



COURSE SYLLABUS

CSC310 (SPRING 2007)

Database Administration

DEPARTMENT: Computer Science and Information Systems

COURSE NUMBER: CSC310

CREDIT HOURS: 3

- I. **TITLE:** Database Administration.
- II. **CATALOG DESCRIPTION:** A course in administering database management systems. Topics include data definition language, data control language, backup and recovery, security, performance tuning, network administration. Prerequisites: CIS 307 and TSM 132.
- III. **PURPOSE:** The purpose of CSC 310 is to provide Computer Science, Information Systems, and Telecommunications Systems students a solid foundation in the administration of large, complex, relational database systems for business, organizational, educational, and research applications.
- IV. **COURSE OBJECTIVES:** The objective of CSC 310 is to impart a thorough understanding of the primary roles and responsibilities of the modern database administrator (DBA) to include: database design considerations; capacity planning; initial system installation and configuration; security; data integrity; backup and recovery; network & communications considerations; user management; and performance management.
- V. **Assurance of Learning: *Bachelor of Arts in Business (BAB) and Bachelor of Science in Business (BSB) programs:*** Graduates of the Bachelor of Arts in Business (BAB) and Bachelor of Science in Business (BSB) programs shall be able to:
 - Goal 1: Fundamental Knowledge**
 - Demonstrate a fundamental knowledge of the core business disciplines.
 - Goal 2: Problem-Solving and Decision-making**
 - Demonstrate effective problem solving and decision making skills in business situations.
 - Goal 3: Information Technology**
 - Apply information technology tools appropriately in the analysis of business problems.
 - Goal 4: Ethical Issues**
 - Perform a structured analysis of ethical issues in business.
 - Goal 5: Global and Multicultural Dimensions**
 - Demonstrate knowledge of the global and multicultural dimensions of the modern business environment.
 - Goal 6: Oral and Written Communication**
 - Communicate effectively in oral and written formats.
 - Goal 7: Foreign Language [Bachelor of Arts in Business Programs Only]**
 - Understand, speak, read, and write a second language at the intermediate level.
- VI. **CONTENT OUTLINE**
 - A. DBA Roles and Responsibilities, Mullins Chapter 1 – Week 1
 - B. The Database Environment, Mullins Chapter 2 – Week 2

- C. Overview of SQL Server 2005, Microsoft Material – Week 3.1 (SQL Server discussion and exercises will be spread throughout the course from this point on)
- D. Data Modeling and Normalization, Mullins Chapter 3 – Week 3.2
- E. Database Design, Mullins Chapter 4 – Week 4
- F. Application Design, Mullins Chapter 5 – Week 5
- G. Change Management, Mullins Chapters 6 & 7 – Week 6.1
- H. Availability, Mullins Chapter 8 – Week 6.2 and 7
- I. Review and Mid-Term Exam
- J. Performance Management
 - a. General and System, Mullins Chapters 9 & 10 – Week 8
 - b. Database and Application, Mullins Chapter 11 & 12 – Week 9
- K. Data Integrity, Mullins Chapter 13 – Week 10
- L. Security, Mullins Chapter 14 – Week 11.1
- M. Backup and Recovery, Mullins Chapters 15 – Week 11.2 and 12.1
- N. Disaster Planning, Mullins Chapter 16 – Week 12.2
- O. Data Storage, Movement and Management, Mullins Chapters 17 & 18 – Week 13
- P. Design and Application Considerations – Weeks 14 & 15

VII. INSTRUCTIONAL ACTIVITIES: Lecture, discussion, and practical SQL Server lab exercises

VIII. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES: CSC 310 will use Microsoft SQL Server 2005 in classroom and lab exercises to gain hands-on experience, and demonstrate competence in modern database administration and management principles.

IX. RESOURCES: MSU Blackboard system. Microsoft SQL Server 2005.

X. GRADING PROCEDURES:

Grading Scale: 92-100% A
 80-91% B
 70-79% C
 60-69% D
 Below 60% E

1. Tests (probably 3) – 75%.
2. Homework, exercises, student presentation, attendance, and participation - 25%.

Grievance and Appeals Policy: <http://www.murraystate.edu/cbpa/PDF/Appeals.pdf>.

XI. ATTENDANCE POLICY: This course will adhere to the attendance policy published in the current MSU Bulletin. Class attendance is mandatory and will be checked. Students that have 3 unexcused absences will lose 1 exam point for each additional unexcused absence up to a total of 5 absences. Students will lose 2 exam points for each additional unexcused absence in excess of 5.

XII. ACADEMIC HONESTY POLICY: The Murray State University College of Business and Public Administration's (MSU CBPA) Academic Honesty Policy is viewable online at: <http://www.murraystate.edu/cbpa/PDF/Honesty.pdf>. Cheating, plagiarism, submitting another person's material as one's own, or doing work for another person for academic credit are all impermissible. This includes the use of unauthorized books, notebooks, or

other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers, laboratory reports, drawings or the presentation of unacknowledged material as if it were the student's own work. Disciplinary action may result in no credit for an assignment or exam and/or failure of the course. All instances of academic dishonesty will receive appropriate punitive action from the instructor of this course and the names of the students involved will be reported to the Dean in all instances. The MSU CBPA Ethics policy is viewable online at: <http://www.murraystate.edu/cbpa/PDF/Ethics.pdf>

XIII. TEXT AND REFERENCES: There are two texts.

- A. **Required** textbook: Database Administration – The Complete Guide to Practices and Procedures, Craig S. Mullins, Addison Wesley, ISBN: 0-201-74129-6.
- B. Recommended references: Microsoft SQL Server 2005 Administrator's Companion, Whalen, Garcia, Patel, Misner, Isakov Microsoft. Microsoft SQL Server 2005 documentation – provided in class/lab.

XIV. PREREQUISITES: CIS307, TSM132.