Course Description


Course Objectives

The role of discrete mathematics in computer science is analogous to the role of calculus in physics and in engineering: it provides the mechanisms that allow computer scientists to define and reason about complex systems, such as hardware, software, algorithms and data structures. The objectives of this course are to introduce the mathematical concepts that provide the basis for much of computer science and to develop the ability to describe and analyze problems in a logical and systematic fashion. This course focuses primarily on:

a) Logic and mathematical reasoning
b) Set theory, functions and relations
c) Induction and recursion
d) Grammars and finite state machines

To achieve these objectives, we study broad, general concepts in these areas and discuss applications of these concepts in computer science and in computer engineering.

Instructor

M. McCullen
2142 Engineering
517-355-2354
mccullen@msu.edu
Office hours:
M/W 1:30-2:30 PM
and by appointment

Course Website

Information related to the course is available at:

http://www.cse.msu.edu/~cse260/

Teaching Assistants

Contact information for the instructional staff is posted on the course website.

Textbook

Discrete Mathematics and Its Applications, 7th or 8th Edition
(Rosen; McGraw-Hill, 2018; ISBN 9781259676512)

Lecture and Recitation Sessions

The class sessions will be conducted in B117 Wells Hall (M/W/F 3:00-4:30 PM). Regular attendance is critical to your success in this course.
Course Grades

Your course grade will be based on the sum of the points you earn in the following categories:

- Examinations: 72% of total course points
- Quizzes: 18% of total course points
- Homework exercises: 10% of total course points

The following table gives the scale for course grades:

- 4.0 90% of points available
- 3.5 85% of points available
- 3.0 80% of points available
- 2.5 75% of points available
- 2.0 70% of points available
- 1.5 65% of points available
- 1.0 60% of points available

The scale will be adjusted at the end of the semester, if warranted.

Examinations

Three midterm examinations and a final examination will be administered during the semester, and will constitute 72% of the total course points.

- Midterm Exam #1 (16%) Friday, 2/07 (3:00 - 4:30 PM)
- Midterm Exam #2 (16%) Friday, 3/13 (3:00 - 4:30 PM)
- Midterm Exam #3 (16%) Friday, 4/10 (3:00 - 4:30 PM)
- Final Exam (24%) Wednesday, 4/29 (5:45 - 7:45 PM)

Make-ups for examinations will be arranged if your absence is caused by documented illness or personal emergency. A written explanation (including supporting documentation) must be submitted to the instructor; if appropriate, an alternative to the examination will be arranged. Whenever possible, make-up arrangements must be completed in advance.

You may use one 8.5" x 11" note sheet (both sides) during an exam, but you may not use any other reference materials. You may not use a calculator or other electronic device during an exam.

Quizzes

Eleven quizzes will be administered during the semester and will constitute 18% of the total course points. Your lowest two quiz scores will be dropped. There will be no make-ups for quizzes.

You may not use any reference materials during a quiz. You may not use a calculator or other electronic device during a quiz.

Homework Exercises

Eleven homework exercises will be assigned during the semester and will constitute 10% of the total course points. Your lowest homework score will be dropped. There will be no make-ups for homework exercises.
Academic Integrity

The Spartan Code of Honor states: As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do.

The Department of Computer Science and Engineering expects all students to adhere to General Student Regulation 1.00, Protection of Scholarship and Grades, which states:

The principles of truth and honesty are fundamental to the educational process and the academic integrity of the University; therefore, no student shall:

1.01 claim or submit the academic work of another as one's own.

1.02 procure, provide, accept or use any materials containing questions or answers to any examination or assignment without proper authorization.

1.03 complete or attempt to complete any assignment or examination for another individual without proper authorization.

1.04 allow any examination or assignment to be completed for oneself, in part or in total, by another without proper authorization.

1.05 alter, tamper with, appropriate, destroy or otherwise interfere with the research, resources, or other academic work of another person.

1.06 fabricate or falsify data or results

To summarize: anything which you submit for grading must be your own work.

Additional information is available at:

https://msu.edu/~ombud/academic-integrity/index.html

Spartan Code of Honor

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Notes

Any extenuating circumstances which impact on your participation in the course should be discussed with the instructor as soon as those circumstances are known (such as absences due to illness or religious observances).

Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form. Please present this form to the instructor at the start of the term (or as soon as possible thereafter).

Commercialization of lecture notes and course materials is not permitted in this course.
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