COSC 5370 Advanced Software Engineering
Spring 2012

Course Information
Lecture: MWF 8:00 am – 9:50 am, CI-112
Instructor: Longzhuang Li
Office: CI 323
Office hour: MW, 10:00 am – 11:00 am,
and other time by appointment, send email or call me
Phone: (361)825-2406
Email: Longzhuang.Li@tamucc.edu
WWW: http://www.sci.tamucc.edu/~lli/teaching/Fall2010/cosc5370/cosc5370.htm
Prerequisite: Data Structures (COSC 5321)

Description
This course is a study of software engineering principles and their application to:
analysis, design, development, testing, and maintenance of large software systems.
Students learn how to develop and maintain high-quality software systems. Topics
include software process, system engineering, requirements engineering, architectural
design, testing strategies, and UML.

Outcomes
The course is designed to achieve the following objectives:
• Understand the concepts of software engineering
• Practice good analysis and design techniques
• Utilize Unified Modeling Language (UML) models
• Understand and utilize new approaches in software engineering
• Apply software quality assurance techniques
• Discuss current research in software engineering
• Understand effective project management techniques
• Practice teamwork activities

Required Text

Recommended Resources
• Software Engineering: A Practitioner’s Approach, R.S. Pressman, McGraw Hill, 7th Ed.
• Software Engineering, I. Sommerville, Pearson Education, 8th Ed.

Grading
Mid-Term Exam 15%
Final Exam 20%
Team Project 20%
Team Effort Evaluation 5%
Research Paper Presentation 10%
Term Research Paper  15%
Class Participation 10%
Class Attendance 5%

Grade Ranges

A     90 - 100%
B     80 - 89%
C     70 - 79%
D     60 - 69%
F    Less than 60%

Tentative Class Schedule

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<th>Week</th>
<th>Topic</th>
<th>Reading Assignment</th>
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<td>1</td>
<td>The Scope of Object-Oriented SE</td>
<td>Introduction, Chapter 1</td>
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<td>Software Life-Cycle Models</td>
<td>Chapter 2</td>
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<td>The Software Process</td>
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<td>The Tools of the Trade</td>
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<td>Testing</td>
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<td>From Modules to Objects</td>
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<td>Exam I: Chapters 1-7</td>
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<td>8-9</td>
<td>Research Paper Presentation</td>
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<td>The Requirements Workflow</td>
<td>Chapter 11</td>
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<td>Object-Oriented Analysis</td>
<td>Chapter 13</td>
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<td>12</td>
<td>Design</td>
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<td>Postdelivery Maintenance</td>
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<td>Term Paper Presentation</td>
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<td>Exam II: Chap.11 Chap.13 Chap.14 Chap. 15 Chap.16</td>
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Class Participation
Class discussions and information provided in class are considered regular course material; it is your responsibility to take appropriate notes. You are expected to attend lectures and actively participate in class discussions. I will be frequently taking attendance. You are also required to turn off your cell phone and/or pager in class and pay attention to class discussions. Use of laptops and other electronic devices is restricted to taking notes. Unethical behavior will result in final score deduction or an automatic F.

Penalties for Lateness
Assignments are accepted until MIDNIGHT on the due date. Every homework assignment will list a due date for full credit. Late assignments will lose 10% of the maximum score per day.
**Academic Honesty**
You are required to abide by the university academic honesty code. All submissions must reflect the student’s own work; no collaboration will be allowed unless instructed otherwise. You must properly acknowledge all materials that you may use. Plagiarism will result in no credit and/or an automatic F. It is your responsibility to protect your own work; all parties participating in copying, cheating and/or academic dishonesty will be treated indifferently. Academic dishonesty cases will be reported to the appropriate university authorities.

**Makeup Exams**
Makeup exams will not be given under normal circumstances. If you notify me immediately that serious, unavoidable, documentable (e.g., with a letter from your doctor) circumstances have arisen, I will discuss options for replacing the missing grade. (For example, I may allow the grade earned on the comprehensive final to replace the grade for the missed exam.) Excused absences due to school sponsored activities, religious observations, family rituals, etc. should be discussed in advance.

*Notice to Students with Disabilities: Texas A&M University-Corpus Christi complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. If you suspect that you may have a disability (physical impairment, learning disability, psychiatric disability, etc.), please contact the Services for Students with Disabilities Office, located in Driftwood 101, at 825-5816. If you need disability accommodations in this class, please see me as soon as possible.

**ACADEMIC ADVISING:** The College of Science and Technology requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. The College's Academic Advising Center is located in Faculty Center 178, and can be reached at 825-6094.

*** Grade Appeal Process. As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html). For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.
This syllabus provides a framework for the course format and policies. Changes and/or additions to this syllabus may be made at the instructor’s discretion. Students will be notified with any changes.