Design and Analysis of Algorithms
COT 5405, Fall 2017

Course Syllabus

Class Hours: Monday and Wednesday from 1:30PM - 2:45PM at HPA1 107.

Description: Classification of algorithms: recursive, divide-and-conquer, greedy, etc. Data structures and algorithm design and performance. Time and space complexity analysis.

PR: COT 4210 with a grade of ""C"" (2.0) or better

Instructor: Dr. Khanh Vu
Email: Khanh.Vu@ucf.edu?subject=COT5405
Office: HEC 328
Office Hours: (tentative) Thursday 10:00AM - 11:30AM, and by appointment.

Teaching Assistant: TBA
Office: TBA
Office Hours: TBA

Text: *"Algorithm Design," by Jon Kleinberg and Éva Tardos, 2005, Addison-Wesley. ISBN-10: 0321295358*

Web Resources: https://www.webcourses.ucf.edu

Lecture Notes: course notes, and other materials covered in class will be available and updated on the course's website. Assignments, solution keys, and announcements will also be posted on the website.

Homework Assignments: All homework assignments will be submitted via WebCourses. No late assignments will be accepted by default.

Grading Policy: (This grading policy will be used to calculate your term grade)

- Homework - 30%
- Programming assignments - 25%
- Test 1 - 20%
- Test 2 - 25%

The grading scale will be based on the class average, standard deviation and overall difficulty of the exams. Plus/Minus letter grades will be used and are based on the straight percentage scale (e.g., B-: 80 – 83%; B: 84 – 86%; B+: 87 – 89%; etc.)

Course Policies:

- All tests are closed books, closed notes, and closed Internet. Calculators may be permitted in some exams. Reference sheets will be provided as needed.
- There will be no makeup exams (Exceptions may be made for medical emergencies).
- Homework reflects individual work and is due by the deadline on Webcourses; no email or late submissions accepted unless prior arrangements are made.
- All regrade requests MUST be initiated within 1 week of returning the graded homeworks/exams.
- If you request for a regrade, not only the problem in doubt, but also all problems on your homework/exam may be regraded at the discretion of the TA or the instructor.
- Attending lectures is not mandatory. However, you are responsible for all announcements and course material discussed in the class.
- Do not use any published solutions or solutions from prior semesters unless we explicitly post them for your use.

Academic Integrity and Student Conduct: Please read and understand student rights and responsibilities including conduct rules clearly stated in UCF's golden rules, at http://www.goldenrule.sdes.ucf.edu/2e_Rules.html.

Topics to Be Covered:

- Greedy algorithms
- Divide and conquer algorithms
- Dynamic programming
- Network flow
- NP-completeness
- Approximation algorithms
- Randomize algorithms