Fall 2019

IS 684-851: Business Process Innovation

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

IS 684-851: Business Process Innovation

Online Section

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Office Hours: Tuesday, 4:00 pm – 5:30 pm; Wednesday, 11:30 AM – 1:00 PM

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 and INFOR software, leading ERP software platforms. By going through several business processes using these systems for a global company, 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. (Prior 3rd Edition is 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*.

Delivery Mode

IS 684 will be delivered entirely online this semester, i.e. all course activities will be completed through the Moodle learning management system (http://moodle.njit.edu). Students officially enrolled in IS 684 are automatically added to this Moodle course for all sections offered by this instructor. There are no required face-to-face sessions but students are expected to follow a week-by-week schedule as outlined in this syllabus. Work is typically done in an asynchronous mode and students can complete the coursework without coming to campus. However, there are several group assignment/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. There is an online final exam that requires you to participate at a day and time as specified later in the syllabus and acknowledged in the learning management system.

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.

Course Structure and Components:

1. A weekly schedule of topics is posted in Moodle and included below.
2. There are weekly recorded lectures posted in Moodle, along with lecture slides. 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. The presentation should be no more than 10 minutes. Anything in excess of 11 minutes would lose credit.
4. There will be several discussions in Moodle where students will be asked to answer a question and comment on the responses of others.
5. There will be three modeling assignments done in groups. The first homework 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). The student will apply this notation to a set of simple processes.
6. There will be 6 SAP labs and several using INFOR. These are designed to help you understand implementation steps for major enterprise processes (e.g. procurement).
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/INFOR Laboratory assignments:	15%
2.	Modeling assignments (3 @ 10% each):	30%
3.	Group Reading Assignments and Discussions:	15%
4.	Final Group Project:	20%
5.	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 will not be accepted.

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. I am on campus most days, but may not be available to meet with students. 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.

Fall 2019 Outline/Weekly Schedule – Subject to Minor Modification

Week	Topic	Readings	Assignments	Hands On ERP Lab Work
1 – Sep. 2	• Course Introduction • Unit #1 – Introduction to Business Processes	• BPC, Introduction • Alter articles (Skim)	Introductions	
2 – Sep. 9	• Unit #2 – How Work Gets Done	• BPC, Chapters 1-3		Review "Getting ready to Use SAP"
3 – Sep 16.	• Introduction to SAP ERP with Global Bike, Inc. (GBI)		Group Reading Assignment #1 Due Sunday, September 22, 11:55 PM	Lab #1: Sales and Distribution in SAP
4 – Sep 23.	• Unit #3 – Collaboration and Coordination	Denning and Yaholkovsky (7); Denning (6); Goldkuhl (10) ;**Dietz (8)**		
5 – Sep. 30	• Unit #4 - Reengineering	**Hammer(11); Davenport (5),** Grant(9)		Lab #2: Material Management in SAP
6– Oct. 7.	• Unit #5: BPM: Enterprise Level	BPC, Chapters 4-5	Group Reading Assignment #2 Due Mon. Oct. 7, 11:55 PM	
7 – Oct. 14	Unit #6: Business Process Modeling in BPMN	White articles (17,18, 19) Owen and Ray (14) and article #20	Modelling Assignment #1 Due Mon. Oct 14, 11:55 PM	Lab #3: Production Planning in SAP
8 – Oct 21.	Lab and Group Project work, No new lectures			Lab #4: Financial Accounting in SAP
9 – Oct. 28	• Unit #7: BPM – Process Level	BPC Chapter 8,9,10,11		
10 – Nov. 4	• Unit #8: Process Improvement • Project Case Study	Alter articles (in detail),	Modeling Assignment #2 Due: Mon. Nov. 4, 11:55 PM	Lab #5: Controlling in SAP
* Nov. 11 *	Monday – November 11 - Last Day to Withdraw and Receive grade of "W"			
11 – Nov. 11	• Unit #9 Making the Business Case • Introducing INFOR	BPC – Chapter 6,11		INFOR Labs

12 – Nov. 18	• Unit #10: Implementation Levels Concerns	BPC Chapters 12-17		
– Nov. 25	Thanksgiving Week • Tue. Nov. 26: Thursday Classes Meet • Wed. Nov. 27: Friday Classes Meet		Group Reading Assignment #3 Due: Mon. Nov. 25, 11:55 PM	
13 – Dec. 2.	• Unit #11: Other Approaches to Process Improvement	BPC Chapter 12		All SAP and INFOR Labs Due. See Moodle for Instructions.
14 – Dec. 9	Group Project Presentations Due			
**Dec. 12 **	Thursday, Dec. 12 – Saturday Classes Meet Friday, Dec. 13 – Reading Day			
15 – Dec. 16	IS 684 Final Exam – Thursday, December 19 - Online 6:00 PM – 8:30 PM			