

COURSE DESCRIPTION

Course No.	CSC 471	Course Title	Principles of Database Systems
Course Type	Sel. Elect.		
Sem. Hours	3	Coordinator	Lixin Fu

Current Catalog Description:

Contemporary database systems. Emphasis on query processing, design, and implementation of applications in relational (SQL) databases. Introduction to other database models such as XML, object-oriented, and deductive.

Textbook:

Database System Concepts, Sixth Edition, A. Silberschatz, H. F. Korth, and S. Sudarshan , McGraw-Hill, 2011. ISBN: 978-0-07-352332-3.

References:

None

Course Outcomes:

Upon successful completion of the course, students should be able to:

1. *understand* ER data model (CO1)
2. *learn* relational model, SQL, relational algebra (CO2)
3. *learn* to design databases (CO3)
4. database applications (CO4)
5. complete a real world, comprehensive database project (CO5)

Prerequisites by Topic:

Students must have

- a grade of at least C (2.0) in CSC 330, or
- permission of instructor

Major Topics Covered in the Course:

- Introduction
- Entity-Relationship Model
- Relational Data Model and Relational Algebra
- SQL Query Language
- Relational Database Design Including Functional Dependencies and Normalization
- Application Design and Development
- XML

Estimated Curriculum Category Content (Semester hours):

<i>Area</i>	<i>Core</i>	<i>Advanced</i>	<i>Area</i>	<i>Core</i>	<i>Advanced</i>
Algorithms	0	0	Software design	0	2
Data structures	0	0	Prog. Languages	0	1
Comp Org & Arch	0	0			