THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Introduction to Database Systems

CSE 5241

Credit Hours:
2.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Database systems use; logical design; entity-relationship model; normalization; query languages and SQL; relational algebra and calculus; object relational databases; XML; active databases; database design project.

Prerequisites and Co-requisites:
Prereq: 2133 or 2231 or 2233 (314) or 321, and 2321 or Math 2366 (366).

Course Goals / Objectives:
- Master using relational databases.
- Master writing queries in relational data languages including SQL and relational algebra.
- Master using mechanisms for data independence, including data models, languages and views.
- Be competent with logical database design.
- Be competent with conceptual database design.
- Be familiar with object relational database technology.
- Be exposed to XML and active databases.

Course Topics:

- Entity-Relationship (ER) Model
- The Structure of the Relational Data Model
- Relational Algebra and Relational Calculus
- Functional Dependencies and Normalization
- ER-to-Relational Data Model
- SQL
- Graphical User Interfaces
- Embedded SQL
- Object Relational Databases
- XML
- Active Databases

Designation:

Elective