CS2984: Data Structures and Algorithms
Fall, 2008

Note: This course will eventually be renumbered CS3114

Class:	CRN 97213: TuTh 11:00-12:15am in McBryde 231
Instructor:	Dr. C.A. Shaffer, Torgerson 2000A, 540-231-4354 Office Hours: TuTh 2:00–3:00 E-Mail: shaffer@cs.vt.edu
GTA:	AJ Alon, Email: alon@vt.edu Office Hours: Will be posted at the web site
Prerequisites:	Math2534; C or better in each of the following: CS2104 (previously CS2984) Introduction to Problem Soving; CS2114 (CS2984) Software Engineering and Data Structures; CS2505 (CS2984) Introduction to Computer Organization I.
Textbook:	Coursnotes/textbook materials will be posted at the website.
Course Website:	`http://courses.cs.vt.edu/~cs3114`
Grade Weighting:	4 Projects: 45% total Midterm and final: 30% In-class and out-of-class quizzes and assignments: 25%

Honor Code:

The Virginia Tech Honor Code applies to this course and will be strictly enforced. Homework assignments and exams **must** be done strictly on an individual basis. Programming assignments may (at your option) be done with a partner, in which case the pair will jointly submit the assignment. Aside from your programming partner, it is acceptable to discuss with classmates a programming assignment in a general way, i.e., to discuss the nature of the assignment. In other words, you may discuss with your classmates what your program is required to accomplish but not how to achieve that goal using Java. In no way should the individual statements of a program or the steps leading to the solution of the problem be discussed with or shown to anyone except the graduate teaching assistants, the instructor, or the free tutors provided by ACM or UPE. Any discussion of your program source code must be limited to these people or your pair partner.

Always give credit for work that is not entirely your own (e.g., parts of programs or homework answers borrowed from a book).

Prerequisites:

The Computer Science Department rigorously enforces the prerequisite requirements for all courses. Additionally, for majors or minors in Computer Science the Department enforces

the requirement that all prerequisite Computer Science courses be completed with a grade of C or better. Any student not meeting these requirements and not obtaining written permission from the course instructor to remain in the course, must withdraw from the course within the first week of classes. Any student who is subsequently found not to meet these requirements **will be subject to an honors violation report** on the basis of falsification of qualifications. Instructors are NOT bound to investigate the records of students to ascertain their prerequisite status; this is the student's own responsibility.

In **all** cases, **the student is responsible** for knowing all prerequisite material.

Assignments and Grading Policy:

This is in large part a programming course, and programming projects count for 45% of your grade. You are expected to produce programs which are both readable and correct.

One purpose of a data structures course is to teach efficient algorithms and use of appropriate data structures. Another purpose of this course is to exercise your design abilities. It is not sufficient that a program generate the correct answer and be written with good documentation style. Projects will also be graded in part on design and organization quality, and in part on efficiency. You should certainly pay attention when the instructor or GTA discusses issues related to "good" and "poor" design choices for the projects. These issues directly affect your grade.

Solutions to homework assignments must be typeset either using a word processor or in plain ASCII text. No handwritten work (including scanned documents) will be accepted. You may include hand-drawn illustrations if appropriate.

All programming assignments will have a stated due date. Every student has a bank of 5 late days that may be used over the course of the semester. On any given project, you may use zero, one, or more of the late days in your bank. No projects may be turned in late aside from using days from your bank.

There will be a number of non-programming assignments, some done in class and some out of class. Such assignments are due at the date and time specified. No late assignments will be accepted unless an extension has been granted.

All assignments will be submitted electronically to Web-CAT. Web-CAT will provide the official timestamp used to determine whether an assignment is on time. Assignments that arrive "a few minutes late" are subject to a late penalty. **Be warned** – the "few minutes late" penalty is automatic, and there will be no exceptions or mitigating circumstances. **Don't push deadlines.**

If any student needs special accommodations because of a disability, please contact the instructor during the first week of classes.

Equipment and Programming Language:

All programming for this course will be done in Java. The GTAs will will compile and test programs using Eclipse, as available on the undergraduate lab machines. It is the responsibility of the student to submit a program that will successfully compile and execute on the specified platform. Computing facilities are available for use in the Departmental Computing Lab.

Test data files will be provided via the course website.

Class Website and Forum

The class website can be found at `http://courses.cs.vt.edu/~cs3114`. The class website is the source for all official announcements related to due dates, tests, etc. The class forum can be found at `https://forum.cs.vt.edu`. This forum will be the source for all official announcements related to changes to, and interpretation of, the project requirements and similar course management issues. We might remember to announce a test, assignment, or change to spec or due date in class, but there is no guarantee or promise that we will. The class website and forum are the **only** official, reliable sources for announcements, changes, etc for this course. If something an instructor or GTA says in class or in one-on-one conversation conflicts with information posted at the forum or class website, then **the website and forum take precedence**. Verbal instructions are easily mis-interpreted, nor do they leave a paper trail. The excuse "my instructor/GTA said something else" will not be accepted. Check the website and forum daily.