Computer Science 3310
Advanced Data Structures and Data Abstraction
Spring 2009

Meeting Time: 5:00 – 6:15 P.M., Tuesday and Thursday
Meeting Location: Austin 306
URL: http://www.cs.ecu.edu/~rws/c3310/

Instructor: Dr. Ronnie W. Smith
Email: rws@cs.ecu.edu
Office: Sci-Tech C-117
Phone: 328-9687

Office Hours: Mondays 2:00 – 4:00 P.M.
Tuesdays 9:45 – 10:45 A.M.
4:15 – 4:45 P.M.
Thursdays 9:45 – 10:45 A.M.
4:15 – 4:45 P.M.
Or by appointment

Course Goals

1. To learn the properties of several abstract and fundamental methods of data organization for computers, including lists, stacks, queues, trees, graphs, and hash tables.
2. To learn how to use these methods of data organization in solving computational problems.
3. To learn how to use recursive programming to solve computational problems.
4. To develop basic methods of analysis for determining when a particular method of data organization is appropriate for a specific algorithmic solution.
5. To develop skills for successfully handling more complex programming problems.

Prerequisites

CSCI 3300.

Text (required)

Data Abstraction and Problem Solving with Java: Walls and Mirrors, Frank M. Carrano and Janet J. Prichard 2nd edition, Pearson Education, 2006.

Evaluation Criteria

Programs - 45% (5 weighted programs assigned during the semester)
Assignments - 15% (weighted "problems of the week"; approximately 10-12 assigned during the semester; should be worked in two or three person teams)
Exams – 20% (2 of them, February 12 and April 9---subject to change)
Final Exam – 20% (April 30, 5:00 – 7:30 P.M.)

Program Due Dates (subject to change)

Program	Handed Out	Due
1	January 20	February 3
2	February 10	February 24
3	March 3	March 31
4	March 31	April 14
5	April 14	April 28

Computing Environment

Programs must be executable on the department workstations in Austin 208 using the javac compiler with the Linux Operating System.

Grading Scale

An absolute grading scale has not been set, but you can be assured of at least the following:

Final Average (x)	Grade will be at least
$x \geq 92$	A
$85 \leq x < 92$	B
$75 \leq x < 85$	C

Late Work

No late assignments will be accepted without an official excused absence. For programs, you will be given a budget of 72 hours of lateness that you can spend throughout the semester. Once it is used up, no late programs will be accepted without an official excused absence. Unused hours in your budget will be cashed in as extra points earned for programs at the rate of "2 unused hours = 1 point". Assignments and programs are due at the start of class unless otherwise noted.

Class Attendance

Attendance is mandatory and will be checked. If you have 3 or 4 unexcused absences during the semester your final grade will be reduced by one full letter grade. If you have more than 4 unexcused absences, your final grade will be an F.

If you are more than 5 minutes late and it is unexcused, your tardiness will be counted as an unexcused absence.

A dean's excuse or student health excuse is required for an absence to be considered excused.

Virtual Office Hours

Besides physical office hours noted on the previous page, virtual office hours are available on an ad hoc basis. This refers to times during the week when I will try to answer student emails. My policy for answering emails will be the following.

- First priority during physical office hours will be visitors and phone calls. Secondary priority will be answering emails.
- For days that I do not have office hours, I will normally try to answer emails on Wednesdays beginning at 11:00 A.M., and on Fridays beginning at 2:00 P.M. This is subject to change without notice due to conflicting responsibilities.
- On weekends, I will normally try to look at email at some point on Sunday afternoons after 2:00.
- You should not rely on me answering emails quickly at other times, though I will sometimes be able and willing to do that.

Ethics

You may work on assignments in two or three person teams. Teams should remain the same throughout the semester. Only one copy of the assignment should be turned in per team. Teams must be decided upon by January 27.

For programs it is acceptable to ask for assistance with the following:

1. Understanding the problem description.
2. Using the system software and hardware.
3. Understanding the source of compiler errors.

It is considered **CHEATING** to obtain assistance other than from the instructor for the following:

1. Writing your program. This means *any* discussion about writing code or specifying algorithms.
2. Fixing your program beyond syntax errors except for having someone ask you questions about your code. You must figure out how to change your code when errors are discovered (or go talk to the instructor).

Violations of these policies will be handled in a manner consistent with official university policy.

HINT: To avoid problems with people stealing your work, do not recycle printouts of your program code until one week after the due date.

Hints for Success

1. Do the reading in advance.
2. Bring book to class.
3. Work the practice problems.
4. Talk to your teammate(s) about assignments (and practice problems too).
5. Take advantage of my office hours.
6. Begin working on programs immediately.

Weather emergencies

In the event of a weather emergency, information about ECU can be obtained through the following sources:

ECU emergency notices	http://www.ecu.edu/alert
ECU emergency information hotline	252-328-0062

Students with disabilities

East Carolina University seeks to comply fully with the Americans with Disabilities Act. Students requesting accommodations based on a covered disability must go to the Department for Disability Support Services, located in Slay 138, to verify the disability before any accommodations can occur. The telephone number is 252-737-1016.