Spring 2020

IS 684-002: Business Process Innovation

David F. Ullman

New Jersey Institute of Technology
Ying Wu College of Computing
Department of Informatics

IS 684-002: Business Process Innovation (In Class)
IS 684-852: Business Process Innovation (Online)

In Class section meets Fridays, 1:00 PM– 3:50 PM in CKB 207

Instructor: David F. Ullman
Professor of Practice
Office: 4401 Guttenberg Information Technology Center
Phone: (973) 596-2915 * E-Mail*: david.ullman@njit.edu*

Online Office Hours: Tuesdays Online Via Web-Ex – 4:00 – 5:30 PM
In-Person Office Hours: Friday 11:30 AM – 12:45 pm
Additional Online and In-person Office Hours by Appointment

Description

Enterprise business processes are the end-to-end collections of work activities that create and deliver value to customers. Examples of business processes are order fulfillment, new product development, and logistics.

This course introduces students to the key concepts and approaches of business process innovation (BPI) such as incremental improvement, process automation, and process redesign. BPI initiatives take place across three levels – the enterprise level, the process level, and the application infrastructure level. The focus of this course is on both understanding and designing business processes within these three levels of concern.

This course has theoretical, practical and laboratory components. We will cover theories and models of business processes and their management, and cover modelling tools such as the Business Process Modeling Notation (BPMN) and use them to design process innovations to achieve efficiency, effectiveness, compliance, and agility objectives. We will also discuss the ways in which information technology can be used to manage, transform, and improve business processes. Throughout the term there will also be a practical laboratory component where students will gain hands-on experience with SAP, a leading ERP software platforms. By going through several business processes using the SAP software, students can reinforce their theoretical learning and link the models to actual business practices.

Required Background

None, but prior modeling knowledge and a management or business course are suggested. Modeling knowledge could be gained in IS 663 or CS 673. Students with only a technical background should be prepared to invest additional time to understand management and organization concepts.

Course Objectives

At the end of this course, the student should be able to:
Theory and Practice:

1. Describe and analyze business work activities
2. Map business processes using the business process modeling notation (BPMN)
3. Identify process problems
4. Apply key business metrics to analyze and track process performance

5. Explain how IT innovations can enable agile business processes
6. Specify best practice tactics for improving process efficiency and effectiveness
7. Analyze and critique proposed business process innovations

Laboratory:

1. Be able to navigate the SAP system with ease
2. Go through Procurement, Fulfilment and Production processes using SAP
3. Be able to link the theoretical discussions on business process to the hands-on SAP practice

Required Texts and Readings

Paul Harmon*, Business Process Change: A Business Process Management Guide for Managers and Process Professionals.* 4th Edition, Morgan Kaufmann, 2019. ISBN-13: 978-0128158470; ISBN-10: 0128158476. Digital versions acceptable.

A set of readings is posted in Moodle, with PDFs included for each.

Academic Integrity

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found here.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. *Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.*

There will be no warnings or second chances with regard to cheating. It is your responsibility to understand specifically, what constitutes academic dishonesty. Ignorance is not an excuse or a defense. It is also your responsibility to understand the rules for properly citing the work of others in submission of classwork. Improper citation with a simple "copy/paste" from online sources may be grounds for failure of the assignment and/or the course.

If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at *dos@njit.edu*.

Online and In-Class Sections

This syllabus applies to both the online and In-class sections I am teaching this semester. The due dates are aligned with the In-class meting time of Fridays, 1:00 PM-4:00 PM

Learning Management System:

We shall be using the Moodle learning management system (LMS) for on-line discussions, assignment submissions, distribution of readings, announcements and other activities. Lecture recordings will be made available in Moodle prior to the week in which they are scheduled. It is your responsibility to check Moodle regularly for announcements and any changes to the schedule.

Regarding Groups and Collaborative Work

Class members come to IS 684 with a myriad of backgrounds, experiences and opinions. Everyone will benefit from everyone else's knowledge. The class is being structured so that groups are assigned randomly for group assignments and project work. This will maximize the opportunity for you to share

your experiences with others and learn from one another. Please draw on your professional and previous academic experience throughout the course. There are several group assignments/projects where you will need to meet and coordinate with members of a group to complete assigned work. This may be done in a technology-mediated format.

Course Structure and Components:

1. A weekly schedule of topics is included at the end of this syllabus. There may be some minor revisions to this during the semester that would be announced in advance in Moodle.
2. Weekly recorded lectures and lecture slides will be posted in Moodle by the week in which they are scheduled. You should review these and ask questions in the Help and Open Discussion Forum.
3. There are several group reading assignments where a group of students is required to read one of the articles on the reading list and collectively produce a recorded PowerPoint slide set to summarize the assigned article. These are done in advance of when the topic would be discussed in lecture. In general, the presentation should be no more than 10 minutes. Anything in excess of 11 minutes will likely lose credit. More information will be posted in Moodle.
4. There will be several discussions in Moodle where students will be asked to answer a question and comment on the responses of others. More information will be posted in Moodle.
5. There will be three modeling assignments done in groups. The first assignment uses the language action notations of the Commitment Management Protocol (CMP) and Actor Transaction Diagrams (ATD) to identify communication and commitment breakdowns in a simple situation. The second and third assignments use the Business Process Model and Notation (BPMN). Students will apply this modeling technique to a set of simple processes. Microsoft Visio is available free to students for download. I encourage you to use Visio for the modeling assignments.
6. There will be five SAP labs. These are designed to help you understand implementation steps for major enterprise processes (e.g. procurement). These are completed individually.
7. A Final Group Project will demonstrate the ability to propose a business process improvement initiative and make a business case for such initiative. This is discussed more below and further details will be provided in Moodle.
8. An online final exam using the *Respondus Lockdown Browser* will be administered during finals week.

