THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Capstone Design: Software Applications

CSE 5911

Credit Hours:
4.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Capstone design project: application of software engineering techniques, methodologies and technologies in software lifecycle activities using enterprise software frameworks; teamwork, written and oral communication.

Prerequisites and Co-requisites:
Prereq: 3231 or 5231, and 2501 or Philos 1338, and CSE 3901 or 3902 or 3903, and second writing course; or Grad standing.

Course Goals / Objectives:

- Master synthesizing and applying prior knowledge to designing and implementing solutions to open-ended computational problems while considering multiple realistic constraints
- Master deadline driven software design and development in a team setting for an open-ended problem
- Be competent in evaluating design alternatives
- Be competent with issues of teamwork, project scheduling, individual and group time management
- Be competent with presenting work to an audience of peers
- Be competent with techniques for effective oral and written communication for a range of purposes
- Master principles of structured and agile software eng. frameworks, specifically methodologies for requirements identification, analysis, architecture, design, deployment, testing, and project management
- Be competent with application of structured & agile software eng. frameworks, specifically methodologies for requirements identification, analysis, architecture, design, deployment, testing, and project management
- Be familiar with frameworks for analyzing the business context of enterprise IT systems, the concept of Business-IT alignment and related issues, and Enterprise Architecture frameworks for analyzing and achieving Business-IT alignment
- Be competent with the application of at least one industry-standard technology framework
- Be competent with professional and formal presentations and communications to a varied set of stakeholders ? customers, peers and superiors

Course Topics:

- Course overview and project guidelines
- Project selection and team formation
- Software engineering methodology selection, High-level project plan consisting of high-level requirements, analysis, architecture, risk plan and acceptance plan. Development and target environment set up
- Student presentations and demos of current progress
- In-class team project design and development time
- Midterm presentation
- Final presentation
- Poster presentation

Designation:

Elective