I. Course Name: MS Access and Database Processing
Prefix and Number: CSC 211
Credit Hours and Contact Hours: 3 Credit Hours - 3 Contact Hours

Course Description:
Applied database processing will provide the student with the opportunity to study database processing as it relates to computer information systems. The course will begin with an introduction of database definitions, concepts, and elementary database theory. The majority of course content will provide the opportunity for the learner to practice database processing; by learning and exploring a number of specific database management tools and programming languages (of the tools). Prerequisite: CSC 115 with a grade of C or better or permission of instructor.

II. Course Outcomes and Objectives

Learning Outcomes
Upon completion of the course the participant will be able to:

A. Describe and give examples of the following database fundamentals:
   - "generic" database processing
   - file organization and structures
   - data structures for database
   - database design (data definition, data dictionary, data organization, relational database design)

B. Design, create, maintain and query a small database system using at one database management software packages (i.e., Access)

C. Design and write structured programs for database management through at least two languages or command structures (i.e., Access)

D. Create a system using a database management tool. Achievement of this objective will support the learning of a number of tasks faced by database design developers; prototyping, documentation and management, modularity in design, consistency and flexibility. (i.e., Access)

Relationship to Academic Programs and Curriculum
This course is required in the AS IS and AAS IT (Advisement area 1) degree program. CSC majors can take this as an elective.

Competencies Addresses in this Course
   Reading
   Computer Literacy
   Problem Solving and Critical Thinking
   Professional Competency

III. Methods of Instruction

Types of Course Materials
Textbook: a textbook on relational database management software
Methods of Instruction
The instructor will employ a number of techniques to facilitate a thorough learning experience. Specifically, they will be: lecture of underlying concepts and theories, instructor demonstration, and guided student activities in the microcomputer environment.

Assessment Measures
Activities will emphasize problem solving using the computer - specifically programming the computer. The students will work on individual programs and toward the end, will work as part of a team, designing and writing a system of programs (team project).

Methods of Evaluation
The demonstration of the satisfactory achievement of the above learning outcomes will be the responsibility of the student, facilitated by the instructor. Specifically, the following activities must be performed and completed for successful course completion:

A. Written examinations or quizzes after every significant part of the course as described above, in Learning Objectives A., B., C., and D.

B. Assigned projects (most to be completed on a computer) that support the Learning Objectives A., B., C., and D., above.

C. Class participation and favorable attendance.

IV. General Outline of Topics Covered
A. Creating and maintaining data
B. Creating a form
C. Creating a report
D. Modifying database structure
E. Multiple tables
   1. Database normalization
   2. Establishing relationships
   3. Queries
F. Forms with subforms
G. Complex query reports
H. Integrating database management software with other applications
I. Advanced queries
J. Complex objects
K. Macros
L. Modules and programming