CS310: Algorithms and Data Structures

Catalogue Description:

A study of algorithms and data structures on which they are based, with a focus on the analysis of their correctness and complexity in terms of running time and space. Pre-requisite: CS 256. Co-Requisite: MATH 190.

Instructor: Beenish Chaudhry

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Webpage: http://www.cs.earlham.edu/~bchaudhry/teaching/cs310.html

Please check frequently for announcements.

Lectures: MTWR 9:00 – 9:50 a.m.

Textbook: Cormen, Leiserson, Rivest, & Stein, *Introduction to Algorithms*, 3rd ed., 2009.

Course Objectives: Upon completion of this course, students will be able to do the following:

- Analyze the asymptotic performance of algorithms.
- Demonstrate a familiarity with major algorithms and data structures.
- Apply important algorithmic design paradigms and methods of analysis.
- Synthesize efficient algorithms in common engineering design situations.

Homework Policies:

- 1 ungraded and 10 graded.
- Due promptly at the start of lecture on the due date.
- No credit for late submissions.
- You may work on the homework and submit it in pairs. Please submit a collaboration statement, if you work with someone.

Grading break-up:

- Homework 40% (10-12)
- Quizzes 15%
- Midterm 15%
- Final Exam 30%
- A +> 90, F < 50

Contesting Grades

Individual grades or questions on grading of individual quizzes, exams, etc. are discussed only in my office (i.e. NOT at the end of the class period or via email)

Disabilities:

Please let me know as early in the semester as possible if there are any adaptations or accommodations you require.

The Earlham policy is:

Any student with a documented disability (e.g., physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact Academic Support Services and the instructor at the beginning of each semester. Accommodation arrangements must be made during the first-two weeks of the semester.