THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Introduction to Database Systems

CSE 3241

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 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: 2123 or 2231; and 2321, or 2111 and Math 2366; and enrollment in CSE, CIS, ISE, Data Analytics, ECE, Engr Physics, or Business Info Sys majors, or CIS minor.

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