Standard Course Outline

Advanced Database Systems

I. General Information

Course Number	ACCT 633
Title	<u>Advanced Database Systems</u>
Units	4.0
Prerequisites	MAC Standing
Course Coordinator	
SCO Prepared by	Rod Smith
Date prepared/revised	March 2013

II. Catalog Description

This course examines the architecture of enterprise information. Semantic and syntactic modeling of enterprise economic phenomena, relational database technology and database design for business systems, business process analysis patterns and implementation compromises.

III. Curriculum Justifications

This course provides MAC students, especially those selecting the AIS concentration, with the knowledge and skills necessary to participate effectively in the management and design of database systems within an organization. It enables development of the skills necessary to solve complex business problems and support management decision-making with respect to enterprise database systems. Additionally, it offers students an opportunity to design, build and use information from an enterprise database system.

This course addresses the following CBA graduate learning goals.

1. Critical Thinking: Students will be able to demonstrate learning, critical thinking, and problem-solving skills. More specifically, students will be able to understand:
   a. Design and develop database applications.

     b.   Use database applications to serve management's decision-making requirements.
2. Quantitative and Technological Skills: Students will develop technical skills in the use of database system tools.
3. Accounting-Specific Learning Goals: Students will be able to design, develop, and use enterprise database systems to produce accounting and other management information.

IV.   Course Objectives

Specific goals of this course include the following:

1. Analyze information flows in an organization and develop conceptual models of organizational relationships.
2. Examine enterprise database systems architectures and how those differ depending on the nature of the business.
3. Review he major database systems used in enterprises; be able to compare and contrast the differences in those systems.
4. Develop and use SQL statements; recognize when SQL and NoSQL applications are appropriate.
5. Understand information retrieval process for XML data.
6. Examine and employ standard application development techniques.

VI.   Subject matter topics

Module	Concept	Active Learning Tools
1	Overview of database systems and introduction to database design techniques.	Exercises; case studies
2	Relational algebra and calculus; SQL queries, constraints, and triggers.	Exercises; case studies.
3	Database application development	Exercises; Project
4	Database interface design; application and access controls	Exercises; Project
5	Data mining and information retrieval for XML data	Exercises

VI.   Methods of Instruction

This course is taught through lecture and class discussion of concepts and applications, case analysis and discussions, as well as computer-based simulations. Active interaction between the instructor and students is encouraged. The instructor will make appropriate use of corporate financial reports, group work, and a comprehensive project to enhance the learning process.

Instructors in planning the exams, and other grading procedures, should adhere to the relevant University Policy on "Grades, Grading Procedures, and Final Assessments, Final Course."

The textbooks for this course should be chosen in accordance with the University Policy on textbooks. There are a number of appropriate textbooks for this course. The following suggestion is based on the special nature of a MAC course:

- Students will arrive at this course with a background in accounting.
- Students will have a level of maturity that will enable them to look at a broader picture via more advanced cases, simulations, group projects.
- Any textbook used for this course must be a graduate level textbook.
- Student knowledge should be evaluated using case studies and a variety of demanding projects.
- Examinations must be essay-type and/or problem solving questions and not use multiple-choice questions.

VII.   Instructional Policy Requirements

The students are expected to comply with the universally accepted norms of considerate and courteous behavior, and with all University rules and policies found in the current University Catalog, including the Withdrawal Policy and Policy on Cheating and Plagiarism.

Students shall attend classes regularly and be responsible from all materials covered in class, regardless of their attendance. Make-up exams are strongly discouraged and will only be given with documented proof of an excused absence. The student should give earliest possible notification of an anticipated excused absence. The students refer to the specific university policy on these issues.

Instructors may adjust course assignments when necessary. The students should be notified about any changes and, whenever possible, consulted in advance about any changes.

Students with Disabilities: Students with disabilities are responsible for notifying their instructor as early as possible of their needs for an accommodation of a verified disability. A student with a disability is urged to consult with Disabled Student Services as soon as possible in order to identify possible accommodations to enhance academic success.