Northeastern University
College of Engineering

INFO7260 - BUSINESS PROCESS ENGINEERING SYLLABUS

Overview

Course Number:	INFO7260
Course Name:	Business Process Engineering
CRN:	Business Process Engineering - 16366 - INFO 7260 - 01
Quarter / Year:	Fall 2024
Term Length	15 weeks
Start / End Dates	Sep 4 to Dec 14, 2024
Credit Hours	4
Course Format:	On-ground, Boston
Instructor Name:	Mr. Shannon Pettiford, M.S., PMP, PMI-ACP
Instructor E-mail:	s.pettiford@northeastern.edu
Lecture day:	Thursday 5:30 pm to 9:00 pm EST
Document last updated:	8/26/24
Office Hours	Email for an appointment

Course Description

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Process breakdowns occur within organizations resulting in misaligned goals, miscommunication, higher costs, and employee dissatisfaction. Business process reengineering seeks to lead innovative techniques to solve these problems. Business process reengineering takes an analytical approach to how an existing process can be redesigned to achieve sustainable, strategic, and beneficial improvements. Breaking from the "this is how we've done things" mindset, individuals and teams can drive successful results in complex business environments with process reengineering. Using case studies and current trends in the business field, this course will determine how to approach, detect, define, analyze, plan, and implement business processes. Process engineering should serve and be valuable to stakeholders. It is critical for technical individuals (e.g., IT, engineers, etc.) to provide value-driven processes which help everyone achieve operational and projectized objectives.

This course will explore business processes trends and innovative techniques to improve productivity and efficiency for projects and operational costs. We will examine the origins of organizational processes, their long-term effect on strategic goals, and learn new methods for improvement. Through team-based assignments, students will learn how to diagnose problems with an organization's methodology, provide recommendations and solutioning options, and reengineer existing processes. Students will also learn how to communicate and obtain "buy-in" for the process changes to non-technical stakeholders.

Program Outcomes

- Explore the origins of business processes and mapping
- Learn what process mapping is and how to analyze and document existing processes.
- Learn techniques for exploring interdependencies between entities
- How to establish visibility to stakeholders about processes and a framework for improvement.
- Process engineering "ownership" mindset
- Explore ethical issues with reengineering processes governed by legal, regulatory, corporate, and team areas.
- Develop proficiency in process modeling and redesign strategies
- Understand and implement a "process mindset" by means of Agile and Lean principles.
- Learn to leverage qualitative tools (fishbone diagrams) to perform root cause analysis.
- Determine the actual process costs and outline alternative business process models.

Learning Outcomes

Based on satisfactory completion of this course, a student should be able to:

- LO1: Understand and analyze the voice of the customer and explore potential solutions to the need.
- LO2: Apply design thinking, lean, and agile principles to analyze customer needs to ensure the solution meets that need.
- LO3: Engage journey mapping to understand the customer journey and its pain points in order to focus on the problem or opportunity.
- LO4: Implement data visualization techniques to unlock stakeholder expectations.
- LO5: Invent potential solutions through the analysis provided by business agility and analysis best practices.

Second Point of Contact

If for any reason you wish to express a concern about anything that may impact on your success in a course, first speak directly with your instructor. If you need additional support, please contact your Academic Advisor. If some concern about the course arises and is not addressed by the instructor, please contact:

Dr. Khaled Bugrara, Information Systems Program Director

Multidisciplinary Graduate Engineering Programs

E: kmb@coe.neu.edu

W: 617.373.5424

Technical Requirements

Courses are available on Northeastern University's Canvas at the following link: http://canvas.northeastern.edu. Canvas Technical support and resources including 24/7 phone (1-833-450-3937), and chat can be found on the help icon in Canvas. Northeastern Technical support can be accessed at 617-373-4357 (xHELP) or help@northeastern.edu.

Each student is responsible for his or her access to the internet for purposes of this course and for research. Internet access is a required component of this course and will not be accepted as an excuse for missed work. If you know that you will be traveling, then make sure you plan accordingly.

Note regarding e-mail/voicemail: If you e-mail, please include your name and class title. Please allow up to 48 hours for an email reply. If you leave a voicemail, please remember to include your name, class title, and phone number.

Required Texts

The following texts are *REQUIRED*:

> Title: The Design Thinking Playbook: Mindful Digital Transformation of Teams, Products, Services, Businesses and Ecosystems (Design Thinking Series)
> Authors: Michael Lewrick , Patrick Link
> Date: May 22, 2018
> ISBN-13: 978-1119467472

> Title: Mapping Experiences: A Complete Guide to Customer Alignment Through Journeys, Blueprints, and Diagrams
> Author: James Kalbach
> Date: Feb 9, 2021
> ISBN-13: 978-1492076636

Supplemental Readings

Additional readings will be provided within Canvas.

