University of Phoenix®

SYLLABUS

DBM/460 Enterprise Database Management Systems

Course Description

This course covers distributed computing, middleware, and industry standards as relating to the enterprise data repository. Data warehousing, data mining, and data marts are covered from an enterprise perspective.

Course Dates

Sep 20, 2016 - Oct 24, 2016

Faculty Information

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Policies

Faculty and students/learners will be held responsible for understanding and adhering to all policies contained within the following two documents (both located on your student website):

- Academic Policies

University policies are subject to change. Be sure to read the policies at the beginning of each class. Policies may be slightly different depending on the modality in which you attend class. If you have recently changed modalities, read the policies governing your current class modality.

Academic Resources

- Course Software
  - **Instructions**
    Click the link for additional course software requirements.
    Note: We do not recommend trial software versions because they expire.
  - **SupportingMaterial**
    Course Software
- College of IS&T Resources
  - **Instructions**
    Click the link to review the College of IS&T Resources.
  - **SupportingMaterial**
    College of IS&T Resources
- College of IS&T Website
  - **Instructions**
    Click the link to access the College of IS&T Website.
  - **SupportingMaterial**
    College of IS&T Website

Get Ready for Class

- Familiarize yourself with the textbooks used in this course.
  - **Instructions**
    Coronel, C., Morris, S., & Rob, P. (2015). Database Systems: Design, Implementation, and Management (11th ed.). Stamford, CT: Cengage Learning.
    Eckerson, W. W. (2011). Performance Dashboards: Measuring, Monitoring, and Managing Your Business (2nd ed.). Hoboken, NJ: John Wiley & Sons, Inc.
    Linoff, G. S., & Berry, M. J. A. (2011). Data Mining Techniques: For Marketing, Sales, and Customer Relationship Management (3rd ed.). Indianapolis, IN: Wiley Publishing, Inc.
    Ponniah, P. (2010). Data Warehousing: Fundamentals for IT Professionals (2nd ed.). Hoboken, NJ: John Wiley &

Sons, Inc.

Course Materials

All electronic materials are available on your student website.

Week1 *Sep, 20 - Sep, 26*

Distributive Computing Basic Concepts

Tasks

- Read Me First
- Getting Started with VitalSource eBooks
- Learning Team Charter
- Learning Team Instructions: Enterprise Sales Application

Objectives/Competencies

1.1 Analyze distributed database partitioning, application clustering, and architecture.

1.2 Identify data distribution and replication strategies.

1.3 Describe middleware, and its application to distributed computing.

Required Learning Activities

- Ch. 12, Database Systems

  Instructions
  Read Ch. 12, "Distributed Database Management Systems," of Database Systems.

- Ch. 14, Database Systems

  Instructions
  Read Ch. 14, "Database Connectivity and Web Technologies," of Database Systems.

- Week One Electronic Reserve Readings

  Instructions
  Read this week's Electronic Reserve Readings.

  Support Material
  Week One Electronic Reserve Readings

See the student website for additional recommended learning activities that may help you learn this week's concepts.

Assignments

Title	Type	Due	Points
Week One Participation Instructions: **Participate** in class discussions.	Individual	Sep 26, 2016 11:59 PM	4

Individual: Capabilities Comparison Instructions: For this assignment, you will choose from the following options: · Option 1: Write a 1- to 2-page paper. · Option 2: Create a 3- to 5-slide presentation including speaker notes. **Compare** the distributed database management system capabilities of Oracle® and Microsoft® SQL Server®. **Develop** a list of database management system capabilities to compare these systems. **Develop** your criterion and definitions in a table that lists the criteria, your definition, and your rankings. **Consider** some of the following capabilities: · Distributed data dictionary · Distributed data location transparent to developers and users · Security · Concurrency · Deadlock control · Global query optimization · Automatic failure recording and recovery · Data consistency among distributed copies of data · Single logical database view for distributed data · Scalability · Replication of data and stored procedures across distributed data · Cost · Support · Training and skill requirements · Database partitioning · Application clustering · Middleware integration and support **Submit** your assignment using the Assignment Files tab.	Individual	Sep 26, 2016 11:59 PM	10

Week2 *Sep, 27 - Oct, 03*

Business Intelligence and Data Warehouses

Objectives/Competencies

2.1 Examine the data warehouse architecture.

2.2 Identify the characteristics of dimensional modeling in business.

2.3 Identify the characteristics of online analytical processing.

Required Learning Activities

• Ch. 1, Data Warehousing

Instructions
Read Ch. 1, "The Compelling Need for Data Warehousing" of Data Warehousing.

