CSC 412 - 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 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 requirements toward a minor in computer science or computer information systems.

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.
CONTENT

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

McGee Computing Laboratory hardware, software, and procedures manuals and user's guides.

FACILITIES

The McGee Computing Laboratory which contains: Local Area Network, microcomputer, and printing.