

CSCI 4312 - COMPUTER SCIENCE PRACTICUM

LECTURE HOURS: 1
LAB HOURS: 6
CREDIT HOURS: 3
PREREQUISITES: Eighteen hours of computer science with at least six hours advanced and department chair approval. Majors only.

GRADE REMINDER: Must have a grade of C or better in each prerequisite course.

CATALOG DESCRIPTION

Operation and supervision of computer facilities in a production and student environment. May not be used to satisfy advanced computer science requirements for a computer science or computer information systems major, or any minor in the Department of Computer Science.

PURPOSE OF COURSE

To acquaint students with the operation of computing facilities and to provide an opportunity for students to supervise and direct the use of the facilities. Studies the ethical, social, and professional concerns of the computer science field. Covers the social impact of the computer, implications and effects of computers on society, and the responsibilities of computer professionals in directing the emerging technology; to further develop oral and written communications skills by enabling students to gain first-hand experience in presenting information.

EDUCATIONAL OBJECTIVES

The goal of this course is to have students develop interpersonal skills through the operation and supervision of computer facilities. Oral and written communications skills will be augmented with a semester research project and presentation.

Upon successful completion of the course, students should be able to do the following:

1. Demonstrate knowledge of computing facilities rules and operating procedures.
2. Develop skills in problem analysis for assisting users of the computing facilities.
3. Evaluate computing facilities rules and operating procedures and develop improvements and/or alternatives.
4. Describe and distinguish between the various ethical theories which can be used to form the basis of solutions to moral dilemmas in computing.
5. Identify and define the components of a structured plan for solving ethical problems and, in the process, to understand the basis for her/his own ethical system.
6. Given a variety of ethical problems, indicate which of them may be unique to computing and what makes each unique.
7. Prepare case studies dealing with moral dilemmas related to computing, including appropriate components of the plan described in objective B above.
8. Given several examples of professional codes of ethics related to computing, compare and contrast these examples, discussing their commonalties, differences, and implications.
9. Expand research skills using the library and the Internet.
10. Effectively express ideas through written communication.
11. Demonstrate oral communication abilities by presenting oral reports and case studies.

COURSE CALENDAR

This course meets for a minimum of 12.5 lecture contact hours during the semester. Students have significant laboratory/field assignments. Students are expected to complete a major project, a research paper, a 10-15 minute presentation, and 2-3 exams in addition to the final exam. Students are expected to prepare for any class assignments or quizzes over the material covered in class or in the reading material. Successful completion of these activities requires at a minimum six additional hours of outside of classroom work each week.

CONTENT	HOURS
Lecture	15
Introduction to ethics	
Social and ethical issues affecting computing	
Case studies	
Equipment operation and maintenance instructions	
Description and use of hardware, operating system environments and application software	
Supervision responsibilities including user support and questioning techniques	
Discussion of special problems encountered	
Projects.....	0
Projects are assigned at the discretion of the instructor. Project work will be accomplished outside of student's scheduled classroom hours. One term project for each student. Approximately 10 weeks to complete. Project requires research, a formal paper of eight to twelve pages and a formal presentation lasting ten to fifteen minutes. Topics are drawn from social and ethical issues.	
Presentations	2
Oral presentation of projects and case studies	
Exams.....	1-2
Lab	
Varies, depending on the number of students enrolled	
Usage of laboratory facilities to perform basic assignments and project work	
Scheduled supervision of the laboratory	
Maintenance of help-desks to provide support to lab users	
Operation of LAN based file and print services	
	TOTAL 45

REFERENCES

Department of Computer Science Computing Laboratory hardware, software, and procedures manuals and user's guides.

Baase, Sara., A Gift of Fire., 1st Ed., Prentice Hall, 1997.

Edgar, Stacey L., Morality and Machines., 2nd Ed., Jones and Bartlett, 2003.

Forester, Tom and Morrison, Perry., Computer Ethics., 2nd Ed., MIT Press., 1999.

Gehringer , Edward F., Ethics in Computing., website: <http://ethics.csc.ncsu.edu/>, 2006.

Quinn, Michael J., Ethics for the Information Age., 2nd Ed., Addison Wesley, 2006.

Spinello, Richard A., *CyberEthics: Morality and Law in Cyberspace.*, 2nd Ed., Jones and Bartlett, 2003.
Woodbury, Marsha Cook., *Computer and Information Ethics.*, 1st Ed., Stipes Publishing, 2003

FACILITIES

The Department of Computing Laboratory which may contain: Local Area Network, microcomputer, and printing.