

CSCE 3110 – Data Structures Spring 2006

Instructor: Rada Mihalcea
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Class hours: TTh 04:00-05:20pm
Office hours: TTh 02:30-03:30pm or by appointment.
Anytime electronically.
Class web page: <http://www.cs.unt.edu/~rada/CSCE3110>
Teaching assistant: TBA

Course objectives: To give the students a solid understanding of the design and analysis of fundamental data structures and algorithms. A special emphasis will be placed on programming and hands-on experience that will reinforce the theoretical aspects covered in lectures.

Textbook: *Data Structures & Algorithm Analysis in C++*
Mark Allen Weiss

Recommended readings:
Fundamentals of Data Structures in C++
Ellis Horowitz, Sartaj Sahni , Dinesh Mehta

Introduction to Algorithms
Cormen, Leiserson and Rivest and Stein

Course work and grading (tentative)	Assignments:	30%
	Project:	20%
	Exam I:	20%
	Exam II:	25%
	Class participation:	5%

Each assignment will specify the material to be turned in.
All programming will be in C/C++, and must compile on an University Unix/Linux machine. No credit will be given for programs that do not compile.

Assignments are due by 11:59pm on the due date. Assignments may be turned in up to 3 days late, with a penalty of 10% for each day late. No credit will be given after 3 days.

Academic honesty: Each program and homework assignment must be worked on individually. A submission carries with it an implicit statement that the submission is your own work. You may discuss the requirements and syntactical issues, but not solutions or designs. Violations may result in failure of the course.

Tentative schedule:

Week 1	Introduction, Analysis tools
Week 2	Short overview C++, Analysis Tools (cont'd)
Week 3	Arrays; Lists
Week 4	Stacks and Queues
Week 5	Trees
Week 6	Trees. Search trees.
Week 7	Priority Queues / Heaps. Hashing. Dictionaries.
Week 8	Exam I, Sorting
Week 9	Sorting
Week 10	Sorting
Week 11	Graphs
Week 12	Graphs
Week 13	Exam II, Graphs
Week 14	Special topics: data structures and algorithms for text processing
Week 15	Project presentations