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Senate App. 2/29/00

CURRICULUM PROPOSAL COVER SHEET
University-Wide Undergraduate Curriculum Committee

I. CONTACT

Contact Person Elizabeth Pierce or Daniel Frederick Phone 5773 or 2929

Department MIS and Decision Sciences

II. PROPOSAL TYPE (Check All Appropriate Lines)

X **COURSE** Micro Database Sys
Suggested 20 character title

X **New Course *** IM 261 Micro Database Systems
Course Number and Full Title

____ **Course Revision** _____
Course Number and Full Title

____ **Liberal Studies Approval +** _____
for new or existing course Course Number and Full Title

____ **Course Deletion** _____
Course Number and Full Title

____ **Number and/or Title Change** _____
Old Number and/or Full Old Title

New Number and/or Full New Title

____ **Course or Catalog Description Change** _____
Course Number and Full Title

____ **PROGRAM:** _____ Major _____ Minor _____ Track

____ **New Program *** _____
Program Name

____ **Program Revision *** _____
Program Name

____ **Program Deletion *** _____
Program Name

____ **Title Change** _____
Old Program Name

New Program Name

III. Approvals (signatures and date)

Elizabeth M. Pierce
Department Curriculum Committee

Mimi S. S. S.
College Curriculum Committee

Louise B. Burkley
Department Chair

Robert C. Camp
College Dean

+ Director of Liberal Studies (where applicable)

*Provost (where applicable)

Syllabus of Record: IM 261 Micro Database Systems

I. Catalog Description

IM 261 Micro Database Systems

3 credits
3 lecture hours
0 lab hours
(3c-0l-3sh)

Prerequisite: BE/CO/IM101 Microbased Computer Literacy

The fundamentals of database management including different database models and database design issues will be examined. The course will emphasize the use of various tools of relational database software, including report generators, screen builders, and query facilities. Design techniques and software tools will be used in creating a database application. This course is intended as an elective for business students who are not majoring in MIS. MIS majors will not be allowed to count this course towards satisfying their graduation requirements.

II. Course Objectives:

By the end of this course, students will have:

- Examined the major issues concerning the design and management of database systems.
- Developed skills in the utilization of data modeling techniques.
- Implemented database design principles to organize the data components of an organization into a well-designed database.
- Developed skills in the utilization of relational DBMS software.
- Integrated the tools of a DBMS to provide a well-designed application including a custom user-interface.
- Compared and contrasted different database query facilities.
- Analyzed how database systems could serve the needs of various business functions.

III. Detailed Course Outline

- A. Database Concepts (6 hours)
1. Intro to Database Management Systems (DBMS)
 2. DBMS and conventional file processing methods
 3. Overview of database models
 4. Emphasis on the relational database model
- B. Data Manipulation (6 hours)
1. Data structures and data definitions
 2. Intro to query methods
 3. Indexes and views
- C. Database Design (6 hours)
1. Data modeling techniques
 2. Normalization
 3. Information-level & physical-level design
 4. View integration
 5. Interface design
- D. DBMS Tools (9 hours)
1. Report & Screen Generators
 2. Query Methods
 3. Access macros and Access BASIC

- E. DBMS Application (12 hours)
1. Database system design
 2. Development and testing
 3. Implementation and demonstration

- F. Exams & Exam Reviews (3 hours)

IV. Evaluation Methods

40% Exams (mid-term & final). Exams will emphasize the application of concepts and techniques.
 40% Project. A working, custom-designed DBMS application complete with documentation.
 20% Lab exercises and assignments. Primarily the tools of MS Access and database design techniques.

Grading Scale (straight percentage method): 90-100=A; 80-89=B; 70-79=C; 60-69=D; 0-59=F

V. Required Textbooks

Pratt, Philip, Leidig, Paul, Last, Mary. Using Microsoft Access 97, Course Technology, 1997.

VI. Special Resource Requirements

The course will utilize existing PC labs in the Eberly College of Business.

VII. Bibliography

Bradley, Julia Case, Millspaugh, Anita C. Programming in Visual Basic 5.0, McGraw-Hill, 1998.

Burrows, William, E., Langford, Joseph D. Programming Business Applications with Microsoft Visual Basic 5.0, McGraw-Hill, 1998.

Davis, William S. Business Systems Analysis and Design, Wadsworth Publishing, 1994.

Kroenke, David M. Database Processing: Fundamentals, Design, and Implementation, 6th ed., Prentice Hall, 1998.

Nickerson, Robert C. Business and Information Systems, Addison-Wesley, 1998.

Post, Gerald V. Database Management Systems: Designing and Building Business Applications, McGraw-Hill, 1999.

Pratt, Philip J. and Adamski, Joseph J. Concepts of Database Management, 2nd ed., Course Technology, 1997.

Pratt, Philip J. A Guide to SQL Featuring Oracle, Course Technology, 1997.

Preece, Jenny. Human-Computer Interaction, Addison-Wesley, 1994.