• Ch. 2, Data Warehousing

Instructions
Read Ch. 2, "Data Warehouse: The Building Blocks" of Data Warehousing.

• Ch. 3, Data Warehousing

Instructions
Read Ch. 3, "Trends in Data Warehousing" of Data Warehousing.

• Ch. 10, Data Warehousing

Instructions
Read Ch. 10, "Principles of Dimensional Modeling" of Data Warehousing.

• Ch. 15, Data Warehousing

Instructions
Read Ch. 15, "OLAP in the Data Warehouse" of Data Warehousing.

• Week Two Electronic Reserve Readings

Instructions
Read this week's Electronic Reserve Readings.

Support Material
Week Two Electronic Reserve Readings

See the student website for additional recommended learning activities that may help you learn this week's concepts.

Assignments

Title	Type	Due	Points
Week Two Participation Instructions: **Participate** in class discussions.	Individual	Oct 03, 2016 11:59 PM	4
Learning Team: Enterprise Sales Application Part 1 Instructions: **Resource:** Data Warehouse and Business Intelligence Application **Create** a 3- to 4-page draft executive summary, project implementation plan, and outline of management and business requirements for the data warehouse. · Using Microsoft® SQL Server® in Toolwire®, create tables for the Enterprise Sales Database and the Data Warehouse Business Intelligence database. Share your database files for instructor access and review. · Include a dimensional model for the enterprise sales application and the technical architecture for the data warehouse. **Read** the Data Warehouse and Business Intelligence Application resource document describing the requirements of Lafleur Trading Company. Additional background information is provided to complete the assignment. **Analyze** the Lafleur sales application documents. · Sales Application Entity Relationship Diagram · Sales Application Data Dictionary · Microsoft® Excel® Spreadsheets of Enterprise Sales Data **Submit** your assignment using the Assignment Files tab. SupportingMaterial:Sales Application Entity Relationship DiagramSales Application Data DictionaryMicrosoft Excel Spreadsheet for Enterprise Sales Data	Learning team	Oct 03, 2016 11:59 PM	5

Individual: Business and Management Scenario Instructions: This is Part One of a three-part assignment. For this week, you will complete the following: **Choose** from the following options: · Option 1: Write a 3- to 4-page paper. · Option 2: Create a 7- to 10-slide presentation. Include videos, audio, photos, diagrams, or graphs as appropriate. Include substantial speaker notes, or insert audio narration into your presentation. Explore the Microsoft® PowerPoint® website to locate instructions on recording audio. **Choose** from the following issues: · Increasing sales · Increasing market share · Revenue growth · Operational efficiency · Cost containment · Product quality · Customer satisfaction **Select** an issue affecting an organization with which you are familiar. Discuss how the organization may implement and use data warehousing to overcome the issue. **Define** the data warehouse architecture that would support the recommendations you made to solve the issue you identified. **Include** project planning, management, and business requirements in your design. **Create** a dimensional model to meet the warehouse's data needs for the issue. **Submit** your assignment using the Assignment Files tab.	Individual	Oct 03, 2016 11:59 PM	15

Week3 *Oct, 04 - Oct, 10*

Building Data Warehouses and Handling the ETL Processes

Objectives/Competencies

3.1 Analyze project planning, management, and business requirements of the data warehouse.

3.2 Design the technical architecture for the data warehouse and ETL processes.

3.3 Explain the tradeoffs between an enterprise data warehouse, a data mart, and an operational data store.

Required Learning Activities

• Ch. 4, Data Warehousing

Instructions
Read Ch. 4, "Planning and Project Management" of Data Warehousing.

