Bergen Community College
Computer Science Discipline
Course Syllabus

Course Title: CIS-278 Database Systems

Prerequisites: CIS-265 (Advanced Programming Concepts) or CIS-266 (Visual Basic)

Credits/Hours: 3 Credits 3 Lecture / 1 Lab

Gen'l Ed. Course: No

Course Description:

Database systems is an introduction to the design and implementation of a database system. Topics considered include database architecture; the Entity-Relationship model; the relational model of data; normalization theory; data definition languages and query facilities; physical database design; data integrity and security; programming language interfaces; database administration and control; and current trends in database systems. Students use a DBMS to develop an actual database.

Student Learning Outcomes: Upon completion of the course, the student will:

1. Be able to describe the components of a database system and the relationships between them.
2. Understand the major models of data and the role that each plays in the development process.
3. Know how to do the conceptual design of a database using the Entity-Relationship model of data.
4. Be able to use normalization theory to determine the quality of the design of a relational database.
5. Know how to use structured query language to create, modify, and query a relational database.
6. Understand the various schemes for the physical organization of a database.
7. Know the functions and goals of database administration.

See INF-217 Syllabus for assessment measures and course policies.