Algorithms & Programming II

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M/W 4:00 - 5:40

Boyer 8

DESCRIPTION: This is the second course in the CS curriculum. The goal of this course is to continue the process of learning to program in Java with a focus on Classes, Inheritance, Basic Data Structures, and GUI applications.

PREREQUISITES: Successful completion of CS201.

COURSE GOALS:

- Effectively store data in appropriate data structures
- Utilize the concepts of OOD to model real world objects in a programming environment
- Utilize inheritance to effectively design object based programs.
- Create Java based GUI programs
- Use appropriate sorting/searching methods to manipulate data

ACTIVITIES: Throughout the course students will participate in a variety of learning activities including lecture, discussion, discovery, hands-on lab exercises, homework, group & individual projects, quizzes, exams, student presentations, peer editing and peer critiques.

RESOURCES:

- Instructor Website: http://cs.mickeyengel.com
- Introduction to Java Programming (Liang)

GRADING POLICIES: There will be 2-3 quizzes per unit. The lowest quiz grade will be dropped. There will be no late or makeup quizzes. A missed quiz results in a score of zero for that quiz. Quizzes will account for 10% of the final grade.

There will be one projects assigned during each unit. Projects submitted after the due date will lose 20% per day late. No project or part will be accepted more than two days late. Projects will account for 40% of the grade. Projects will be submitted in both electronic AND printed form. Be sure to include your name in the comments and name the submission lastname_projectName.

In each unit there will be a take home packet of questions. These questions will be a mix of multiple choice and open ended questions designed to help you delve deeper into the concepts. The packet will typically be handed out 1 week prior to the test and is due the day of the exam. Students who choose to submit their packets early will be given feedback prior to the exam. Packets will account for 10% of the grade.

There will be one test for each unit. Test will count for 20% of the final grade.

The final exam will be a written exam and will account for 20% of the course grade.

Each University student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Arcadia University Student Handbook. The Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Students are encouraged to study together and to work together on class assignments and lab exercises; however, academic honesty will be strictly enforced in this class.

COURSE SCHEDULE:

Date	Topic	Assignment Due
8/29	Introduction & Review	
9/5	1D Arrays	
9/10	ArrayLists	
9/12	Linked Lists	
9/17	Linear Search	
9/19	Introduction to Sorting	
9/24	2D Arrays	
9/26	Storage Exam	Storage Packet Due
10/1	Introduction to OOP	Storage Problem Due
10/3	Encapsulation	
10/8	Instantiation and State	
10/10	Object Comparisons	
10/15	Design & Development	
10/17	Design & Development	
10/22	OOP Activity	
10/24	OOP Test	OOP Packet Due
10/29	Introduction to Inheritance	OOP Project Due
10/31	Polymorphism	
11/5	Inheritance Activity	
11/7	Abstract Classes	
11/12	Interfaces	
11/14	Applications of Inheritance	
11/19	Inheritance Test	Inheritance Packet Due
11/26	NO CLASS	Inheritance Project Due
11/28	Recursion	
12/3	Recursion	
12/5	Recursive Algorithms	
12/10	Recursion Test	Recursion Packet Due
12/12	FINAL EXAM (4:00)	