Fall 2007

CEG 760: Advanced Software Computer Engineering

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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

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**

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