

## [RU ENG ECE 16:332:567](#) Software Engineering I

Fall 2014

### HOME PAGE

<http://www.ece.rutgers.edu/~marsic/Teaching/SE1/>

PDF document of the lecture notes  
(software engineering book) is

available [here](#) 

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### [Lecture Schedule and Projects](#)

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#### 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](mailto: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.  
Book information at: <http://shop.oreilly.com/product/9780596009823.do>  
ISBN-10: 0596009828 | ISBN-13: 978-0596009823  
Amazon.com: <http://www.amazon.com/Learning-UML-2-0-Russ-Miles/dp/0596009828>

Robert W. Sebesta: *Programming the World Wide Web*, 8th edition  
Addison-Wesley, 2014.  
ISBN-10: 0133775984 | ISBN-13: 978-0133775983  
Book information at: <http://www.pearsonhighered.com/educator/product/Programming-the-World-Wide-Web/9780133775983.page>  
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](#).

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Page Created: Jul 11, 2007  
Last Modified: Mon Sep 24 16:57:12 EDT 2012  
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**RU ENG ECE 16:332:567 :**  
**Software Engineering I**

## Lecture Schedule -- subject to change

### 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**.

	Item	Due date
I t e r a t i o n #1	1. <a href="#">Proposal</a>	September 20
	2. <a href="#">First report</a> (Specification only) <ul style="list-style-type: none"> <li>• Part 1 (Statement of Work &amp; Requirements)</li> <li>• Part 2 (Functional Requirements Spec &amp; UI)</li> <li>• Full Report #1</li> </ul>	October 2 October 9 October 16
	3. <a href="#">Second report</a> (Design only) <ul style="list-style-type: none"> <li>• Part 1 (Interaction Diagrams)</li> <li>• Part 2 (Class Diagram &amp; System Architecture)</li> <li>• Full Report #2</li> </ul>	October 23 November 5 November 9
	4. <a href="#">First demo</a> (in regular classroom SEC-202)	October 31
I t e r #2	5. <a href="#">Third report</a> (All reports collated)	December 10
	6. <a href="#">Second demo</a> (in regular classroom SEC-202)	December 5
	7. <a href="#">Electronic Project Archive</a>	December 12

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>)

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](#)

Created: September 10, 2007

Modified: Thu Sep 19 17:48:07 EDT 2013