BUS 362
Business Process Analysis and Systems Design
Summer 2017 UPDATED July 21, 2017

Instructor: Drew Parker

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NOTE: I may update this syllabus at any time. Check the course website regularly to see announcements, assignments, and other information.

OVERVIEW

The focus of this course is the design and development of computer-based information systems to support business needs. The course examines all aspects of this task, starting with the identification of a business need, analysis of the processes to be supported by the new system, and the specification of business requirements using various techniques. Through tools such as data flow and ER diagrams, students learn how to model a business process and manage a systems development project. These concepts are put into practice as students identify a real business need, analyze its information requirements, design a system to support it, and construct some interface prototypes. During the design process, they must take care to understand how users will actually use the system. Part of the development process is to consider the required infrastructure, and to plan the implementation process.

LEARNING OBJECTIVES

This course is designed to provide you with knowledge of and skill in using the professional tools employed in performing detailed analyses of business processes and developing effective designs for new and improved information systems. The way the material is covered will allow you to practice and improve your ability to apply these professional skills. In particular you should expect to develop skills and competencies to:

- Develop system requests and conduct feasibility assessments
- Create work plans for the management of system development projects
- Determine user requirements through interviews and document analysis and summarize them as use case scenarios
- Represent features of information systems graphically using a variety of techniques including data flow diagrams and entity relationship diagrams
- Understand the use of various Unified Modeling Language (UML) diagrams
- Apply these tools and techniques to a business problem
- Understand issues in interface design
- Communicate the results of systems analysis and design

REQUIRED BACKGROUND

The course assumes basic knowledge of material covered in BUS 237. This material will only be reviewed, not studied. In particular, it will be helpful if you are familiar with development tools such as Visio and

Dreamweaver. While this material will not be covered in this course, it will be reviewed in the tutorials as you will be required to utilize these skills in the completion of assignments and the course project.

COURSE MATERIALS

- Required textbook:

Dennis, Alan, Barbara Haley Wixom, and Roberta Roth, *Systems Analysis and Design, 6th edition*, Wiley and Sons, 2014.

- Assignments will be posted on the course website. They will be submitted using the Canvas course management system located at https://canvas.sfu.ca/courses/31431

CLASS FORMAT

The course material is a collection of methodologies and techniques that are best learned by doing. Thus much of the responsibility for covering the material is placed squarely on you. Come prepared, and be willing to participate in class discussion. It is only by comparing your point of view with other viewpoints that you can develop your own critical thinking skills, and deepen your understanding of the course material. Each class will contain a number of components, including:

- Discussion of topical events, new technology, etc.
- A lecture based in part on the assigned chapter from the textbook.
- An interactive portion where we jointly work some examples that demonstrate how to apply the conceptual tools presented in the lecture.

The tutorials will be used to get hands on experience with the tools. They provide an opportunity to work on assignments and receive immediate feedback, you will work in small groups determined in the first tutorial. Missing a tutorial will most likely require you to opt out of an assignment with your group and lost marks.

COURSE ASSIGNMENTS AND GRADING

In-lab Assignments **16%**
There will be eight graded assignments. The assignments are to be completed by groups of three or four students as organized in the labs. The assignments will be posted on the course website, and your solutions should be submitted using Canvas. Only one assignment needs to be turned in per group, but it is each individual's responsibility to ensure that the submission has been made. Each assignment will be due on Monday at midnight right after the week in which it was assigned. Late assignments are not accepted, and early submissions are encouraged.

Midterm Exam, Thursday, June 29th **20%**
The closed book mid-term exam will be held in class and will assess your understanding of material from the text and from class.

Analysis Assignment (Due in week 10 tutorials – July 13th) **20%**
A team project that demonstrates your ability to apply the course material to a specific organizational problem is a central element of this course. It will have a number of specific deliverables, some of which can be completed early in the term. Students will work in groups of four (or three as necessary). The assignment requires students to find a "real world" organization and use the modeling techniques that they have learned in the class to create a systems analysis report on a "small" business process. The objective of the analysis report is to analyze a business process, suggest improvements to it, and create a model of it that can be used by a person who does not know how the business operates to develop a computer application to support the process. More information on the project will be distributed separately.

Design Assignment (report due in week 12 tutorials – July 27th) ***14%***
Working in the same groups as for the Analysis Assignment, students will build a prototype interface for the business application they analyzed. The functionality, interface design, style, and content of the interface will be assessed. Creativity and originality in the design will also be counted. The assignment deliverables are a completed interface, appropriate documentation, and a short report detailing the features. Every group will make a presentation of their project in their last tutorial session. More information on this assignment will be distributed separately.

Final Exam **30%**
The final exam is a closed book exam, scheduled for August 15th from 3:30 to 6:30 p.m. The modeling component of the final exam is cumulative and will cover all chapters covered in the lectures. In addition to the modeling questions, there will be short answer questions that will focus on material covered after the midterm exam.

GRADING

You are reminded that SFU Business has guidelines for grade distribution across a class which require that the final grades more or less fit a predetermined curve. Thus the final grades may not be a simple arithmetic compilation of the component grades.

ACADEMIC HONESTY

SFU has an established Code of Academic Honesty, available on line at http://www.sfu.ca/policies/teaching/t10-02.htm. Please review the code and be aware that I expect students to abide fully by this code.

TO SEE ME

The best way to contact me is through e-mail. I check it frequently when I am in the office, and regularly when I am not. My voice mail comes to me as an email attachment, so it works but is generally a bit slower than email. I am in both Burnaby and Surrey, so catching me outside of office hours is hit and miss, and an appointment is generally best.

STUDENTS WITH DISABILITIES

If you need course adaptations or accommodations because of a disability, or if you have medical information to share with me, please make an appointment with me as soon as possible (see contact info above).

BUS 362 – Course Schedule (subject to revision)

	Date	Topic	Readings and Assignments
1	May 11	Introduction and overview What is systems analysis The IT profession Introduction to the SDLC Systems Development Methodologies	DWR (Dennis,Wixom and Roth) Chapter 1 **No tutorials this week**
2	18	Project Initiation System Request Feasibility Analysis Project Assignment	DWR Chapter 2 Assignment 1: System Request and Feasibility Analysis
3	25	Project Management: Estimating time, size of project, scheduling activities, staffing and coordinating	Assignment 2: Project planning
4	June 1	Requirements Determination: Analyzing business needs Requirements gathering techniques	DWR Chapter 3 Assignment 3: Requirements gathering
5	8	Process Modeling: Use Cases	DWR Chapter 4 **Project outline due** Assignment 4: Use case exercise
6	15	Process Modeling continued – Creating data flow diagrams	DWR Chapter 5 Assignment 5: DFD exercise
7	22	Data Modeling: Entity relationship diagrams and normalization Design Introduction	DWR Chapter 6 Assignment 6: ERD exercise Mid-term review
8	29	Midterm exam	No tutorials this week
9	July 6	Interface Design Principles Navigation, input and output	DWR Chapter 9 Assignment 7: user interface exercise
10	13	Program design Object-oriented techniques	DWR Chapters 10 (to p. 316) & 14 Assignment 8: uml exercise **Analysis Project due**
11	20	Design Strategies Architecture Design Security	DWR Chapters 7 and 8 No tutorials this week – office hours to help with final Analysis and Design assignment issues
12	27	Construction, testing, documentation, conversion and implementation	DWR Chapter 11 **Project report due** **Project Presentations**
13	August 3	Summary, review	DWR Chapters 12, 13 Sample Final Case (on web) No tutorials this week
Fin	August 15	Final Exam 8:30 – 11:30	A well-kept secret…