

Common Course Outline

EBUS 135

Databases For E-Business

3 Semester Hours

The Community College of Baltimore County

Description

This course provides an in-depth coverage of multi-user database management systems (DBMS), their capabilities and limitations. Relational database concepts, design, implementation and management will be covered. The role of databases in e-business and Web database development issues will also be explored. Data modeling in an e-business system will be emphasized. Students will have the opportunity to design, create, and access a database.

Prerequisite: CINS 101 or permission of the program coordinator

Overall Course Objectives

Upon successfully completing the course students will be able to:

1. Apply proper terminology in describing relational databases;
2. Distinguish between a database and a traditional file;
3. Identify the major components of a DBMS;
4. Identify major database models, their strengths and weaknesses;
5. Compare and contrast Client/Server database computing and the PC/File Server model;
6. Explain the purpose of the n-tier business logic component of the database computing environment;
7. Describe the Enterprise Network;
8. Explain the concept and purpose of a data warehouse;
9. Differentiate between warehouse data and operational data;
10. Generate an ER diagram to meet customer's requirements;
11. Identify relevant entities required to build the database;
12. Identify the data elements that can be generated from existing databases, input and output documents;
13. Identify table subjects that can be appropriately derived from mission objectives and data elements lists;
14. Determine field names and characteristics for each table;
15. Establish primary and foreign keys to create relationships between tables;
16. Normalize the database schema to ensure that it will be viable;
17. Create the tables;
18. Create the relationships;
19. Populate the tables;
20. Retrieve data using queries;
21. Analyze the database for additions/changes that need to be made based on the business plan;
22. Identify the role of a DBA;
23. Recognize the need for database optimization;
24. Identify database security issues; and
25. Identify database optimization and performance metric techniques.

Major Topics

- I. File Systems and Databases
- II. The Relational Database Model
- III. Entity Relationship Modeling
- IV. Normalization of Database Tables
- V. Structured Query Language
- VI. Database Design and Implementation
- VII. Transaction Management and Concurrency Control
- VIII. Distributed Database Management Systems
- IX. Object-Oriented Databases
- X. Client/Server Systems
- XI. The Data Warehouse
- XII. Databases in Electronic Commerce
- XIII. Web Database Development
- XIV. Database Administration

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

- At least five projects
- At least two written tests
- A comprehensive final exam

Other Course Information

This course is taught online.