CS 5390 Special Topic: Software Engineering

Spring 2009 Syllabus

Schedule: 7:30-8:50 p.m., Tuesdays and Thursdays, in Room 321

Instructor: David Novick

Office Hours: By appointment (contact Bea Tarango, btarango@utep.edu, 747-5480, to schedule)

Overview: This is a graduate survey course covering software engineering concepts, techniques, and methods. Topics include software process and life-cycle models, requirements specification, design methods, and software testing. The course emphasizes skills in critical thinking in software engineering.


Course Outcomes

Upon successful completion of this course, students will be able to…

1. Knowledge and Comprehension

Explain the elements and applications of

- Key concepts and activities of software and systems engineering
- Societal and legal contexts in which software development occurs
- The importance of software requirements and methods for developing them.
- Key concepts and methods of software design
- Guidelines on the selection of software tools and methods
- Major issues and activities of software construction
- Types and methods of software testing
- Preparing for and executing a program of software maintenance

2. Application and Analysis

Apply skills of critical thinking to software engineering as a process, including

- Reading and presenting graduate-level papers
- Assessing the limitations and researching counter-evidence and advances related to these papers
- Formulating questions
Apply analytical software engineering skills to work products from example software engineering projects

3. Synthesis and Evaluation

Research and write a critical analysis of a topic in software engineering

Standards of Conduct

You are expected to conduct yourself in a professional and courteous manner, as prescribed by the UTEP Standards of Conduct. Graded work, such as homework and tests, is to be completed independently and should be unmistakably your own work, although you may discuss your project with other students in a general way. You may not represent as your own work material that is transcribed or copied from another person, book, or any other source, e.g., a Web page. The instructor is required to—and will—report academic dishonesty and any other violation of the Standards of Conduct to the Dean of Students.

Disabilities

If you feel that you may have a disability that requires accommodation, contact the Disabled Student Services Office at 747-5184, go to Room 106E Union, or email dss@utep.edu

Assignments

Reading and homework assignments will be handed out or announced in class. If you miss a class, it is your responsibility to find out what you missed. You should expect to spend at least seven hours per week outside of class on reading and homework.

Grading

Your semester grade will be based on a combination of in-class presentations and participation, reviews of software engineering projects, two midterm exams, and a term paper. The final exam will consist of presentations of the term papers. The approximate percentages are as follows:

- 40% Class presentations and participation (This part of the grade may be based in part on how well the class demonstrates comprehension of covered material on the midterms.)
- 10% Reviews of software engineering projects
- 30% Two midterms
- 20% Term paper