COMP 2210
Fundamentals of Computing II
Spring 2014

Course Staff

Instructor
Dr. Dean Hendrix
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Office Hours: 8:30am-10:00am MWF

Teaching Assistants
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Course Meetings

Lecture Shelby 1103
11:00am – 11:50am MWF

Labs Shelby 2122
Sec 001 1230-1345 TR
Sec 002 1400-1515 TR
Sec 003 1530-1645 TR
Sec 004 1700-1815 TR
Sec 005 1830-1945 TR

Course Materials

Textbook
There is no required text for the course. However, I *strongly* recommend that you have a good data structures text. Two options are below.

Venugopal, S. (2006). *Data Structures Outside-In with Java* (1st ed.). Prentice Hall. ISBN 0-13-198619-8.

Bailey, Duane A. (2007). *Java Structures – Data Structures in Java for the Principled Programmer* (√7 edition). http://www.cs.williams.edu/JavaStructures/Book.html (FREE)

Classroom Response Device
All students are required to have their own i>clicker2 classroom response device. The i>clicker2 can be ordered online or purchased at area bookstores. When ordering, be sure to use ISBN1429280476.

Java Development Environment
Required: Java SE 7 JDK
Recommended: jGRASP latest release (2.0.0_08 beta 4 as of this writing)

Engineering Network Account
Each student is required to have an account on the Engineering Network. Consult the online Help Desk (http://www.eng.auburn.edu/ens/helpdesk/index.html) or go to 270 Ross Hall for assistance with your account.

Course Content

Current Bulletin Description
Software development in the context of collections (e.g., lists, trees, graphs, hashtables). Communication, teamwork, and a design experience are integral course experiences.

Overview
COMP 2210 is designed to introduce fundamental data structures, their associated algorithms, and applications in which they are commonly used. An object-oriented approach to problem solving and program design will be emphasized in the lecture and reinforced in the lab.

Specific course objectives are: (1) Be able to design, implement, and apply data structures based on specifications of abstract data types. (2) Be able to apply concepts and techniques from object-oriented programming. (3) Be able to perform fundamental testing and debugging techniques. (4) Be able to perform fundamental maintenance activities. (5) Be able to perform fundamental time and space analysis on algorithms. (6) Be able to design a set of candidate solutions given a problem statement and recommend the best solution by evaluating tradeoffs and circumstances. (7) Be able to effectively communicate professional work to others in written and oral form. (8) Be able to function effectively on a team to construct software deliverables.

Course Outline

Topic	Reading from Bailey
Searching, Java, OOP	Appendix B, Ch. 1
Correctness	Ch. 2
Generality	Ch. 4, 8, 11
Efficiency, Algorithm Analysis	Ch. 5
Sorting	Ch. 6
Exam 1	
Collections	Ch. 3, 7
Linked Structures	Ch. 9
Lists	Ch. 9, 11
Stacks and Queues	Ch. 10
Recursion	Ch. 5
Exam 2	
Trees	Ch. 12
Search Trees	Ch. 14
Heaps, Priority Queues	Ch. 13
Exam 3	
Hashing	Ch. 15
Graphs	Ch. 16
Disjoint Sets	Notes

Final Exam
Monday April 28, 2014
Shelby 1103
12:00pm – 2:30pm

Course Grading

Your grade for the course will be determined by your performance on a sequence of exams and programming assignments, and your participation in the course.

There are a total of four exams planned (three exams during the term and a final at the end of the term, as scheduled by the Registrar). All exams are comprehensive over all the material covered to date, although they focus on the material indicated. No make-up for any exam can be given without an approved University excuse.

There will be a sequence of programming assignments, some of which will be completed individually and others will be completed in teams. No late submissions of assignments can be accepted without an approved University excuse.

During lecture periods, one or more questions will be asked for which you will be expected to respond with the i>clicker2. If you answer all questions asked during a given lecture period, you will be awarded one participation point. The number of participation points that you earn will determine the fraction of two bonus points that will be applied to your course grade.