• Ch. 5, Data Warehousing

Instructions
Read Ch. 5, "Defining the Business Requirements" of Data Warehousing.

• Ch. 6, Data Warehousing

Instructions
Read Ch. 6, "Requirements as the Driving Force for Data Warehousing" of Data Warehousing.

• Week Three Electronic Reserve Readings

Instructions
Read this week's Electronic Reserve Readings.

Support Material
Week Three Electronic Reserve Readings

See the student website for additional recommended learning activities that may help you learn this week's concepts.

Assignments

Title	Type	Due	Points
Week Three Participation Instructions: **Participate** in class discussions.	Individual	Oct 10, 2016 11:59 PM	4
Learning Team: Enterprise Sales Application Part 2 Instructions: **Resource:** Data Warehouse and Business Intelligence Application **Load** the Enterprise Sales database with the data provided in the Microsoft® Excel® Spreadsheets of Enterprise Sales Data, using Microsoft® SQL Server®in Toolwire®. **Share** your database files for instructor access and review. **Create** a 3- to 4-page draft technical report outlining the following: · Include the advantages and disadvantages of using an operational data store, data mart, or enterprise data warehouse. · Describe the ETL processes to take current data from enterprise sales in Microsoft® Excel® spreadsheets at Lafleur Trading Company to load in the data warehouse tables. · Use the ETL processes that you develop to extract this data, transform it, and load it into your dimensionally designed data warehouse. Share your database files for instructor access and review. · Design an ad-hoc reporting strategy, a static reporting strategy, a parameter-driven reporting strategy, including capability for drill-down and drill-across analysis, a dashboard strategy, and an analysis strategy. · Explain how your data mining strategy will be implemented to better manage and run the organization's business operations. **Read** the Data Warehouse and Business Intelligence Application resource document describing the requirements of Lafleur Trading Company. Additional background information is provided to complete the assignment. **Analyze** the Lafleur sales application documents. · Sales Application Entity Relationship Diagram · Sales Application Data Dictionary · Microsoft® Excel® Spreadsheets of Enterprise Sales Data **Submit** your assignment using the Assignment Files tab. SupportingMaterial:Sales Application Entity Relationship DiagramSales Application Data DictionaryMicrosoft Excel Spreadsheets for Enterprise Sales Data	Learning team	Oct 10, 2016 11:59 PM	5
Individual: Dimensional Model Hands-On Project Instructions: This is Part Two of the three-part assignment. For this week, you will complete the following: **Resource:** Business and Management Scenario assignment **Write** a 3- to 4-page paper addressing the following: **Create** the following components: · Refined dimensional model · Logical design for the database table structure **Design** and document appropriate ETL processes that could be used to populate your dimensional model. **Submit** your assignment using the Assignment Files tab.	Individual	Oct 10, 2016 11:59 PM	15

Week4 *Oct, 11 - Oct, 17*

Data Mining

Objectives/Competencies

4.1 Analyze the use of data mining in an organization.

4.2 Develop a strategy for data mining throughout the customer lifecycle.

4.3 Design the data environment and data mining methodology.

Required Learning Activities

• Ch. 1, Data Mining Techniques

Instructions
Read Ch. 1, "What is Data Mining and Why Do It?" of Data Mining Techniques.

• Ch. 2, Data Mining Techniques

Instructions
Read Ch. 2, "Data Mining Applications in Marketing and Customer Relationship Management" of Data Mining Techniques.

• Ch. 3, Data Mining Techniques

Instructions
Read Ch. 3, "The Data Mining Process" of Data Mining Techniques.

• Ch. 13, Database Systems

Instructions
Read Ch. 13, "Business Intelligence and Data Warehouses" of Database Systems.

• Week Four Electronic Reserve Readings

Instructions
Read this week's Electronic Reserve Readings.

Support Material
Week Four Electronic Reserve Readings

See the student website for additional recommended learning activities that may help you learn this week's concepts.

