Course Syllabus
CS 6363.004 Design and analysis of computer algorithms; Spring 2017; TR 10:00-11:15 AM; ECSS 2.415;
Class URL: http://www.utdallas.edu/~rbk/teach/2017s/daca.html

Professor Contact Information
Balaji Raghavachari; (972) 883-2136; rbk@utdallas.edu; ECSS 4.225;
Office hours: Tue/Thu 9:00-9:45 AM, 2:20-3:00 PM. To meet at other times, send email for appointment.

Course Pre-requisites, Co-requisites, and/or Other Restrictions
CS 5343 or equivalent (Data structures and algorithms): Analysis of algorithms. Stacks, queues, and trees, including B-trees. Heaps, hashing, and advanced sorting techniques. Disjoint sets and graphs.

Course Description
Topics: Algorithm design techniques: divide-and-conquer, dynamic programming, greedy algorithms; Sorting and searching; Graph algorithms; Computational complexity, lower bounds, NP-Completeness. Proofs of correctness.

Student Learning Objectives/Outcomes
Study efficient algorithms for a number of fundamental problems, learn techniques for designing algorithms, prove correctness and analyze running times.
1. Ability to understand asymptotic notations, recurrences, algorithm analysis
2. Ability to understand divide and conquer algorithms
3. Ability to understand greedy algorithms
4. Ability to understand dynamic programming algorithms
5. Ability to understand graph algorithms, flow networks
6. Ability to understand NP-Completeness

Required Textbooks and Materials

Assignments & Academic Calendar
Mid-term Exam 1: Feb 16 (Thu)
Mid-term Exam 2: Mar 30 (Thu)
Final exam: as announced by the Registrar (likely to be on May 2 or on May 4).

Grading Policy:
A: 90% or more in every exam; A-: 82.5% or more in every exam, or, 85% average
B+: 75% or more in every exam, or, 77.5% average; B: 70% average;
B-: 65% average; C: 60% average
Below 60% is an “F”. No curving will be applied.

Course & Instructor Policies
• CS department policy: one grade reduction for missing 3 classes (without prior permission from instructor), and a grade of “F” for missing 4 classes without proper excuse.
• Regular class attendance and participation is expected and is the responsibility of each individual. There is a strong correlation between regular class attendance and good performance. If a student should elect not to attend a class, (s)he is responsible for any handouts, announcements, reading material and contents of missed lectures.

See also UTD's policies at http://go.utdallas.edu/syllabus-policies