

**University of Southern California**  
**Daniel J. Epstein Department of Industrial and Systems Engineering**  
**ISE 582: Web Technology for Industrial Engineering**  
**General Information**

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**Personnel:**

**Instructor:** **Elaine Chew**  
**Office Hours:** TR 11am-12noon, GER245 and by appointment  
**Phone:** (213) 8212414 (from USC phone, x12414)  
**Fax:** (213) 7401120  
**Email:** echew@usc.edu  
**Url:** <http://www-rcf.usc.edu/~echew>

**Teaching Assistant:** **Arpi Mardirossian**  
**Office Hours:** M 12noon-1pm, T 1pm-2pm, GER309  
**Phone:** (213) 7404883 (from USC phone, x04883)  
**Email:** mardiros@usc.edu  
**Url:** <http://www-scf.usc.edu/~mardiros>

**Course Text:**

**On to Java**  
by Patrick Henry Winston and Sundar Narasimhan,  
3rd Edition, Addison-Wesley, 2001.

**Course Website:**

<http://www-classes.usc.edu/engr/ise/582>  
Visit the course website regularly for announcement,  
assignments, lecture notes and other supplementary  
materials.

**Pre-requisites:** ISE 382, CS 101L or equivalent.

**Details:** R 7:00-9:30PM Lectures in SAL 127.  
TA hours and tutorials also in GER 309.  
Section #048-35110D.

**Course Objectives:**

This is a fast-paced, project-based introduction to designing and implementing interactive web-based software for Industrial Engineering applications. The applications include economic models, market research tools, product design and representation, distribution of company data for outsourcing and vendor identification. Students will gain knowledge and experience in user interface design, Java, HTML, UNIX and UML. Over the course of the semester, the student will design and build a web application to automate data input and modeling, and problem solving in an industrial engineering domain.

**Grading Method:**

Evaluation is based on:

homeworks	40%
midterm	25%
project	35%

Each student is expected to: be responsible for his/her own learning; solve and write up his/her own solutions; and, credit all collaborators and sources in their solutions. **To use and pass off the ideas or work of another person's as one's own is NOT acceptable.** Plagiarism will be severely punished (see the Academic Integrity Policy below).

The homeworks will be graded by the Teaching Assistant. Collaboration is allowed in completing the assignments, and you are encouraged to attend homework tutorials conducted by the TA. No late assignments will be entertained, unless *extreme* circumstances can be demonstrated. The midterm will be closed book, but one 8.5x11 cheat sheet will be allowed. The midterm will be graded by the TA.

The project will exercise your knowledge in implementing web-based software for solving a problem in an industrial engineering application area. Students may work alone or in pairs to design and implement the projects. The application areas may include economic modeling, market research, product design and representation, data modeling, analysis and visualization. The project grade (on a scale of 100%) will be based on the program's content (40%), style (40%) and clarity (10%), plus the in-class presentation (10%). The project will be graded by the professor.

**Schedule:**

Week 1: Aug 28	Introduction
Week 2a: Sep 2 (TUE, 4PM)	Special <i>tutorial</i> on setting up for Java (Arpi Mardirossian)
Week 2b: Sep 4	Presenting Information on the Web
Week 3: Sep 11 (GER309)	Object-oriented Concepts
Week 4: Sep 18 (GER309)	Methods, Classes and Hierarchical Design
Week 5: Sep 25	Problem Solving Using Logic
Week 6: Oct 2	Data Structures
Week 7: Oct 9	Modules and Packages
Week 8: Oct 16	Interfaces, Model-View Design
Week 9: Oct 23	<b>MIDTERM</b>
Week 10: Oct 30	Creating Interactive Applets
Week 11: Nov 6	Special Session on Manipulating MIDI (Mardirossian)
Week 12: Nov 13	Incorporating Images and Forms
Week 13: Nov 20	Making Connections
Week 14: Nov 27	THANKSGIVING
Week 15: Dec 4	<b>Project Presentations</b>

**Academic Integrity Policy:**

You are expected to solve and write up your own homeworks, or you will be penalized for cheating. You are encouraged to study and to work on assignments and homeworks together. This includes discussing solution strategies to be used on individual assignments. If you do study or work together on a homework, be sure to credit your team of collaborators. However, all work submitted for the class is to be done individually.

All USC students are responsible for reading and following the Student Conduct Code, which appears in the SCampus and at <http://www.usc.edu/dept/publications/SCAMPUS/governance>. The USC Student Conduct Code prohibits plagiarism. Some examples of what is not allowed by the conduct code: copying all or part of someone else's work (by hand or by looking at others' files, either secretly or if shown), and submitting it as your own; giving another student in the class a copy of your assignment solution; consulting with another student during an exam. If you have questions about what is allowed, please discuss it with the instructor.

Students who violate University standards of academic integrity are subject to disciplinary sanctions, including failure in the course and suspension from the University. Since dishonesty in any form harms the individual, other students, and the University, policies on academic integrity will be strictly enforced. We expect you to familiarize yourself with the Academic Integrity guidelines found in the current SCampus.

Violations of the Student Conduct Code will be filed with the Office of Student Conduct, and appropriate sanctions will be given.

**Disability Policy Statement:**

Any Student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213)740-0776.