Common Course Outline
CSIT 243
Business Intelligence Technologies
4 Credits

The Community College of Baltimore County

Description

CSIT 243 – Business Intelligence Technologies introduces students to the multidimensional data analysis techniques of Business Intelligence that are used to retrieve and present information for decision making and problem solving. Techniques will be applied to various industries. Technologies used include Data Visualization, QBE, SQL, Report Writers, Pivot Tables, Pivot Charts, MS Office, Web Pages and Adobe Portable Documents (PDF). In this capstone course for the Information Management certificate students will complete case projects that require them to retrieve information from various data sources and present that information in various formats.

4 Credits

Prerequisite: C or better in CSIT 132, CSIT 134 and CSIT 142, or consent of the program director.

Overall Course Objectives

Upon completion of this course students should be able to:

1. define Information Management and Business Intelligence and their roles within organizations;
2. analyze information needs to determine appropriate information retrieval tools or techniques;
3. setup Open Database Connectivity (ODBC);
4. generate Business Intelligence by using multidimensional data analysis techniques (Pivot Tables, Cross Tabs, etc.);
5. create and manipulate Adobe Portable Document Files (PDF);
6. create data visualizations using MS Office, MS Office Add-ins and Adobe Acrobat;
7. retrieve information using Query by Example (QBE) and Structured Query Language (SQL);
8. identify the information need and presentation format;
9. determine the data sources for the required information need;
10. choose the appropriate processing required to retrieve the required information;
11. use a Report Writer to write various types of reports (Summary, Detail, Cross Tab);
12. use cloud computing to deliver Business Intelligence;
13. integrate external information from web sources;
14. interpret Business Intelligence Dashboards for various types of industries;
15. design Business Intelligence Dashboards for various types of industries;
16. build Business Intelligence Dashboards for various types of industries; and
17. create a web information portal.

Major Topics

I. Defining Information Management and Business Intelligence
II. Identifying the information need
III. Determining data sources and their formats
IV. Cleansing and validating data sources
V. Choosing the appropriate presentation format for information
VI. Choosing the appropriate processing required to retrieve and present information
VII. Determining when to link to data as opposed to Importing or Exporting data
VIII. Interpreting Entity Relationship (E-R) diagrams
IX. Querying a database to produce information using QBE and SQL
X. Using a Report Writer to write various types of reports (Summary, Detail, SubReports)
XI. Using Multidimensional Data Analysis techniques (Cross Tabs, Pivot Tables and Pivot Charts)
XII. Using Cloud Computing to implement Business Intelligence
XIII. Creating and manipulating Adobe Portable Document Format (PDF) documents
XIV. Creating Data Visualizations using MS Office, MS Office Add-ins and Adobe Acrobat
XV. Identifying and integrating appropriate external information
XVI. Interpreting a Business Intelligence Dashboard
XVII. Designing a Business Intelligence Dashboard
XVIII. Building a Business Intelligence Dashboard
XIX. Retrieving and presenting information for various types of industries
XX. Creating a Web Information Portal

Course Requirements

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

- At least four projects. Each project should focus on a different industry or business unit and incorporate various data sources, information requests, multidimensional data analysis techniques, and presentation formats. At least one project should require students to write a recommendation based upon resulting information.
- A minimum of two exams
- A comprehensive final exam

Written Assignments: Students are required to use appropriate academic resources.

Other Course Information

This course is the capstone course of the Information Management Certificate. This course is taught in a computerized environment.