Software & Related Equipment
- Adobe Reader
- MS Word (or equivalent)
- MS Excel (or equivalent)
- MS PowerPoint (or equivalent)

Textbook & Lecture Outline

Lecture#	Date	Lecture Topic	Assignment (Due date is posted in Canvas)	Readings
1	Wed, Sep 04	Course Introduction Thriving in the Digital Age		
2	Mon, Sep 09	Business Process Mapping in the Digital Age		Mapping Experiences chapter 3
3	Mon, Sep 16	Business Analysis Framework	Individual #1	Design Thinking Playbook 3.1-3.4 Mapping Experiences chapter 1

Lecture#	Date	Lecture Topic	Assignment (Due date is posted in Canvas)	Readings
4	Mon, Sep 23	Stakeholder Analysis	Team Charter and Evaluation	Design Thinking Playbook 3.4-3.8 Mapping Experiences chapter 2
5	Mon, Sep 30	Process Mapping Methodologies and Approaches		Design Thinking Playbook 2.1-2.7 Mapping Experiences chapter 4
6	Mon, Oct 07	Process Analysis		Design Thinking Playbook 1.1-1.10 Mapping Experiences chapter 5
7	Mon, Oct 14	Design Thinking	Individual #2	Mapping Experiences chapter 6
8	Mon, Oct 21	Analytical Solution Development		Mapping Experiences chapter 7
9	Mon, Oct 28	Data Visualization	Individual #3	Mapping Experiences chapter 8,9
10	Mon, Nov 04	Agile and the Engineer	Team: Agile / Lean Principles in Practice & Evaluation	Mapping Experiences chapter 11, 12
11	Mon, Nov 11	Business Agility I		Mapping Experiences chapter 13
12	Mon, Nov 25	Business Agility II	Team Journey Mapping	
13	Mon, Dec 02	Lean and the Engineer		
14	Mon, Dec 09	Cross Functional Team Dynamics		
15	Mon, Dec 16	Team Presentations	Team Presentations	

Assignment Schedule

Course assignment details and due dates are listed in Canvas => Syllabus.

Grading/Evaluation Standards

Your grade will be weighted as follows:

Assignment type	Percentage
Individual	35%
Team	30%
Presentation	20%
Evaluation	10%
Survey	5%
Total	100%

You are strongly encouraged to track your progress through the course of the term. At the end of the term, you will not be allowed

to "go back" and request assignment grades or attendance to be adjusted. It is your responsibility to monitor your progress each week.

Course Methodology

Each week begins on Monday and ends on Sunday, except for the final week. Beginning on Monday of each week, you will view lecture materials, read more about the lecture topic in your course text and then you will complete case studies and other assignments where you will have a chance to apply what you have learned. Each week, you will be expected to:

1. Attend the weekly class meeting
2. Participate in class exercises
3. Complete all assigned readings.
4. Submit all individual and group assignments online by the due dates

Course Workload Expectations

Students are expected to spend approximately 10-15 hours of study time per week on this course, including in class (face-to-face) instructions and self-directed work. The actual hours will vary from student to student, depending on familiarity with the topics covered in class.

Student Competencies

- Students are expected to be proficient in the use of Microsoft Word, Microsoft Excel, and Microsoft Power Point
- APA writing standards are expected in this course.

Attendance Policy

It is important that you be physically present in the classroom to insure your possibility for success in the course. **If you do not attend the first class, then you will receive a 10% course grade reduction penalty.** You should plan your schedule accordingly.

Attendance is **required** for each lecture. *In the event of extraordinary, legitimate, and unavoidable situations, students may be excused for absence (NOT lateness) 24 hours in advance. Extraordinary, legitimate, and unavoidable situations include significant personal illness; unavoidable emergencies, a family emergency; and religious requirements are considered valid. Failure to make arrangements for visa clearance and/or travel so as to arrive in the classroom on time after school breaks are not considered valid excuses.* Similarly, failure to arrive in the classroom after an in-term holiday is not a valid reason for absence. The decision as to whether the reason presented is a valid extraordinary, legitimate, and unavoidable situation and whether to grant an excused absence rests with the instructor alone. To make up a lecture that was missed, a student will create and submit a 10-minute video summarizing the lecture material and lessons learned. Students will *only* receive full credit attendance for arriving when the attendance is taken, and staying for the entire lecture. Late arrival *(regardless of the situation)* will receive partial credit.

Grading Policy

Grades are earned not given and adjusted downward. You begin the course with zero (0) points and work your way upward based on the quality and content of your submitted work. If you do the minimum work required to meet assignment requirements your resulting grade will be in the B Range as shown below. Only work that goes beyond the assignment requirements in terms of content and quality will receive grades in the higher ranges. Your performance in this course is evaluated independently of the work

produced (and the grade received) in other courses. It is YOUR responsibility to keep track of your progress throughout the course. Questions about a grade received will only be discussed and possibly reevaluated for 1-week after the grade has been returned to students. Letter grades are as follows:

Grading Scale	
A = 93%-100%	C+= 77%-79.9%
A- = 90%-92.9%	C = 73%-76.9%
B+= 87%-89.9%	C-= 70%-72.9%
B = 83%-86.9%	F = Below 70%
B- = 80%-82.9%	

Note that you will not receive the maximum number of points if you fail to be present in class and if you do not submit work that meets minimum standards for written communication as outlined in the writing rubrics and in the course.

