

Department of Computer Engineering and Computer Science

CECS 493 Course Outline

Database Web Applications

DESCRIPTION

This course aims to let students shape their skills in developing techniques of software-intensive systems through successful requirements engineering, design, testing, maintenance and evolution, and project and quality management. Design and development of data-intensive web applications in Java EE. Database topics include transaction management, stored procedures, triggers, and security. Web application design and development using core JEE patterns like Front Controller, MVC, and DAO. Students will use their software engineering to complete a group project.

Lecture 2 hours and lab 2 hours. Semester long team project plus final exam. Letter grade only (A-F).

I. PREREQUISITE TOPICS

Prerequisites: CECS 323 and 343 all with a grade of "C" or better Prerequisite/Co-requisite: ENGR 350. Sufficient programming skills for the team development project.

II. COURSE TOPICS

In this course, students will be teamed up to solve real world software problems in collaboration with industrial partners and researchers. They will develop a software project from requirements engineering all the way through to delivery of the product and presentation of their solution to real-world stakeholders. This course specifically targets software systems with a web frontend.

III. COURSE OBJECTIVES

- Overall: Advanced applied knowledge in software engineering in developing and managing a project.
- A knowledge of and an ability to apply:
 - Quality assurance techniques
 - Requirements management techniques
 - Software project planning
 - Quality engineering techniques
 - Documentation techniques

V. METHODS FOR ASSESSING STUDENT LEARNING

Students will develop a semester-long software engineering project, composed of collaborative teamwork with deliverables of a requirements specification, design specification, the implementation of a software system, a test specification, documentation, and presentations.

VI. FURTHER READING

- Software Engineering: A Practitioner's Approach. 7th Ed. Roger Pressman.
- Software Engineering by Ian Sommerville. Publisher: Pearson.

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