BUS 362
Business Process Analysis and Systems Design
Summer 2021 UPDATED March 24, 2021
Preliminary Syllabus

Instructor: Drew Parker

Office: Normally WMC 3327, but I'm hiding from COVID and we're virtual
Office hours: **tentatively** Thursday 12:30 – 13:20, or by appointment,
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Course Website: http://bus362.com

NOTE: I may update this syllabus at any time. Check the course website and/or Canvas 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 online business application, analyze its information requirements, model the 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 Microsoft Visio and Project. This material will be reviewed in the tutorials as you will be required to utilize these skills in the completion of assignments and the course project. If you have a Windows computer, the software is available to you as a Simon Fraser University student. There is also a way for Macintosh users to get this software, although parts of the install process will require you to Google the steps and won't be included in the course. This will all be discussed in an early tutorial. For either platform, you can access our computer labs virtually where the required software is already installed. This procedure will also be covered in the tutorials.

COURSE MATERIALS

- Required textbook:
  Dennis, Alan, Barbara Haley Wixom, and Roberta Roth, *Systems Analysis and Design, 7th edition*, Wiley and Sons, 2018. There is an eBook available from the publisher for purchase or rent.

- 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/61638

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.

Because we are going to be in the seminar in a Zoom session, I want this to be interactive. You can best learn by being present and participating in discussions. Similarly, I can best deliver information by being able to see you and catch facial expressions if I am losing you. I expect you to attend sessions with your camera turned on. For your privacy, I encourage you to use a virtual Zoom background if you wish. 10% of the seminar grade is allotted based on your attendance and participation in discussions. We will go over this in the first session.

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 **20%**
There will be seven 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 **20%**
The closed book mid-term exam will be held in class time and will assess your understanding of material from the text and from class.

Group Project **30%**
You will be assigned to groups in the first tutorial in the second week of classes. A group will typically be comprised of 3 people, but tutorial sizes may necessitate a group of 2 or 4 as need be. You will be asked to identify an online point-of-sale process with which you are somewhat familiar and have access without being required to visit a site or contact internal personnel. This is to accommodate our requirements during the pandemic. You will model this site in a 'reverse engineering' approach to demonstrate your ability to understand the workings of the system and to use the modeling tools we will discuss. A caveat – you cannot select eBay.com (or any other eBay domain). I have chosen to use this as an example in class. We will discuss this in the first session, and I expect you won't have too much trouble identifying a system to model.

Final Exam **20%**
The final exam is a proctored, closed book exam. Similar to the mid term, 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. My voice mail comes to me as an email attachment, so it works but is generally a bit slower than email. I am 'virtual' this term, so email is a good way to communicate with me, and if more interaction is required I am happy to set up a zoom meeting on short notice.

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 13	Introduction and overview What is systems analysis The IT profession Introduction to the SDLC Systems Development Methodologies	DWR (Dennis,Wixom and Roth) Chapter 1 Tutorial: Getting software and/or remotely accessing our computer labs
2	20	Project Initiation System Request Feasibility Analysis Project Assignment	DWR Chapter 2 Assignment 1: System Request and Feasibility Analysis
3	27	Project Management: Estimating time, size of project, scheduling activities, staffing and coordinating	Assignment 2: Project planning
4	June 3	Requirements Determination: Analyzing business needs Requirements gathering techniques	DWR Chapter 3 **Project outline due –** Tutorials will discuss any project-related issues
5	10	Process Modeling: Use Cases	DWR Chapter 4 Assignment 3: Use case exercise
6	17	Process Modeling continued – Creating data flow diagrams	DWR Chapter 5 Assignment 4: DFD exercise
7	24	Midterm exam	No tutorials this week
8	July 1	Canada Day – University is Closed and All Classes are Cancelled	Go Play Outside
9	8	Data Modeling: Entity relationship diagrams and normalization Design Introduction	DWR Chapter 6 Assignment 5: ERD exercise Mid-term review
10	15	Interface Design Principles Navigation, input and output	DWR Chapter 9 Assignment 6: user interface exercise
11	22	Program design Object-oriented techniques	DWR Chapters 10 (to p. 326) & 14 Assignment 7: uml exercise
12	29	Design Strategies Architecture Design Security	DWR Chapters 7 and 8 **Project report due** **Project Discussion**
13	August 5	Construction, testing, documentation, conversion and implementation Summary and Review	DWR Chapters 11, 12, 13 Sample Final Case (on web) No tutorials this week
Fin	August	Final Exam	A well-kept secret…