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Fall 2012

CS 3100/5100: Data Structures and Algorithms

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CS 3100/5100 – DATA STRUCTURES AND ALGORITHMS
FALL, 2012

Instructor: Dr. Keke Chen
385 Joshi
937-775-4642
keke.chen AT wright.edu

Room and Time: 2 pm - 3:20 pm TR, Russ 150

Office Hours: 3:30 – 5:00 pm TR, or by appointment.

Course Description: This course will cover the fundamentals of algorithm design and analysis, the implementation of classical data structures and control structures, and the basic problem solving techniques.

Textbook: [Data Structures and Algorithms in C++](#) by Adam Drozdek (3rd or 4th edition)

Prerequisite: CS242 (in the quarter system)

Grading: Midterm Exam = 20%
Final Comprehensive Exam = 30%
Programming Assignments (3) = 30%
Homework Assignments (5) = 20%
Programming exercises: not graded

90 – 100 = A; 80 – 89.9 = B;

70 – 79.9 = C; 60 – 69.9 = D;

< 60 = F

I *may* curve the final letter grades based on the overall distribution of scores.

Web Page: All materials will be hosted on Pilot (pilot.wright.edu)

Covered topics:

Topics	Reading assignments
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1. Introduction, review C++ and linux, simple sort algorithms	Chapter 1, 9.1
2. Big O notation, algorithm analysis	Chapter 2.1-2.8
3. ADT, list, stack, queue, recursion	Chapter 3.1,3.2,4.1,4.2,5.1,5.2
4. tree basics, binary trees	Chapter 6
5. multiway trees	Chapter 7.1.1, 7.1.3, 7.1.6
6. graph basics	Chapter 8.1-8.2, 8.5
7. graph algorithms	Chapter 8.5,8.7,
8. sorting	Chapter 9.3.2-9.3.4
9. hashing	Chapter 10.1,10.2,10.5
10. applications	

Policies:

1. No assignment will be accepted after the due date.
2. The assignment must be done individually.
3. The following is not allowed:
 - Cheating
The unauthorized use of books, notes, aids, electronic sources; or assistance from another person with respect to examinations, course assignments, class recitations; or the unauthorized possession of examination papers or course materials, whether originally authorized or not. Any student helping another cheat may be found guilty of academic misconduct.
 - Plagiarism
The deliberate use and appropriation of another's works without any indication of the source and the representation of such work as the student's own. Any student who fails to give credit for the ideas, expressions or materials from another source, including internet sources, is guilty of plagiarism.
4. Students are expected to attend all classes. In the event that a student misses a class, he/she is responsible for all material covered in the class, including all assignments and announcements.
5. Late arrival to the classroom disturbs everyone. Please do not be late, but if you are unavoidably delayed, join the class quietly and with minimal disturbance.