Rob, Peter, Coronel, Carlos, M. Database Systems: Design, Implementation, and Management, 3rd ed., Course Technology, 1997.

Stallings, William, Van Slyke, Richard. Business Data Communications, 3rd ed., Prentice Hall, 1998.

Toerey, Toby J. Database Modeling and Design: The Entity-Relationship Approach, Morgan Kaufmann, 1990.

Course Analysis Questionnaire**A. Details of the Course**

- A1. This course will be a free elective for Eberly College of Business majors. It will be included in the menu of choices for students choosing to minor in MIS. The course is intended primarily to teach business students who are not MIS majors how to utilize database applications. MIS majors will not be allowed to count this course towards satisfying their graduation requirements.
- A2. This course does not require changes in the content of existing courses.
- A3. This course has never been offered at IUP.
- A4. This course is not intended to be dual level.
- A5. This course is not intended to be taken for variable credit.
- A6. A course of this type is recommended in the IS'97: Guideline for Undergraduate IS Curriculum Model as a fundamental course for both IS¹ minors and all disciplines experiencing a growth in computer usage, including Accounting, Finance, and Marketing. With the rapidly growing trend of end-user application development and the need for businesses of all sizes to effectively manage substantial volumes of information, business graduates with database management skills will be in demand. This course is designed to provide those skills for non-MIS business majors at IUP.
- A7. This course is not required to meet the standards of any professional society or accrediting authority.

B. Interdisciplinary Implications

- B1. This course will not be team taught.
- B2. This course does not overlap with any other courses at the University. In MIS, we need more than one database course for the same rationale that the Math Departments needs to offer more than one Calculus course. The database courses taught in the Computer Science Department are designed with the viewpoint that their majors may go on to careers where they will be designing and enhancing database packages so they need to learn about databases from the point of view of a database designer. For MIS majors, the viewpoint is different. Our majors will not be coding database packages, but they will be using database software to create business information systems so they need to learn about databases from the viewpoint of a builder. For MIS minors and non-MIS majors who want to know how to store, retrieve, and analyze business records, they need a course that will focus on how to become a sophisticated database user. IM 261 is designed to provide these students with that viewpoint.
- B3. Seats will be made available to Continuing Education students meeting the prerequisite.

¹IS as a field of academic study uses a number of different names, such as Information Systems, Management Information Systems, Computer Information Systems, Information Management, and others.

C. Implementation

C1. Based on our normal full head count figures of 10 full-time tenured faculty, we do have the resources to teach this course. While it is true that at the present time, we currently have two open positions, it should be noted that this is a temporary situation. The Dean of the Eberly College of Business is actively supporting our search to fill these positions and has indicated that he will continue to do so until these positions are filled. In addition, we are removing a number of obsolete courses from our program. We are also considering alternate ways of offering IM 101 which will help conserve faculty resources.

C2. Other Resources

1. Current space allocations are adequate for this course.
2. The course will utilize existing PC labs in Eberly.
3. Laboratory supplies/consumable goods are not required.
4. Library holdings are adequate.
5. Travel funds are not required.

C3. No resources are funded by grant sources.

C4. This course will initially be offered once per year.

C5. One section of this course will be offered.

C6. Available units in the PC lab restrict this course to a maximum enrollment of twenty-eight.

C7. Enrollments are not mandated or recommended by any society.

D. Miscellaneous

Microbased database management systems (DBMS) are widely used in business. The demand for business graduates with database application skills will continue to grow. This course is intended to provide those skills for business students who lack the prerequisites and programming background necessary to take database courses in the MIS or Computer Science majors.

Letters of Support

IUP

Computer Science Department 319 Strlight Hall x2524

SUBJECT: Support for Proposed Course IM 261

TO: Kenneth L. Shildt, Chair
MIS and Decision Sciences Department

FROM: William Obilloy, Chair
Computer Science

WWO

I write in support of your course, IM 261 Micro Database Systems.

I understand your intent is to teach the course to non-majors in your department, and request that your policy concerning this course stipulates that Computer Science majors cannot count the course toward a minor in MIS.

Other than this stipulation, we feel this course is appropriate for non-computer science and non-MIS business majors.

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TO: Ken Shildt, Chair
Management Information Systems

FROM: Wayne Moore, Chair *W Moore*
Office Systems and Business Education

DATE: December 2, 1996

RE: CURRICULUM PROPOSALS

The faculty of the Office Systems and Business Education Department has reviewed your two course proposals: IM205 Foundations of MIS and IM261 Micro Database Systems. The faculty agree that the course proposals reflect the necessary changes in technology based programs. We will be moving forward the changes to the Associate of Arts in Business program with IM205 as a required course and IM261 as a major area elective.

Concerns of the faculty members include the IM205 course with the use of terminology. The three terms used in the course outline are end-user computing, office automation and telecommunications. We do however understand that this is a "survey" course and that an introduction to this information is necessary.

You may consider this memo as the Office Systems and Business Education Department's letter of support as requested in your memo.