The University of Texas at El Paso
Department of Computer Science
Course Title: Advanced Algorithm
Course No.: CS 5350 (CRN 17757) and CS 6350 (CRN 14953)
Fall 2019 Syllabus

Course description: A review of mathematical techniques for analysis of computer algorithms, techniques for design of efficient algorithms, description and analysis of both well-established and recently developed algorithms.

Topics: Asymptotic notation, recurrences, lower bonds for, worst case and average case, dynamic programming, greedy algorithms, searching algorithms, sorting algorithms, graph algorithms, and one or more extra topics.

Class meetings:
Tuesdays and Thursdays 12:00 pm - 1:20 pm, Chemistry Computer Sci Bldg 1.0410

Instructor: Mahmud Shahriar Hossain
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Office: CCSB 3.0504
Office Hours: Tuesdays and Thursdays (1:45 pm - 2:45 pm) and by appointment

Reference book:
Introduction to Algorithms, by Charles E. Leiserson, Clifford Stein, Ronald Rivest, and Thomas H. Cormen. Third Edition. MIT Press.

Exams and Grades:
There will be two tests, written assignments, quizzes, and presentations.

For the presentations, the student will present algorithms from recent or seminal research papers published in a journal or conference.

Test 1	20%
Test 2	20%
Quizzes	5%
Assignments	20%
Presentations	20%
Final	15%

There are no positive points for showing up in the class. However, there are negative points per missed class. Roughly, consider that a student will lose one point for each missed lecture. The instructor may drop the student from the course if a student misses more than seven classes. The final grade may be an "F" if a student misses classes at the end of the semester, regardless of the points obtained. Please discuss with the instructor if you have to miss a class to attend conferences and any other urgent matters.

The grading scale is A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: below 60.

Materials:
Chapters 1-9, 15, 16, 21-25 will be covered. Depending on the remaining time, we may study some advanced topics.

The instructor reserves the right to modify this syllabus to upgrade course-content and course-strategies.

Special Accommodations: If you have a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148 or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass. CASS' staff are the only individuals who can validate and if need be, authorize accommodations for students.

Scholastic Dishonesty: Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but not limited to cheating, plagiarism, collusion, submission for credit of any work or materials that are attributable to another person. Some examples of **cheating** are – (a) copying from the test paper of another student, (b) communicating with another student during a test to be taken individually, (c) giving or seeking aid from another student during a test to be taken individually, (d) possession and/or use of unauthorized materials during tests (i.e. crib notes, class notes, books, etc.), (e) substituting for another person to take a test, (f) falsifying research data, reports, academic work offered for credit. Some examples of **plagiarism** are – (a) using someone's work in your assignments without the proper citations, (b) submitting the same paper or assignment from a different course, without direct permission of instructors. To avoid plagiarism see: https://www.utep.edu/student-affairs/osccr/_Files/docs/Avoiding-Plagiarism.pdf. An example of **collusion** is an unauthorized collaboration with another person in preparing academic assignments.

NOTE: When in doubt on any of the above, please contact your instructor to check if you are following an authorized procedure.