

COT 6405 Introduction to Theory of Algorithms

1. Instructor:

Dr. Yao Liu,
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Office hour: Monday & Wednesday 9:00am - 10:30am ENB 336
Class meetings: Monday & Wednesday 3:30pm - 4:45pm, ENB 118

2. Teaching Assistants:

Mr. Chengbin Hu
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Mr. Christopher Collazo
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Office hour: Fridays 2:00pm – 2:45pm

3. Course Objectives:

Students having successfully completed this course will be able to analyze and understand the basic algorithms in Computer Science. Topics include asymptotic (growth rate) analysis, recurrences, heapsort, quicksort, bucket sort, order statistics, hash tables, binary search trees, elementary graph algorithms, minimum spanning trees, shortest paths algorithms, dynamic programming, and NP-Completeness.

4. Required Textbook:

- *Tom Cormen, Charles Leiserson, Ronald Rivest, and Cliff Stein, Introduction to Algorithms, Third Edition, MIT Press, ISBN: 978-0-262-03384-8*

5. Coursework and evaluations:

- Homework assignments (20%)
- Midterm I (20%)
- Midterm II (20%)
- Final Exam (40%)

Please note that all tests and the final exam are closed books, notes, and computers. Online section students must take in-classroom tests.

6. Policies on incomplete grades and late assignments:

Late homework assignments will be accepted until the solution is posted or discussed in class. A 15% reduction in grade for each day applies.

7. Policies on absences (excused and unexcused) and scheduling makeup work:

There will be no makeups for all tests. Exceptions can be made if a student presents a police report or a doctor's note that show some emergency situation. Note that traveling and attending conferences are not the valid reasons for requesting the make-up exams.

8. Course prerequisites:

You have either learned the following courses: Data Structures, Programming (C/C++), and Discrete Structures or you obtained the permission from the instructor.

9. Academic integrity:

The university policies against academic dishonesty will be strictly enforced. A student must complete his/her tests, projects and assignments on his/her own. A student's signature on any tests, projects and assignments indicates that the student neither gave nor received unauthorized aid. An FF grade will be assigned to a student who is caught cheating for this class. Example cheating behaviors include but not limited to: direct and indirect plagiarizing another student's work or online resources, and modifying incorrect test and homework answers for regrading.

10. USF policy on working with students with disabilities:

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must identify himself or herself to Students with Disabilities Services and provide documentation of a disability. For more information on USF's policy on working with students with disabilities, please see

<http://www.sds.usf.edu/index.asp>

Students in need of academic accommodations for a disability may consult with Students with Disabilities Services to arrange appropriate accommodations. Students are required to give reasonable notice prior to requesting an accommodation.

**Every part of this syllabus is subject to adjustment as the semester progresses. If you are dissatisfied with the course policies, grading, and assignments, please contact the instructor. Reasonable requests for modifications may be accommodated at the instructor's discretion.*