

Spring 2010

CEG 461/661-01: Object-Oriented Programming and Design

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CEG461/661 Object-Oriented programming and Design

Spring Quarter 2010

Wright State University

Course Description

Study of object-oriented design and programming. Programming topics emphasize the core concepts of encapsulation, inheritance, polymorphism, and dynamic binding. Additional topics include class organization, software maintenance, and design of reusable components. There is a project to be implemented in a modern object-oriented language such as Java or C++.

This course will introduce the essential aspects of software engineering from an object-oriented point of view. There will be considerable emphasis on analysis and design in addition to programming. We will use Unified Modeling Language (UML) for the analysis and design work.

Programming topics will emphasize the core concepts of encapsulation, inheritance, polymorphism, and dynamic binding. We will examine the realization of these concepts in the Java and C++ programming languages.

Professor

Dr. Thomas C. Hartrum

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Class Hours: M W 1:30 P.M. – 2:45 P.M., Russ, Room 154.

Text

Page-Jones, *Fundamentals of Object-Oriented Design in UML*, Addison Wesley, 2000.

Skrien, *Object-Oriented Design Using Java*, 1st ed., McGraw-Hill, 2009.

Prerequisites

CS 400 or CS 600

CEG 460 or CEG 660

Grading

Grading will be as follows:

Homework & programming exercises	10
Project	40
Midterm Exam	25
Final Exam	25

Course grades will be based on the total score as follows. A: 90-100, B: 80-89, C:70-79, D: 60-69. F: below 60.

Grades may be further curved if appropriate.

Grading (cont'd)

- You may work with others on homework assignments, but you must turn in your own individual work. Homework that has obviously been copied will result in a grade of zero for both parties and will be reported to the Office of Judicial Affairs, as will any other form of cheating.
- Ten percent will be deducted for unexcused late work.
- The project will be worked in teams. You may pick your partner(s) or I will pick them. More detail on the project will be handed out later.

Tentative Schedule

	Topic	Skrien	Page-Jones
1	M(3/29) Introduction W(3/31) Object-Oriented & Java	Ch 1 2.1-2.4, 4.4	Ch 1, 2 10.1, 10.4
2	M(4/05) Inheritance I W(4/07) Inheritance I	2.5-2.11 2.5-2.11	
3	M(4/12) Inheritance II W(4/14) Inheritance II	Ch 3 Ch 3	10.2-10.3 12.1
4	M(4/19) Inheritance II W(4/21) Methods	Ch 3 Ch 4	10.5-10.6
5	M(4/26) Methods W(4/28) Methods	Ch 4 Ch 4	Ch 11 Ch 13
6	M(5/03) Catch up, review W(5/05) In class midterm	Ch 1-4 Ch 1-4	Ch 1, 2, 10, 11, 13 Ch 1, 2, 10, 11, 13
7	M(5/10) Class structure W(5/12) Class structure	Ch 5 Ch 5	Ch 8-9 Ch 8-9
8	M(5/17) Examples W(5/19) Design Patterns	Ch 6 Ch 7	Ch 14
9	M(5/24) Examples W(5/26) Components	Ch 8, 9	Ch 15
10	M(5/31) Holiday W(6/02) Catch up, review	All	Appx A-B, All
F	M(6/07) 1:00 PM to 3:00 PM Final Exam	All	All

NOTE: There will be *no* early final exam – plan your travel accordingly. In case of a legitimate conflict, a makeup final can be arranged.

Note: M = Monday, W = Wednesday.