Syllabus - CSC 210 Data Structures & Algorithms

Term: Winter 2017
Schedule: Mon, Wed, Fri @ 1:20-2:30 pm in Carnegie 113
First class: Wed Jan 4, 2017 @ 1:20 pm

Noctrl Description

Here's the official Noctrl description of our class:

> *Structures, techniques, and algorithms for managing data. Topics include variations of linked lists; binary trees, B- trees, and other types of search trees; advanced searching and sorting algorithms; graphs and graph algorithms; and analysis of algorithms. Programming required.*
> Source: northcentralcollege.edu/academics/dept-div-progs/computer-science/courses

Instructor

My name is Bill Krieger. I'm a part-time professor in the Computer Science department at North Central College.
My email is wtkrieger@noctrl.edu, and my school website is wtkrieger.faculty.noctrl.edu.

Textbook

The textbook for our course is: Data Structures and Algorithms in Java by Goodrich, Tamassia, & Goldwasser, published in 2014. There are print and e-text versions available: www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP002900.html

Grading

Your final grade will be comprised of:

- Class participation, 10%
- Programming assignments, 30%
- Midterm, 25%
- Final exam, 35%

The standard North Central College grading scale will be used. It's spelled out here:
www.northcentralcollege.edu/academics/registrar-and-support-services/registrar/plusminus-grading

The college rules on academic integrity will be strictly enforced. Plagiarism is a severe offense and will not be tolerated. It is considered plagiarism if any part of the work you submit has been written by another person. North Central College link: www.northcentralcollege.edu/academics/dept-div-progs/english/plagiarism-policy

Late work will not be accepted without prior approval. Please see me if you have an issue meeting a course deadline.

The Plan

This plan is still tentative and subject to change.

Week	Description
1	Intro: ADT, Algo analysis; Ch1 Java Primer; Ch 2 OO design; Ch 3 Arrays and lists
2	Java Collections, Streams, lambda exprs; Ch 6 Stacks, queues; Ch 7 List ADT
3	Ch 5 Recursion; Ch 8 Trees;
4	Ch 4 Algorithm analysis; Ch 12 Sort and select
5	Review/catch-up for Midterm exam
6	Ch 10 Maps, hash tables
7	Ch 11 Search trees: BST, AVL, Splay, Red-black
8	Ch 14 Graphs
9	Ch 13 Text processing; Ch 15 Memory mgmt
10	Review/catch-up for Final exam