

Course Syllabus

Course Information

CS6363.002.17S

Design and Analysis of Computer Algorithms

Spring 2017

TTh 1:00-2:15pm ECSS2.415

Professor Contact Information

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Office: ECSS 3-611

Office hour: 3:45-5:30pm Thursday

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Pre-requisites CS 5333 and CS 5343.

Course Description

The study of efficient algorithms for various computational problems. Algorithm design techniques. Sorting, manipulation of data structures, graphs, matrix multiplication, and pattern matching. Complexity of algorithms, lower bounds,

Student Learning Objectives/Outcomes

The aim is to learn algorithm design techniques, such as divide-and-conquer, dynamic programming, greedy, incremental method, and solutions of classic problems, such as sorting, the shortest path, minimum spanning tree, maximum flow, as well as fundamental knowledge of computational complexity, such as NP-completeness.

Required Textbooks and Materials

T.H. Corman, C.E. Leiserson, R.L. Rivest and C. Stein

Introduction to Algorithms (3rd Ed.)

MIT Press

Suggested Course Materials

Some reading materials may be provided in elearning system.

Assignments & Academic Calendar

Quiz: *Quizzes will be given in class randomly. There is no make-up for any quiz.*

Assignments: *There will be five assignments.*

Each assignment will be due at the time as shown in elearning.

You are required to submit a pdf-file to elearning. No late assignment will be accepted.

Examinations: *There are two exams, the midterm examination*

and the final examination. Each exam consists of two parts, an in-class part

(close books/notes) and a take-home part. Exam dates will be informed in elearning.

Grading Policy

Five quizzes 15%; Five assignment 25%; the Midterm 30%; Final 30%.

Grades will be assigned according to the total points

as follows: $A \geq 85 > B \geq 70 > C \geq 50$.

Course & Instructor Policies

- (1) Homeworks and take-home parts of exams will be submitted in elearning and will not be accepted if submit after due time.
 - (2) Classroom presence will be enforced. If a student does not appear in classroom for three lectures without getting permission, then the grade will be decreased for one letter. Moreover, if for four lectures, then the grade will be F.
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Off-campus Instruction and Course Activities

There is no off-campus instruction and course activities.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.