Software Engineering I

Fall 2014

Lecture Schedule and Projects

Instructor: 
Ivan Marsic
Office hours: Friday 1:30 – 2:30 p.m.
Room 711, CoRE Building
Phone: (848) 445-6399
URL: http://www.ece.rutgers.edu/~marsic/

( Appointments other than office hours have to be requested by email with the subject of appointment explained. )

TA: 
Gabriel Salles-Loustau
Office hours: Monday and Wednesday 9:00 a.m. – 10:00 a.m.
Room EE-118
Phone: ___
URL: https://www.publications.ac/action/view.action?userId=172009/
Email: gs643@scarletmail.rutgers.edu

Lectures: 
Fridays: 3:20 - 6:20 p.m. in SEC-202

Course Description:
This is a graduate course in software engineering. The key objective of this course is to learn modular design of software and documenting the design using symbolic representations, i.e., UML diagrams. The course will cover software life-cycle models and different phases of the software development process.
Object-oriented techniques are key to the course. Since the ultimate result of software engineering is a working software package, the course will put a great emphasis on developing a demonstrable software package. However, this is not a programming course.
The key characteristic is having teams of about five students work on a semester-long project. The grading is competitive, with the highest rated project receiving the highest grade and the others being rated relatively to the highest one.

Textbooks:
Russ Miles and Kim Hamilton: Learning UML 2.0
Reilly Media, Inc. 2006.
Amazon.com: http://www.amazon.com/Learning-UML-2-0-Russ-Miles/dp/0596009828

Addison-Wesley, 2014.
Amazon.com: http://www.amazon.com/Programming-World-Wide-Web-8th/dp/0133775984/

More relevant books

Course Lecture Notes: 
Lecture Notes - Software Engineering: by Ivan Marsic
(Includes solved problems)
Note that only Chapters 1 - 5 and 7 are covered in this course.

Additional papers will be distributed for some topics.

For UML tutorials and reference documents, also check http://www.uml.org

Click here to get to the optional online readings page.

Course Projects:
Hands-on design projects are the key component of the course. **Team work** is required for the projects.

Click [here](#) for a general project description. All students are urged to examine carefully this document, since the project constitutes the main part of the final grade.

Project **deliverables** and **deadlines** are listed [here](#).

**Grading: (subject to change)**

- Class participation: 17% discussion forum, 17% peer reviews
- Project reports (total 3): 12% each
- Project demos (total 2): 13% first, 17% second
- Project e-Archive: (*) Can reduce the overall grade by 10% if missing or inadequate

Observe that about 1/3 of the grade is individual-based (class participation), and about 2/3 is team-based (project deliverables). Please check the detailed [project grading policy](#).

All assignments should be prepared using a word processor and uploaded to [Sakai](#). Handwritten assignments or those containing handwritten material (e.g., figures, tables, etc.) will not be accepted.

Requests for grade review will be considered no later than **four weeks** after notification of the grade.

See also: [Policy on Academic Integrity for Undergraduate and Graduate Students](#).

**Students with Special Needs:**

The University policy states that:

> “It is the student’s responsibility to confirm with the course supervisor that all arrangements are in place well in advance of the scheduled date of the exam.”

If the student fails to make arrangements before the exams, we may not be able to accommodate the last-moment requests.

See: [Office of Disability Services for Students](#).

**Feedback:**

We’d be very happy to receive suggestions on how to improve the quality of the course and fairness of the grading process. Email us your suggestions and concerns.

To submit your feedback anonymously, consider [RateMyProfessor.com](#).
Project Deliverables at a Glance

Project description is available here.

Students are required to form teams by **September 12, 2014** and notify the instructor by email, listing the team members and their emails. After this date, the students without a team will be randomly assigned a team.

Students will not be allowed to switch the team after **September 16, 2014**.

<table>
<thead>
<tr>
<th>Item</th>
<th>Due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal</td>
<td>September 20</td>
</tr>
<tr>
<td>First report</td>
<td>October 2</td>
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<tr>
<td>Full Report #1</td>
<td>October 9</td>
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<tr>
<td>Second report</td>
<td>October 23</td>
</tr>
<tr>
<td>Full Report #2</td>
<td>November 5</td>
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<tr>
<td>First demo (in regular classroom SEC-202)</td>
<td>October 31</td>
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<tr>
<td>Third report (All reports collated)</td>
<td>December 10</td>
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<tr>
<td>Second demo (in regular classroom SEC-202)</td>
<td>December 5</td>
</tr>
<tr>
<td>Electronic Project Archive</td>
<td>December 12</td>
</tr>
</tbody>
</table>

The parentheses below indicate the textbook chapter relevant to the lecture topic covered.

Download Lecture Notes

Sep
5 (F)  Software Development Lifecycle (Ch. 1)
(For UML, check [http://www.uml.org](http://www.uml.org))
12 (F) Requirements and Architecture (Sec. 2.2 and 2.3)
19 (F) Use Cases and Domain Model (Sec. 2.4 and 2.5)
26 (F) Object-Oriented Design (Sec. 2.6)

Oct
3 (F)  Test-driven Implementation (Sec. 2.7)
10 (F) Web Server Development and Database Integration (Chapters 9, 13, 15, and 16 in Sebesta, Programming the WWW)
17 (F) Web Client Development (Chapters 4 – 6, 10, and 14 in Sebesta, Programming the WWW)
24 (F)  Problem Frames (Sec. 3.3)
31 (F)  DEMO #1 (in regular classroom SEC-202) ******

Nov
7 (F)  Software Measurement and Estimation (Sec. 4.2)
14 (F) Design Patterns (Sec. 5.1 and 5.2)
21 (F)  Software Components (Chapter 7)
(Thanksgiving Recess: Thurs Nov 28 – Sun Dec 1)

Dec
5 (F)  DEMO #2 (in regular classroom SEC-202) ******
(Regular Classes End: Wed Dec 10 || Fall Exams End: Mon Dec 22)

Ivan Marsic
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http://www.ece.rutgers.edu/~marsic/Teaching/SE1/syllabus.html

5/13/2015