Fall 2007

CEG 760: Advanced Software Computer Engineering

Thomas C. Hartrum
Wright State University - Main Campus, thomas.hartrum@wright.edu

CEG760 Advanced Software Engineering

Fall Quarter 2007

Wright State University

Course Description

This course covers advanced topics in software engineering. Aspects of problem specification, design, verification, and evaluation are discussed. We will focus on design methods, including software patterns and software architecture, plus some advanced topics involving formal methods of software specification or evaluation using software metrics. Students will participate in team projects to apply the methods discussed.

Professor

Dr. Thomas C. Hartrum
Office: 337 Russ Engineering Center
Office Hours: M W F 10:00-11:00 and 2:00-3:00 or by appointment.
Office Phone: 775-5015
Email: **thomas.hartrum@wright.edu**
Web: **www.cs.wright.edu/~thartrum**
Class Hours: M W F 12:15 P.M. – 1:20 P.M., Rike Hall, Room 154.

Texts

Partha Kuchana, *Software Architecture Design Patterns in Java,* Auerbach, 2004.
Jos Warmer & Anneke Kleppe, *The Object Constraint Language Second Edition*, Addison-Wesley, 2003.

Additional papers will be handed out as appropriate.

Prerequisites

CEG 660

Grading

Grading will be as follows:

Homework	10
Projects	30
Midterm	30
Final Exam	30

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.

The projects will be worked in teams of two or three. You may pick your partner(s) or I will pick them. More detail on the projects will be provided later.

Tentative Schedule Fall 2007

Week	Topic	Kuchana	Warmer & Kleppe
1 WF	Introduction, UML & OCL	Ch 1, 2, Handouts	Ch 1, Ref 2 – 3, 6 – 9
2 MWF	Abstraction & polymorphism Basic Patterns	Handouts Ch 3-9	
3 MWF	Creational Patterns Collectional Patterns	Ch 10, 11, 12 Ch 15, 16, 17, 18	
4 MW*	Structural Patterns	Ch 19, 20, 21, 22, 24	
5 MW*	Behavioral Patterns	Ch 30, 33, 36	
6 MW*	Midterm (M), Formal Methods		Ch 2 & 3, Ref Ch 6 – 9, 10.1.1, 10.1.2
7 MW*	Formal Methods		Ch 2 & 3, Ref Ch 6 – 9, 10.1.1, 10.1.2
8 MW*	Formal Methods		Ch 4 & 5, Handouts
9 MW*	Formal Methods		Handouts
10 MW*	Architecture, review		Handouts

* No Friday class scheduled after week 3, however, class may be scheduled if needed.

Final Exam (11/14) Wednesday 1:00 – 3:00 PM

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