Final Group Project Summary

The project involves choosing an organizational context, representing one or more of its business processes, diagnosing how they could be transformed into better processes, provide recommendations for doing such, and developing the business case for the process improvement initiative.

The project will include a written report in a prescribed format and a recorded presentation to class. Additional details will be provided in Moodle as the semester proceeds.

Grading

Grading for IS 684 is tentatively assigned as follows:

1. SAP Laboratory assignments (5)	10%
2. Modeling assignments (3)	30%
3. Group Reading Assignments: (3)	12%
4. Group Discussion: (4)	8%
5. Final Group Project:	20%
6. Online Final Exam:	20%

Grading Scales:

There are two different grading scales used for the course as shown in following table:

SCALE #1: LETTER GRADE SCALE	SIGNIFICANCE	SCALE #2: PERCENTAGE SCALE	CALCULATION
A	Excellent	A	90% and above
B+	Good	B+	85% - 89%
B	Acceptable	B	80% - 84%
C+	Marginal Performance	C+	75% - 79%
C	Minimum Performance	C	65% - 74%
F	Failure	F	Below 65%

1. Grading components used will be announced with particular assignments.
2. The Moodle Gradebook does not handle mixed scales well. Therefore, the final average computed in the Moodle Gradebook may not be correct. However, the individual components will be accurately recorded.
3. Unexcused late assignment submissions may not be accepted, or accepted with penalty

Miscellaneous

- If you send me e-mail, please put IS 684 in the SUBJECT LINE so I can filter your e-mails to be read quickly (as opposed to them being ignored as junk e-mail).
- A companion website for the text exists at www.bptrends.com
- This semester's office hours are posted above. For other times, please message me and we can arrange a phone call or virtual meeting at a mutually convenient time (including evenings and weekends).
- If you don't get a response from me on an email message (with IS 684 in the subject line) within 24 hours, please feel free to email again.

REVISED – Spring 2020 Outline/Weekly Schedule – Subject to Minor Modification

Week (Begins Monday)	Topic	Readings	Assignments	Group Discussion Forums – Posts Due 11:55 PM
1 – Jan 20	• Introduction to Business Process Change	• BPC, Introduction, Chapters 1-2	Introductions Due Thursday, January 23 11:55 PM	
2 – Jan 27	• Introduction to Business Process Change (continued) • Introduction to SAP ERP with Global Bike, Inc. (GBI)	• BPC, Introduction, Chapters 1-2 • See Moodle for GBI information		
3 – Feb 3	• Collaboration and Coordination	Denning and Yaholkovsky (7); Denning (6); Goldkuhl (10) ;**Dietz (8)**	Group Reading Assignment #1 Due Thursday, February 6 11:55 PM	Group Discussion #1- Original Posts Due Friday, February 7
4 – Feb 10	• How Work Gets Done	Alter articles (skim) BPC Chapter 3		Group Discussion #1 – Replies Due Friday, February 14
5 – Feb 17	• Business Process Management and Reengineering	**Hammer(11); Davenport (5),** Grant(9)	Group Modeling Assignment #1 Due Thursday, February 20 11:55 PM	
6– Feb 24	• Enterprise Level Concerns	BPC, Chapters 4-7		
7 – Mar 2	• Business Process Modeling	White articles (17,18, 19) Owen and Ray (14) and article #20 BPC Chapter 9	Group Reading Assignment #2 Due Thursday, March 6, 11:55 PM	Group Discussion #2 – Original Posts Due Friday, March 6
8 – Mar 9	Process Level Concerns I	BPC Chapters 8,9,10,11		Group Discussion #2 – Replies Due Friday, March 13
Mar 16	Spring Break			
9 – Mar 23	• Process Level Concerns II	BPC Chapter 13,14	Modeling Assignment #2 Due: Thursday, March 27 11:55 PM	

10 – Mar 30	• Applying Work Systems Theory for Process Improvement	Alter articles (in detail),		Group Discussion #3 – Original Posts Due Friday, April 3
Apr 6	Monday, April 6: Last Day to Withdraw and Receive grade of "W" Fri. April 10 – Good Friday, – University Closed		Modeling Assignment #3 Due Thursday, April 9, 11:55 PM	Group Discussion #3 – Replies Due Friday, April 10
11 – Apr 13	Implementation Level Concerns	BPC – Chapter 15-16		
12 – Apr 20	Other Approaches to Process Improvement	BPC Chapters 12	Group Reading Assignment #3 Due Thursday, April 30, 11:55 PM	
13 – Apr 27	The Future of Process Improvement	BPC Chapter 17-18	All Individual SAP lab work due Sunday, May 3.	Group Discussion #4 – Original Posts Due Friday, May 1
14 Tue– May 5	Classes Follow Friday Schedule Group Project Presentations		Group Project Presentations Due Monday, May 4, 11:55 PM	Group Discussion #4 – Replies Due Friday, May 8
15 – May 8-14	Final Exam – Date To Be scheduled by Registrar's Office			