CS381 Introduction to Discrete Structures

Syllabus - Spring 2018

Instructor Information:
Dr. Jing He
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http://www.cs.odu.edu/~jhe
Office Hours: Recitation time Monday 12 noon - 12:50pm (Dragas 1115) or by appointment in my office (ECSB 3319)

Lecture Class Time and Location:
9:30 - 10:45pm; Tuesday/Thursday, Dragas room 1117

Recitation Time and Location:
Monday noon-1pm; Dragas 1115 (need to register to attend)

Teaching Assistant Information:
Maytha Alshammari  <malsh009@odu.edu>
Office Hour: TBA, ECSB room 3318

Class site: Blackboard online system

objectives

1. to learn basic mathematical concepts such as sets, relations, functions, and graphs, relationships between them, and their properties;
2. to practice abstract thinking;
3. to learn the techniques for solving problems;
4. to become confident in using mathematical notations (both in reading and writing).

Topics

Chapter 1 - The foundations: logic and proofs
Chapter 2 - Basic structures: sets, functions, sequences, sums and matrices
Chapter 4 - Number theory
Chapter 5 - Induction and recursion
Chapter 6 - Counting
Chapter 9 - Relations
Chapter 10 - Graphs

Prerequisites
MATH163, CS150

Textbook
"Discrete Mathematics and its Applications" by Kenneth H. Rosen, 7th edition,

Grading

Homework assignments: 38%
Pre-assessment: 2%
Exams (4): 60%
Extra-credit Project or Honor 381

A project will be provided to students who want to explore more advanced tasks. It is based on the principles in CS381 but often with independent learning. A programming component will be included in the project. Two options are provided and students may choose one of the two for receiving credits. Option 1 allows using the project for extra-credit of maximum 10% towards the grade. Option 2 does not add extra-credits toward the grade, but students may apply for Honor 381 that will appear on the transcript. To obtain a grade for Honor 381, students need to receive 80% of the full score for the project and apply for the honor class. Please talk to the instructor to fill up the paperwork.

Homework submission - All homework assignments are to be submitted through Blackboard unless prearranged with the instructor for special situations. The Blackboard will contain all the lecture slides and other important announcements. Some announcements will be through the emails too.

Late submission - Each homework assignment is due by the end of the day at Blackboard. The graded assignments will be distributed in class. The due date will be specified when the homework is assigned. Late submission will have a penalty of 10% for each late day unless permission is given by the instructor before the due date.

To obtain a C in this course, your overall score needs to be at least 65%. Always leave enough time for homework, so that you get near full score in the assignments.

Pre-assessment - Participation of all pre-assessments will earn 2% of the total grade. The purpose is to know the level of understanding regarding upcoming topics. Preassessments are given in class and are posted on class website shortly after the class. It is expected to be submitted in the same day of the class. Therefore, if you miss a class, make sure to check with a classmate or to visit the website on the same day.

Recitation - The instructor or the TA will be there to go over some questions regarding homework assignments or lectures. It provides an interactive environment targeting individual questions. You need to register to attend.

It is recommended to study the materials such as the lecture slides, the notes written on the board and the textbook. The lecture slides contain a summary of the materials covered in class and are expected to be fully understood.

Academic integrity - The homework is generally expected to be finished independently unless stated otherwise in the homework. Cheating will result in 0 score for the assignment. Cheating includes not only receiving unauthorized assistance, but also giving unauthorized assistance. When resources from the internet are used, they must be cited properly. Please refer to the ODU honor code at http://orgs.odu.edu/hc/.

Work hard - You are expected to work hard in the course to achieve good performance. Students are also expected to read the sections of the book covered in the lecture.