Syllabus

OPIM 5272: Business Process Modeling and Data Management
Fall 2019
Operations and Information Management
University of Connecticut

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Instructor

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Course Objectives

Managing and improving a business process adds to the bottom line, and data is a core business asset derived from multiple business processes. The need to manage both efficiently and use them effectively has assumed paramount importance. This course introduces marketleading techniques that help to identify and manage key data from business processes. It provides the essential tools required for data mining and business process reengineering. It combines lecture, class discussion and hands-on computer work in a business-oriented environment.

This course lays the foundation for process modeling and data management. The focus is on database design, use, and implementation for business decision making. The course will cover best practices for creating a database in a business environment, discuss what entity relationship diagrams are and how they can be constructed, and SQL. The course will also cover important aspects of business process modeling.

Learning Objectives

Upon completion of this course, students should be able to:

- Manage data for various business applications.
- Retrieve data and create reports.
- Write effective SQL queries
- Implement a database using a DBMS tool.
- Model business processes.
- Learn how to lead data management, business intelligence and business process engineering projects.

Class Website

The course homepage is available at HuskyCT. The class schedule, assignment requirements, exam dates, grades, and other important announcements (including course updates) will be posted on HuskyCT as the class progresses. It is your responsibility to check the class website regularly for updated information.

Grade Breakdown

Component	% of Final Grade
2 Exams	25% each × 2 = 50%
4 Homeworks	8% each × 4 = 32%
Project	10%
4 Case Briefs	1% each × 4 = 4%
Team Evaluation	4%

The final grades will be curved (should it be needed) as the instructor sees fit. All assignments must be submitted on time, according to the course schedule on the final page of the syllabus. No credit will be given for assignments submitted after the posted deadlines.

Teams

You are to form teams of 3-4 students each. Your team will stay with you throughout the class and you will work with your team to complete assignments, as described below. A good portion of your grade will be based on team-based assignments, which includes cases, homework, and the class project.

We will determine the teams during the first class period. On the last day of the class, you will be required to submit a confidential Team Evaluation Form. Based on what you and your teammates

say, you will receive a score between 0-4, which will contribute to your total score in the class. Failure to submit a team evaluation form will result in a score of 0/4 points.

Books and Readings

- Cases
  - **Required**: Harvard Case course pack (available online here). This course pack has four cases, which must be purchased for $4.25 per case.
- Databases
  - **Required**: Oracle Database 11g: SQL Fundamentals I, Oracle, Volumes 1 and 2 (workbook available at UConn bookstore).
  - **Optional**: This book is not required, but does provide an excellent overview of database design and implementation
    - Modern Database Management, 12th edition, Hoffer, J.A., Ramesh, V., Topi, H, Pearson, 2016. ISBN: 978-0133544619.
- Business Process Modeling
  - **Optional**: Workflow Modeling, 2nd edition, Alec Sharp and Patrick McDermott, Artech House, Boston, 2009. ISBN: 978-1-59693-192-3.

Business Process Cases

We will cover 4 cases, available for purchase via the link provided above for the Harvard Case Course Pack.

Case	Title
Case 1	How Process Enterprises Really Work
Case 2	Creating a Process-Oriented Enterprise at Pinnacle West
Case 3	Enhancing Business Process Improvements: New Applications for Time-Driven ABC
Case 4	Outsourcing Business Processes for Innovation

EACH team is required to write a brief of each case, and submit it at the start of the class as outlined in the schedule on the syllabus. Please keep your briefs BRIEF. The brief should be no longer than 1 page in length, with single-spaced lines, Calibri (Body) font size 11 with standard margins. Your brief should contain two sections. The first section provides a synopsis of the article and the second section provides a discussion of what you learned from reading the article.

Exams

There will be two exams. Each is 2.5 hours long.

Exam	Dates
Exam 1	Thursday, October 10
Exam 2	Thursday, December 5

The exams must be completed individually. You are permitted to use any of the course materials, including but not limited to the course notes and the course books. You are also permitted to use the Internet.

Homework

There will be four homework assignments. Each student is required to submit solutions to be graded, but you can and should work with the other students in your team. Your submitted solutions, however, must be your own work.

Project

The project is designed to integrate the various business and technical concepts that you learn in the course. The project should consist of a model of a business process (a financial analysis system, a transaction process, a CRM system, etc.), and/or a design of a logical data model related to that process. You can draw the process model in various diagramming software (Visio, PowerPoint, etc.), and implement the database using Oracle, MS Access or other DBMS product you are comfortable with.

The details of the project will be discussed in class, and released according to the schedule below.

Policy on Late Assignments

Homeworks, assignments, and exams are expected to be completed and turned in by the time specified in the schedule. Any late assignment will be marked for no credit.

