade for CS majors.

Proctored Exams
This course requires that you take the 2 exams under the supervision of an approved proctor. ProctorU is an allowed option for this course. It is entirely the student’s responsibility to secure and schedule a proctor before the exam due date and is very important to submit your proctoring request as early as possible to avoid delays. Please remember that late exams will not be allowed due to not having scheduled a proctor early enough. Registration for proctored exams is available online and there is generally a small fee associated with exam proctoring. For more information please visit: http://ecampus.oregonstate.edu/services/proctoring/. If you need assistance please contact ecampustesting@oregonstate.edu or 541-737-9281.

Statement Regarding Students with Disabilities
Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While
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not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Expectations for Student Conduct
Student conduct is governed by the university’s policies, as explained in the Student Conduct Code.

In an academic community, students, faculty, and staff each have responsibility for maintaining an appropriate learning environment, whether online or in the classroom. Students, faculty, and staff have the responsibility to treat each other with understanding, dignity and respect. Disruption of teaching, administration, research, and other institutional activities is prohibited by Oregon Administrative Rule 576-015-0015 (1) and (2) and is subject to sanctions under university policies, OSU Office of Student Conduct.

Academic Integrity
The following two policies apply:

OSU policy:
http://oregonstate.edu/studentconduct/facacdis.php

College of Engineering policy:
http://engineering.oregonstate.edu/undergraduate-policy-manual#honesty

- You MAY discuss the meaning of assignments, general approaches, and strategies with other students in the course.
- You MAY show your work to the TAs or instructor for feedback and help.
- You MAY use the Internet to research how to solve a problem.
- You MUST include a citation in the form of a comment in your homework to indicate the source of any help you received (listing TAs, the instructor, or the required textbook are not necessary).
- You MUST ALSO include a citation if you collaborated with any other student in any way (both the giver and receiver).
- You MAY NOT share work documentation of any kind with any other student in the course.
- You MAY NOT show your work to another student in the course for any reason.
- You MAY NOT use or copy work from any other source, including the Internet.
- You MUST write your own work for your assignments.
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We may use plagiarism-detection software check your work against the work from other students. It is quite sophisticated and can easily see through variable name changes and formatting differences.

If you are found in violation of any of the above policies, whether you are the giver or receiver of help, you will receive a zero on the assignment or fail the course (Instructor’s discretion). The academic dishonesty charge will be documented and sent to your school’s dean and the Office of Student Conduct. The first offense results in a warning; the second offense results in an academic dishonesty charge on your transcript, a disciplinary hearing, and possible expulsion.

Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit Student Conduct and Community Standards, or contact the office of Student Conduct and Mediation at 541-737-3656.

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student’s own efforts or the efforts of another.

b) It includes:
   i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
   ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
   iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone’s grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
   iv) TAMPERING - altering or interfering with evaluation instruments or documents.
   v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own...
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previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.

c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Technical Assistance
If you experience any errors or problems while in your online course, contact 24-7 Canvas Support through the Help link within Canvas. If you experience computer difficulties, need help downloading a browser or plug-in, or need assistance logging into a course, contact the IS Help Desk for assistance. You can call (541) 737-8787 or visit the OSU IS Helpdesk online.

Tutoring
NetTutor is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Students connect to live tutors from any computer that has Internet access. NetTutor provides a virtual whiteboard that allows tutors and students to work on problems in a real time environment. They also have an online writing lab where tutors critique and return essays within 24 to 48 hours. Access NetTutor from within your Canvas class by clicking on the Tools button in your course menu.