Fall 2006

CEG 760: Advanced Software Computer Engineering

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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: 258 Russ Engineering Center
Office Hours: M T W R 2:00-4:00 or by appointment.
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Email: thomas.hartrum@wright.edu
Web: www.cs.wright.edu/~thartrum
Class Hours: T R 8:00 P.M. – 9:15 P.M., Russ, Room 153.

Texts

Additional papers will be handed out as appropriate.

Prerequisites
CEG 660

Grading
Grading will be as follows:

Projects 30
Midterm 35
Final Exam 35

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 2006

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<th>Week</th>
<th>Topic</th>
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<th>Warmer &amp; Kleppe</th>
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<tr>
<td>1</td>
<td>Introduction, OO Review</td>
<td>Ch 1, 2, Handouts</td>
<td>Ch 1</td>
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<td>2</td>
<td>Abstraction &amp; polymorphism</td>
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<td>3</td>
<td>Patterns &amp; Creational Patterns</td>
<td>Ch 3-9, 10, 11, 12</td>
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<td>Collectional Patterns</td>
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<td>5</td>
<td>Structural Patterns</td>
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<td>6</td>
<td>Behavioral Patterns, midterm 10/12</td>
<td>Ch 30, 33, 36</td>
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<td>Formal Methods</td>
<td>Ch 2 &amp; 3, Ref Ch 6 - 10</td>
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<td>9</td>
<td>Formal Methods</td>
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<tr>
<td>10</td>
<td>Formal Methods</td>
<td>Handouts</td>
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Final Exam (11/14) Tuesday 8:00 - 10:00 PM 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.