

COURSE OUTLINE OF RECORD

Dept., Number	CSC 4387	Course Title	Seminar in Computer Science
Semester Hours	3		
Year	2006	URL (if any):	

Current Catalog Description:

This course offers an opportunity to pursue the investigation of current research areas and career options in computer science. Written and oral presentations are required. Prerequisites: Senior standing, CSC 3321, and MAT 3310.

Textbook:

No textbook used for this course

References:

LaPlante, Great Papers in Computer Science, West Publishing Co.
Houp and Pearsall, Reporting Technical Information, MacMillan Publishing Co.
Miller & Knowles, New Ways of Writing, Prentice Hall
Johnson and Nissenbaum, Computers, Ethics and Social Values, Prentice Hall
Selected Computer Science Professional Journals and Books

Course Goals:

This course will provide senior-level computer science students the opportunity to explore formal research in computer science and to examine issues relative to career options available to them.

Prerequisites by Topic:

1. Computer Programming
2. Operating Systems and Computer Architecture
3. Option Electives
4. Probability and Statistics
5. College Writing
6. Speech

Major Topics Covered in the Course (number of weeks):

Research Methods in Computer Science (12)
Critical Review of Computer Science Research (9)
Review of Computer Science Concepts/Content Assessment (9)
Technical Writing/Presentations/WWW Publication (3)
Graduate School and Career Exploration (6)
Statistical Data Analysis (3)
Computer Ethics (3)

Laboratory Projects:

Research Project - (6)
Technical Presentation (3)
Online Presentation (2)

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Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Algorithms		1	Data Structures		
Software Design			Prog. Languages		
Comp. Arch.					

Oral and Written Communication:

Each student will design and conduct a basic research project and write a senior thesis reporting the results of that research. The analytical or experimental research project can be: directly related to the student's option of study; extension/testing of computer science theory; an analytical study of a current practice in computer science; or a study of hardware/software performance. Required equipment and/or resources must be available at the university or provided by the student. Each thesis must incorporate statistical analysis. A written report, seminar poster presentation for the computer science faculty and WWW page are required.

Students will research assigned classical computer science topics, prepare oral presentations, and 1-2 page critical review papers. Papers are to be prepared using a word processor. Two printed copies of the paper should be prepared -- one for the student and one for the instructor. Papers will generally not be returned; students will be informed of the points assigned to the paper.

Technical writing assignments will be assigned ranging from letters and memos to progress reports on the research project. Oral and media presentation activities will include mock employment interviews, and video/poster/WWW presentations of technical information.

Social and Ethical Issues:

A forum for the discussion of ethical issues in computer science.

Theoretical Content:

Students must conduct scholarly investigation of a specific related to their computer science option or a related computer science topic if their option is outside the computer science discipline.

Problem Analysis:

Analysis of the related literature and problem to be studied is required. Statistical analysis, where appropriate, is required.

Open-Ended Design:

Design of the research study includes hypothesis formulation and testing. Students must present research findings to the computer science faculty.