

COURSE DESCRIPTION

Dept., Number	CSci 475	Course Title	Introduction to Database Systems
Semester hours	3	Course Coordinator	Dawn E. Wilkins, Associate Professor

Current Catalog Description

An introduction to database systems covering basic concepts, data models, normalization, concurrency, and storage structures.

Textbook

Ramez Elmasri and Shamkant Navathe, *Fundamentals of Database Systems*, 4th edition, Addison-Wesley, 2003.

References

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Course Outcomes

After successfully completing this course, students:

1. understand the relational model and the use of primary keys, foreign keys, constraints, and indexes;
2. are familiar with data modeling concepts such as Entity-Relationship diagrams and normalization;
3. can create databases and construct queries using SQL;
4. understand the use of transactions;
5. are aware of the social impact and ethical issues involved in data collection and storage.

Relationship between Course Outcomes and Program Outcomes

1. Understand the relational model and the use of primary keys, foreign keys, constraints, and indexes. Outcome: (c)
2. Be familiar with data modeling concepts such as Entity-Relationship diagrams and normalization. Outcome: (j)
3. Be able to create databases and construct queries using SQL. Outcome: (c)
4. Understand the use of transactions. Outcome: (c) and (j)
5. Be aware of the social impact and ethical issues involved in data collection and storage. Outcome: (e) and (g)

Prerequisites by Topic

1. Intermediate programming concepts and skills (CSci 211)
2. Basic data structures and algorithms (CSci 112, 211)
3. Understanding of computer architecture (CSci 223)

Major Topics Covered in the Course

- Introduction to relational database systems
- Writing queries in SQL
- Logical database design
- Entity-Relationship modeling
- Using JDBC to access a database
- User-interface design issues

Assessment Plan for the Course

This is an elective course offered approximately every two years. An offering typically has three examinations, 3-4 programming projects, and a couple of written homework assignments. Outcomes are directly addressed by the assignments, examinations, and programming projects.

How Data in the Course are Used to Assess Program Outcomes (unless adequately covered already in the assessment discussion under Criterion 4)

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Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Software design		1.5	Data Structures	1.5	