Assignments

Title	Type	Due	Points
Week Four Participation Instructions: **Participate** in class discussions.	Individual	Oct 17, 2016 11:59 PM	4

Learning Team: Week Four Status Report Instructions: **Resource:** Data Warehouse and Business Intelligence Application **Create** a 3- to 4-page draft report outlining the business intelligence architecture for your warehouse, including a dashboard that meets the executive management team's business intelligence needs. **Discuss** the data visualization tools that will best meet your project's business intelligence needs. **Create** executive reports using Microsoft® SQL Server® in Toolwire® that will assist the executive team as they analyze and monitor data in the warehouse. **Share** your database files for instructor access and review. **Read** the Data Warehouse and Business Intelligence Application resource document describing the requirements of Lafleur Trading Company. Additional background information is provided to complete the assignment. **Analyze** the Lafleur sales application documents. · Sales Application Entity Relationship Diagram · Sales Application Data Dictionary · Microsoft® Excel® Spreadsheets of Enterprise Sales Data **Submit** your assignment using the Assignment Files tab. SupportingMaterial:Sales Application Entity Relationship DiagramSales Application Data DictionaryMicrosoft Excel Spreadsheets for Enterprise Sales Data	Learning team	Oct 17, 2016 11:59 PM	5
Individual: Data Mining Instructions: This is Part Three of the three-part assignment. For this week, you will complete the following: **Resource:** Business and Management Scenario assignment **Write** a 1- to 2-page paper in which you document the reports to be developed from a data warehouse that will help management analyze, solve, and monitor the issues. **Describe** the data mining process that will be needed to obtain the required information. Specify the resulting content of each report. **Submit** your assignment using the Assignment Files tab.	Individual	Oct 17, 2016 11:59 PM	10

Week5 *Oct, 18 - Oct, 24*

Data Visualization

Objectives/Competencies

5.1 Identify data visualization tools and their role in business intelligence.

5.2 Analyze the design considerations for performance dashboards.

Required Learning Activities

- Ch. 2, Performance Dashboards

  Instructions
  Read Ch. 2, "The Context for Performance Dashboards" of Performance Dashboards.

- Ch. 3, Performance Dashboards

  Instructions
  Read Ch. 3, "Assessing Your Organizational Readiness" of Performance Dashboards.

- Ch. 6, Performance Dashboards

  Instructions
  Read Ch. 6, "Types of Performance Dashboards" of Performance Dashboards.

- Ch. 11, Performance Dashboards

  Instructions
  Read Ch. 11, "How to Create Effective Performance Metrics" of Performance Dashboards.

- Ch. 12, Performance Dashboards

  Instructions
  Read Ch. 12, "How to Design Effective Dashboard Displays" of Performance Dashboards.

- Week Five Electronic Reserve Readings

  Instructions
  Read this week's Electronic Reserve Readings.

  Support Material
  Week Five Electronic Reserve Readings

See the student website for additional recommended learning activities that may help you learn this week's concepts.

Assignments

Title	Type	Due	Points
Week Five Participation Instructions: **Participate** in class discussions.	Individual	Oct 24, 2016 11:59 PM	4

Learning Team: Enterprise Sales Application Instructions: **Resource:** Data Warehouse and Business Intelligence Application **Finalize** your requirements analysis of the Data Warehouse and Business Intelligence Application, incorporating each of the sections drafted in prior weeks. **Submit** your assignment using the Assignment Files tab. SupportingMaterial:Learning Team: Enterprise Sales Application Part 1Learning Team: Enterprise Sales Application Part 2Learning Team: Week Four Status Report	Learning team	Oct 24, 2016 11:59 PM	5
Learning Team: Executive Presentation Instructions: **Resource:** Data Warehouse and Business Intelligence Application **Create** an executive Microsoft® PowerPoint® presentation of 12 to 15 slides that presents the complete solution to the executive management team. You may include speaker notes or embed audio or video in your presentation. **Submit** your assignment using the Assignment Files tab. SupportingMaterial:Learning Team: Enterprise Sales Application Part 1Learning Team: Enterprise Sales Application Part 2Learning Team: Week Four Status Report	Learning team	Oct 24, 2016 11:59 PM	10

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