

University of North Alabama  
Departmental Syllabus

**COURSE:** CS 447

**COURSE TITLE:** Theory and Applications of Database Systems

**COREQUISITE:** CS 355

**CREDIT:** 3 semester hours.

**COURSE DESCRIPTION:** This course emphasizes database concepts, historical database models, new database developments, and databases and the Internet.

**COURSE OBJECTIVES:**

*The student shall demonstrate knowledge of:*

1. The basic concepts of database development.
2. The fundamental historical database models.
3. The basic terminology associated with database systems.
4. The Oracle database system

*The student shall demonstrate the ability to*

5. Use the Oracle database system
6. Use the Structured Query language (SQL)

**COURSE CONTENT:**

- Chapter 1: Database Systems
- Chapter 2: Data Models
- Chapter 3: The Relations Model
- Chapter 4: Entity Relation (E-R) Modeling
- Chapter 5: Normalization of Database tables
- Chapter 6: The Structured Query Language
- Chapter 7: Advanced SQL
- Chapter 8: Database Design
- Chapter 9: Transaction Management and Concurrency Control
- Chapter 10: Distributed Database Management Systems
- Chapter 11: Object-Oriented Databases
- Chapter 12: Data Warehouse
- Chapter 13: Databases in Electronic Commerce
- Chapter 14: Web Database Development
- Chapter 15: Database Administration

**Assessment of Student Progress:** There will be in class examinations and a final examination. The collection of all homework assignments will serve as an additional test grade.

**Accommodation Statement:** In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documental learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Developmental Services prior to the beginning of the semester to initiate the accommodation process and to notify instructors within the first three class meetings to develop an accommodation plan. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Development Services.