CECS 220 Object Oriented Program Design with Java

Catalog Description:
CECS 220 Object Oriented Program Design with Java: Credits: 3. Prerequisites: CECS 130. Introduction to Object Oriented Program design principal concepts and program development using the Java programming language. It includes laboratory exercises on the design and implementation of computer applications in Java.

Prerequisites by Topic:
Knowledge of C and C++ or consent of the instructor.

Textbook:
John Lewis, and William Loftus. Java Software Solutions: Foundations of Program Design, 7/E. Addison-Wesley, 2012. ISBN-13: 9780132149181

Course Objectives
At the conclusion of this course, the successful (passing) student would have learned:

1. The concepts of object oriented design
2. The basic constructs of the Java programming language.
3. The practices of object oriented program implementation and development.

Topics Covered:
Lectures and hands-on exercises (Total of 26 classes 75 minutes each and 2 in class exams)

1. Introduction (1 Lecture)
2. Data and Expressions (3 Lectures)
3. Using Classes & Objects (3 Lectures)
4. Writing Classes (2 Lectures)
5. Conditionals and Loops (2 Lectures)
6. More Conditionals and Loops (1 Lectures)
7. Object-Oriented Design (4 Lectures)
8. Arrays (2 Lectures)
9. Inheritance (2 Lectures)
10. Polymorphism (2 Lectures)
11. Exceptions (2 Lectures)
12. Recursion (1 Lecture)
13. Collections (2 Lectures)

Class/Laboratory Schedule
The course meets for two lectures weekly. Each lecture is 75 minutes.

Evaluation

Homework	® 40%
Two in class tests (30 % each)	® 60 %
Total	® 100%

Grading Scale

100%-96% ®	A^+	95%-93% ®	A	92%-90% ®	A^-
89%-86% ®	B^+	85%-83% ®	B	82%-80% ®	B^-
79%-76% ®	C^+	75%-73% ®	C	72%-70% ®	C^-
69%-66% ®	D^+	65%-63% ®	D	62%-60% ®	D^-
		59%-0% ®	F		

Computer Assignments and projects:

All reports must be submitted in PDF format. ***I will not accept any MS Word or any other word processor's type documents.***
Each assignment must contain:

a. Title page with your name, assignment number and the day you are actually submitting this report (Not the assignment due date)
b. A brief description of the assignment.
c. A brief description of the logic employed and the needed input and expected output.
d. A comprehensive set of snapshots showing the inputs submitted, outputs obtained in the case of a successful output or a failure.
e. Any conclusions, analysis, or answers to any questions in the assignment.
f. A text file that contains all source code.
g. Please zip both the PDF document with the source code and submit one zip file.

Disruptive behavior and the use of Laptop Computers and Electronic Devices:

Students attend lectures and labs for the **sole purpose** of listening and participating in the lecture and lab. Thus, you may not use your laptop or tablet PC for any other reason except as indicated by the instructor. You may not use cell phone, mp3 players or their equivalent, or game consoles and any such hand held electronic devices.
This is to say that:

1. You may not use your cell phone neither to text message nor to make or receive any others calls. Your cell phone has to be off during the lecture or lab.
2. You may not use you laptop or tablet PC to browse the web, read e-mails, chat, play games, programming or working on other assignments not related to the lecture at hand.
3. All other electronic devices including all mp3 players and handheld game consoles must be off and stored away. You may not have headphones or ear pods on.
4. You may not work on any other subject, homework… etc. or engage into other activities not related to the lab or lecture at hand.

Any violation to these rules will be considered disruptive behavior. The student will be asked to leave and could result in other disciplinary action.

Collaboration and Cheating Policy:

Students are encouraged to cooperate in studying and to learn from each other. However, all submitted assignments should be ***original and the result of the individual's own work***. Cheating or copying of assignments or exams will not be tolerated and will be pursued.

Students with Special Needs:

Students with special needs will be accommodated and all necessary arrangements will be made to facilitate learning the material, doing the assignments, and taking the exams.

Professional Component Contribution

Engineering Science: 50%
Engineering Design: 50 %

Relationship to Program Outcomes

This course supports all engineering program objectives by exposing students to:

- Fundamentals
- Design
- Problem solving
- Communication

Prepared by Haythem Balti, August 2013

Calendar:

	Class	Chapter	Days in unit	Post Assign.	Important
Week 1	Mon, August 26, 2013	1. Introduction	1		
	Wed, August 28, 2013	2. Data and Expressions			
Week 2	Mon, September 2, 2013	**Labor Day (No Class)**			
	Wed, September 4, 2013		2	1	
Week 3	Mon, September 9, 2013	3. Using Classes & Objects			
	Wed, September 11, 2013		2	2	
Week 4	Mon, September 16, 2013	4. Writing Classes			
	Wed, September 18, 2013		2		
Week 5	Mon, September 23, 2013	5. Conditionals and Loops		3	
	Wed, September 25, 2013		2		
Week 6	Mon, September 30, 2013	6. More Conditionals and Loops			
	Wed, October 2, 2013		2	4	
Week 7	Mon, October 7, 2013	**Fall Break**			
	Wed, October 9, 2013	**Test 1**			
Week 8	Mon, October 14, 2013	7. Object-Oriented Design			
	Wed, October 16, 2013				
Week 9	Mon, October 21, 2013				
	Wed, October 23, 2013		4	5	
Week 10	Mon, October 28, 2013	8. Arrays			**Last Day to Withdraw**
	Wed, October 30, 2013		2		
Week 11	Mon, November 4, 2013	9. Inheritance			
	Wed, November 6, 2013		2	6	
Week 12	Mon, November 11, 2013	10. Polymorphism			
	Wed, November 13, 2013		2		
Week 13	Mon, November 18, 2013	11. Exceptions			
	Wed, November 20, 2013		2	7	
Week 14	Mon, November 25, 2013	12. Recursion	1		
	Wed, November 27, 2013	**Thanksgiving Break**			
Week 15	Mon, December 2, 2013	13. Collections			
	Wed, December 4, 2013		2	8	**Last Day of Classes**
	Mon, December 9, 2013	**Test 2.**			

You Must Complete and return this portion:

I certify that I have read the above syllabus and that I will abide by all these rules and regulations:

Student Name: _____

Signature: _____

Date: _____