COURSE OUTLINE OF RECORD

Dept., Number	CSC 4350	**Course Title**	Software Engineering
Semester Hours	3		
Year	2006	**URL (if any):**	

Current Catalog Description:

This course features state-of-the-art techniques for software design, team management, and product development. Students will gain experience in actual software development, including requirements, specifications, coding, debugging, testing, and installation of a major software project. This is a project course. Prerequisites: CSC 3310 and 3321.

Textbook:

Object-Oriented and Classical Software Engineering, 6th edition by Stephen Schach, McGraw Hill

References:

Software Engineering by Ian Sommerville, Addison Wesley
Software Engineering by Roger Pressman, McGraw Hill

Course Goal:

The student will obtain detailed knowledge of software engineering techniques and gain valuable experience applying these techniques to a sizable software project.

Prerequisites by Topic:

(1) Proficiency in at least one high-level programming language such as C++.
(2) Data structures such as arrays, linked lists, records, objects, searching and sorting.
(3) Basic Operating system concepts such as processor, memory and file management.

Major Topics Covered in the Course:

Software requirements, specification, design, implementation, integration, and maintenance.

Laboratory Projects:

Software Complexity Program 4 weeks
A single, team-oriented software engineering project will be assigned 8 weeks

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Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Algorithms			Data Structures		
Software Design	2		Prog. Languages		
Comp. Arch.					

Oral and Written Communication:

Typically, every student is required to submit at least 4 written reports (not including exams, tests, quizzes, or commented programs) of 5 pages and make 1 oral presentation of 15 minutes duration.

Social and Ethical Issues:

Software protection and ethics topic is covered in the course, and the students are graded on test questions related to this topic.

Theoretical Content:

Software Life-Cycle Models (3 hours)
Testing (3 hours)

Problem Analysis:

Estimating the duration and the cost of project using different metrics are analyzed.

Open-Ended Design:

Design of a software project.