Schedule

(Subject to change - check HuskyCT regularly for an updated schedule)

- **Week 1: August 25 - August 31**
  - Thursday, August 29
    - Lecture 1 (6:00pm - 9:00pm): Introduction to Databases and Entity Relationship Diagrams
- **Week 2: September 1 - September 7**
  - Thursday, September 5
    - Lecture 2 (6:00pm - 9:00pm): Introduction to Oracle; Retrieving and restricting data
  - Friday, September 6
    - Homework 1 Released (12:00pm)
- **Week 3: September 8 - September 14**
  - Thursday, September 12
    - Lecture 3 (6:00pm - 9:00pm): Single row functions and dates
- **Lecture 4: September 15 - September 21**
  - Thursday, September 19
    - Homework 1 Due (5:59pm)
    - Lecture 4 (6:00pm - 9:00pm): Conditionals and aggregate functions
  - Friday, September 20
    - Homework 2 Released (12:00pm)
- **Week 5: September 22 - September 28**
  - Thursday, September 26
    - Lecture 5 (6:00pm - 9:00pm): Introduction to Business Process Modeling
  - Friday, September 27
- **Week 6: September 29 - October 5**
  - Thursday, October 3
    - Homework 2 Due (5:59pm)
    - NO CLASS!
- **Week 7: October 6 - October 12**

  - Thursday, October 10
    - Exam 1 (6:30pm - 9:00pm)

- **Week 8: October 13 - October 19**
  - Thursday, October 17
    - Case 1 Report Due (5:59pm)
    - Lecture 6 (6:00pm - 9:00pm): ERDs for Relations—Entities and Attributes
    - Project Description Released (9:00pm)
  - Friday, October 18
    - Homework 3 Released (12:00pm)

- **Week 9: October 20 - October 26**
  - Thursday, October 24
    - Case 2 Report Due (5:59pm)
    - Lecture 7 (6:00pm - 9:00pm): Entity relationships in databases and ERDs

- **Week 10: October 27 - November 2**
  - Thursday, October 31
    - Lecture 8: JOINS, subqueries, and set operations

- **Week 11: November 3 - November 9**
  - Thursday, November 7
    - Homework 3 Due (5:59pm)
    - Case 3 Report Due (5:59pm)
    - Lecture 9 (6:00pm - 9:00pm): ERD Review; Modifying data and creating tables
  - Friday, November 8
    - Homework 4 Released (12:00pm)

- **Week 12: November 10 - November 16**
  - Thursday, November 14
    - Case 4 Report Due (5:59pm)
    - Lecture 11 (6:00pm - 9:00pm): Advanced SQL I

- **Week 13: November 17 - November 23**
  - Thursday, November 21
    - Homework 4 Due (5:59pm)
    - Project due (5:59pm)

        * Lecture 11 (6:00pm - 9:00pm): Advanced SQL II

- **Week 14: November 24 - November 30**
  - Thanksgiving Break!
- **Week 15: December 1 - December 7**
  - Thursday, December 5
    * Exam 2 (6:30pm - 9:00pm)
  - Friday, December 6
    * Team Evaluation From Due (12:00pm)

Student Responsibility and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. This section provides a brief overview to important standards, policies and resources.

Academic Integrity

Academic Misconduct in any form is in violation of the University of Connecticut Student Code and will not be tolerated. This includes, but is not limited to: copying or sharing answers on tests, plagiarism, and/or having someone else do your academic work. Depending on the act, a student could receive an F grade on the test/assignment, F grade for the course, and could be suspended or expelled from the University.

If you have any questions regarding what is allowed/disallowed, please contact me directly.

Student Code

You are responsible for acting in accordance with the University of Connecticut's Student Code. Review and become familiar with these expectations. In particular, make sure you have read the section that applies to you on Academic Integrity:

- Academic Integrity in Undergraduate Education and Research
- Academic Integrity in Graduate Education and Research

Copyright

Copyrighted materials within the course are only for the use of students enrolled in the course for purposes associated with this course and may not be retained or further disseminated neither in print nor digital form.

Policy against Discrimination, Harassment and Inappropriate Romantic Relationships

The University is committed to maintaining an environment free of discrimination or discriminatory harassment directed toward any person or group within its community students, employees, or visitors. Academic and professional excellence can flourish only when each member of our community is assured an atmosphere of mutual respect. All members of the University community are responsible for the maintenance of an academic and work environment in which people are free to learn and work without fear of discrimination or discriminatory harassment. In addition, inappropriate Romantic relationships can undermine the Universitys mission when those in positions of authority abuse or appear to abuse their authority. To that end, and in accordance with federal and state law, the University prohibits discrimination and discriminatory harassment, as well as inappropriate Romantic relationships, and such behavior will be met with appropriate disciplinary action, up to and including dismissal from the University. Refer to the Policy against Discrimination, Harassment and Inappropriate Romantic Relationships for more information.

Sexual Assault Reporting Policy

To protect the campus community, all non-confidential University employees (including faculty) are required to report assaults they witness or are told about to the Office of Diversity & Equity under the Sexual Assault Response Policy. The University takes all reports with the utmost seriousness. Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with University officials who can help. Refer to the Sexual Assault Reporting Policy for more information.