Your *numeric score* for the course will be determined according to the following formula where EXAMS is the arithmetic average of your individual exam scores, ASSIGN is the arithmetic average of your individual programming assignment scores, and PART is the fraction of two points corresponding to the percentage of possible participation points that you earned.

$$\textit{numeric score} = \text{EXAMS}*0.70 + \text{ASSIGN}*0.30 + \text{PART}$$

Your *letter grade* for the course will be calculated as follows. If EXAMS $\geq$ 60 and ASSIGN $\geq$ 60, then your course letter grade will be assigned per the numeric score above and the standard 10-point scale (90-100 = A, 80-89 = B, etc.). If EXAMS < 60 or ASSIGN < 60, then your course letter grade will be an F.

Course Policies

Academic Honesty

You will be held responsible for adherence to the Academic Honesty policies described in the *Tiger Cub*. Specifically, each student is expected to apply the Auburn University Oath of Honor to each graded item in this course: "*In accordance with those virtues of Honesty and Truthfulness set forth in the Auburn Creed, I, as a student and fellow member of the Auburn family, do hereby pledge that all work is my own, achieved through personal merit and without any unauthorized aid. In the promotion of integrity, and for the betterment of Auburn, I give honor to this, my oath and obligation*." In certain instances, collaboration on course work is allowed, but these instances will be clearly identified by the instructor and the collaboration is allowed only within the bounds set by the instructor.

TigerMail and Electronic Communication

You are responsible for checking your TigerMail email each day. You are required to set your Canvas Notification Preferences to email your TigerMail account right away for new announcements and for conversations to which you are added. Per University policy, email sent to your TigerMail account is considered official University communication and you are held responsible for it. See the following URL for more details on this policy and more information about student email: http://www.auburn.edu/oit/account_info/tigermail/.

Make-Up Work

Work missed during the semester will be assigned a grade of zero points. Make up work will be given only for valid University excuses with appropriate written verification (see the *Tiger Cub*). It is always your responsibility to initiate arrangements to make up missed work, and these arrangements must be initiated within one week of the original missed due date or within one week of your return to campus (documentation required).

Attendance

You are expected to attend all class meetings and stay for the entire period. Your attendance in lecture will directly impact your participation points. You are responsible for all material presented in lecture and in lab whether you are present or not. It is your responsibility to collect any graded materials that were returned during your absence. If you are excessively late to an exam, the instructor reserves the right to count you absent from the exam and give you the opportunity to take a make-up.

Special Accommodations

Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by email. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT).

Assignment Submission and Grading

Late submissions of any assignment will not be accepted and will result in a grade of zero points. Although partial credit will be given on assignments, source code that does not compile is worth zero points.

Graded Material

Graded materials will be returned only in person, so you will have to come by the instructor's office to pick up graded items that were returned during your absence. If you wish to keep graded materials for your records, they must be picked up before the end of the course. Graded materials will be discarded after the final exam period. The final exam will not be returned, but will be kept on file in the instructor's office per University policy.

Viewing Grades

Grades will be available for viewing throughout the semester in Canvas. It is your responsibility to make sure that the recorded grades are accurate. CAUTION: Please note that Canvas sometimes displays percentage scores that do not correspond to the numeric score specified in the grading section above. When you view your grades in Canvas, you should only pay attention to the individual item scores and completely ignore the percentage scores that are displayed.

Grade Appeals
With the exception of the final exam grade, you have one week from the posting of a grade or the return of a graded item, *whichever is first*, to dispute the grade. You will have a very short period of time to dispute the final exam grade before official letter grades are recorded with the University.

Appeals for re-grading any graded item must be made via email to the instructor no later than one week after the item is returned to you. In the appeal, you must describe (a) exactly what portion you wish to be re-graded and (b) the reasons you are requesting the re-grading in a clear, concise manner. Only email appeals will be accepted.

Electronic Devices
Devices such as computers, tablets, mobile phones etc. should be turned off or set to silent mode before a class or lab begins, and should remain in this setting until the class or lab is over. You may not use a laptop, tablet, or any other electronic device during lectures unless you are specifically given permission to do so. No electronic device, with the exception of a standard calculator, will be allowed during exams.