

## CS 230: Data Structures and Algorithm Analysis - Spring 2006 Greensboro College

Location: PHW 315  
Meetings: (Independent Study. Meeting periodically.)  
Course web site: <http://moodle.gborocollege.edu>

**Instructor:** Tami Britt  
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Office: PHW 315  
Office Hours: Mondays: 10:00 – 11:30am and 2:00 – 4:00pm,  
Tuesdays: 4:30 – 5:30pm  
Wednesdays: 10:00 – 11:30am  
Fridays: 10:00 – 11:30am  
\*I am also available by appointment.

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### Course Description:

This course provides students with an opportunity to apply and expand on the data structure skills and techniques introduced in CS 110 and CS 120. Concepts in graph theory, algorithm analysis, and program efficiency are included. Prerequisites: CS 120 with a grade of C- or higher and MATH 205 with a grade of C or higher.

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### Required Materials:

#### Text:

*Data Structures and Problem Solving Using Java, Third Edition.* Addison Wesley, 2006.

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### Course Policies:

#### Assignments:

All assignments are due by 5:00pm on the indicated date. If an assignment is turned in late, there will be a 10-point deduction of the score on that assignment for each day the assignment is late. Assignments more than 2 days late will not be accepted, unless special permission was granted by the instructor before the 2-day deadline.

#### Academic Honor Code and Student Technology Policy:

Students will be expected to sign the Academic Honor Code and the Student Technology Policy on the first day of class. All students must adhere to the provisions of these policies. The text of each of these is in the *Student Handbook*. **If you violate the Academic Honor Code, you will receive a zero on the assignment or test in which the violation occurred.** The violation may also be reported to the Academic Honor Council.

#### Need for Assistance:

If you have any condition, such as a physical disability, learning disorder, or other situation which will make it difficult for you to come to class or to complete assignments, please notify me so that I may accommodate your needs. If you are registered with Disability Services, you need to submit your 504 plan.

Grading:

**Grading Scale:**

93-100%	A
90-92%	A-
87-89%	B+
83-86%	B
80-82%	B-
77-79%	C+
73-76%	C
70-72%	C-
67-69%	D+
60-66%	D
< 60%	F

Grading Scheme:

Tests	30 %
Homework Assignments	50 %
Final Exam	20 %
TOTAL	100 %

Course Outline:

Class:	Topic (Reading Assignment):	Assignments due:	Tests/Quizzes:
January 9			
January 11	Java Review		
January 13			
January 16	<b>MLK Holiday – No classes</b>		
January 18	Java Review (Chapter 1)		
January 20			
January 23	Reference Types (Chapter 2)	Homework 1(Ch.1)	
January 25			
January 27	Objects and Classes (Chapter 3)	Homework 2(Ch.2)	
January 30			
February 1	Inheritance (Chapter 4)	Homework 3(Ch.3)	
February 3			
February 6			Test 1(Ch.1-3)
February 8	Algorithm Analysis (Chapter 5)	Homework 4(Ch.4)	
February 10			
February 13	API (Chapter 6)	Homework 5(Ch.5)	
February 15			
February 17	Recursion (Chapter 7)	Homework 6(Ch.6)	
February 20			
February 22			Test 2(Ch.4-6)
February 24	Sorting (Chapter 8)	Homework 7(Ch.7)	
February 27			
March 1	Random Numbers (Chapter 9)	Homework 8(Ch.8)	
March 3			
March 6	<b>Spring Break</b>		
March 8	<b>Spring Break</b>		
March 10	<b>Spring Break</b>		
March 13	ArrayList (Chapter 15)	Homework 9(Ch.9)	
March 15			
March 17			Test 3(Ch.7-9)
March 20	Stacks and Queues (Chapter 16)	Homework 10(Ch.15)	
March 22			
March 24	Linked Lists(Chapter 17)	Homework 11(Ch.16)	
March 27			
March 29	Trees (Chapter 18)	Homework 12(Ch.17)	
March 31			
April 3			Test 4(Ch.15-17)
April 5	<b>Assessment Day – No day classes</b>		
April 7	Binary Search Trees (Chapter 19)	Homework 13(Ch. 18)	
April 10			
April 12	Hash Tables (Chapter 20)	Homework 14(Ch.19)	
April 14	<b>Good Friday – No Classes</b>		
April 17		Homework 15(Ch.20)	
April 19			
April 21			Test 5(Ch.18-20)
April 24			
FINAL EXAM	TBA		

Note: This outline is tentative. Changes in reading assignments, due dates, and test dates will be announced in class and on the web site.