

Winter 2007

CEG 860-01: Object-Oriented Programming

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CEG 860 Object-Oriented Programming

- **Instructor:** T. K. Prasad
 - **Phone No.:** (937)-775-5109
 - **Email:** t.k.prasad@wright.edu
 - **Home Page:** <http://www.cs.wright.edu/~tkprasad>

 - **Quarter:** Winter, 2007
 - **Class Hrs:** Tu Th, 6:05pm to 7:20pm, 039 Millett Hall
 - **Office Hrs:** Tu Th, 3:30pm to 4pm, and 5:30pm-6pm. 395 Joshi Research Center / 337 Russ Center(or by appointment)
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Course Objective

- To study the *why*, *what*, and *how* of Object-Oriented Programming.
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Course Prerequisite

- CEG 760 Software Engineering
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Course Description

This course motivates the need for object-oriented programming, and studies, in detail, object-oriented programming techniques, languages, and technology. The lectures will focus on the foundations of OOP, while the student presentations will focus on the applications and extensions of Object Technology.

Course Load

The course load includes programming assignments (in Java) and a presentation (with descriptive notes) worth 40 points, a midterm worth 30 points, and a final worth 30 points.

Texts

- Bertrand Meyer: *Object-Oriented Software Construction*. 2nd Edition. Prentice Hall, 1997. ISBN 0-13-629155-4
 - Clemens Szyperski *et al*: *Component Software: Beyond Object-Oriented Programming*. 2nd Edition. Addison-Wesley, 2002. ISBN 0-201-74572-0
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Reference

- Timothy Budd: *Introduction to Object-Oriented Programming*. 3rd Ed. Addison-Wesley, 2002. ISBN: 0-201-76031-2
 - The Links Galore
 - Garbage Collection
 - K. Thirunarayan, G. Kniesel, and H. Hampapuram, Simulating Multiple Inheritance and Generics in Java, In : *Computer Languages*, Vol. 25(4), pp. 189-210, 2001.
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Grading

The letter grades will be assigned using the following scale: A[90-100], B[80-90), C[70-80), D[60-70), and F[0-60). However, I reserve the right to adjust the scale somewhat to utilize the gaps in the distribution.

Class Schedule and Syllabus

Topic

Class 0	<u>Software Hell</u> <u>Bug Bites</u>
Class 0	<u>Professional Responsibility</u>
Class 1	<u>Motivation : Software Quality</u>
Class *	<u>Intro. to OOP ; OOP by Examples</u>
Class 2	<u>Modularity; Reusability</u>
Class 3	<u>Classes ; Genericity</u>
Class 4	<u>Objects ; Garbage Collection</u>
Class 5	<u>Design by Contract; Exceptions</u>
Class 6	<u>Inheritance; Dynamic Binding</u>
Class 7	<u>Composition; Delegation</u>
Class 8	<u>Multiple Inheritance ; Implementation</u>
Class 9	<u>Inheritance Techniques</u>
Class *	Midterm (February 6)
Class 10	(*SLACK*)
Class 11	Talk 1: 2/13 : -TBA-
Class 12	Talk 2: 2/15 : -TBA-
Class 13	Talk 3: 2/20 : -TBA-
Class 14	Talk 4: 2/22 : -TBA-
Class 15	Talk 5: 2/27 : -TBA-
Class 16	Talk 6: 3/01 : -TBA-

Class 17 Talk 7: 3/06 : -TBA-

Class 18 Talk 8: 3/08 : -TBA-

Class 19 (* Wrap-up *)

Class 20 (* Wrap-Up *)

Finals (March 8)

Extra Design Patterns and Frameworks

Extra Abstract Data Types

Extra Program Correctness

Assignments (winter 07)

- Assignment 1.
- Assignment 2.

Exams (winter 06)

- Midterm .
- Final.

I. K. Prasad (02 Jan 2007)