Writing Quality Standards
Written work is graded as per the rubrics and against these general standards.

Scoring Level	Grammar, Mechanics, Usage	Clarity and Coherence
High level Proficiency	While there may be minor errors, the paper follows normal conventions of spelling and grammar throughout and has been carefully proofread. Appropriate conventions for style and format are used consistently throughout the written assignment.	Sentences are structured and words are chosen to communicate ideas clearly. Sequencing of ideas within paragraphs and transitions between paragraphs make the writer's points easy to follow.
Moderate Proficiency	Frequent errors in spelling, grammar (such as subject/verb agreements and tense), sentence structure and/or other writing conventions distract the reader, but the reader is able to completely understand what the writer meant. Writing does not consistently follow appropriate style and/or format.	Sentence structure and/or word choice sometimes interfere with clarity. Needs to improve sequencing of ideas within paragraphs and transitions between paragraphs to make the writing easy to follow.
Minimal Proficiency	Writing contains numerous errors in spelling, grammar, and/or sentence structure that interfere with comprehension. The reader is unable to understand some of the intended meaning. Style and/or format are inappropriate for the assignment.	Sentence structure, word choice, lack of transitions and/or sequencing of ideas make reading and understanding difficult.

Acceptable References

All references used for support/evidence/information in this course must be primary (preferred) or secondary (such as the course texts) SCHOLARLY resources. I suggest that you use the SNELL Library search engine or Google Scholar to search for resources. If you don't understand the terms **primary sources** and/or **secondary sources,** then you should consult the SNELL Library website and/or the Reference Librarians.

You may NOT, *under any circumstances,* use: Wikipedia, eHow, Ask.com, or any other such non-scholarly website as a source for any work in this course. Exceptions may be granted for the use of items such as project management templates and data sources with my explicit, advance permission. If you have any questions about this, or a question about a particular source, then post a question in **Ask the Instructor**. Failure to adhere to this policy may result in a violation of the Academic Honesty and Integrity policy.

Assignment Standards

All assignments in this course will be graded against the following rubric unless otherwise noted. NOTE: The instructor reserves the right to require a face-to-face, oral, or written examination of any student in addition to any regular assessment as a means to validate the work submitted.

	Not Evident	Below Standards	Approaching Standards	Meets Standards	Above Standards
	(0-69.9%)	(70-76.9%)	(77-83.9%)	(84-92.9%)	(>93%)
Requirements (60%)	Does not meet the requirements of the assignment.	Meets some assignment requirements	Meets some assignment requirements	Meets assignment requirements	Goes well above the requirements of the assignment. Provides new information, tools, and/or techniques
Personal Competencies (15%)	Work reflects no applicable personal competencies to drive effective outcomes for the work	Work reflects a few applicable personal competencies to drive effective outcomes for the work	Work reflects some applicable personal competencies to drive effective outcomes for the work	Work reflects many applicable personal competencies to drive effective outcomes for the work.	Work reflects extensive use of applicable personal competencies (behaviors) to drive effective outcomes for the work
Grammar (10%)	Writing contains numerous errors in spelling, grammar, sentence structure, etc. that interfere with comprehension. The reader is unable to understand some of the intended meaning.	Frequent errors in spelling, grammar, sentence structure, and/or other writing conventions that distract the reader.	Errors in spelling, grammar, sentence structure and/or other writing conventions but the reader is able to understand what the writer meant.	Minor errors in grammar, sentence construction, and word usage. Assignment work follows normal conventions of grammar and spelling and has been carefully proofread.	All work grammatically correct with rare misspellings.
Clarity (10%)	Sentence construction, word choice, lack of transitions, and/or sequencing of ideas makes reading/understanding difficult. Style and/or	Does not express opinions or ideas clearly. Limited connection to the topic.	Sentence construction and word choice interferes with clarity. Transitions between paragraphs	Minor sentence construction and word choice issues sometime interfere with clarity. Transitions between paragraphs are generally easy to follow.	Expresses ideas and opinions clearly and concisely in a manner appropriate to the assignment.

	Not Evident	Below Standards	Approaching Standards	Meets Standards	Above Standards
	format are inappropriate for the assignment.	Writing does not follow consistent style and/or format.	may be choppy and difficult to follow.	Appropriate conventions of style and format are used consistently.	
Formatting (5%)	Does not submit assignment materials in APA format (latest edition).	Multiple errors in formatting, citations, or references.	Some errors in formatting, citations, or references.	Rare errors in formatting, citations, or references.	Virtually no errors in formatting, citations, or references.

NOTE: Gross failure to provide PROPER citations and references – particularly with regard to direct quotes – will result in sanctions as outlined in the academic honesty policy.

Team Work

Your grade for group assignments is based on the score that the team receives on the assignment and can be adjusted based on your peers' (and my) assessment of your participation in the preparation of the team assignment. If a team member does not participate in a team assignment he/she will not receive full credit. *All group members are equally responsible for the academic integrity of assignments submitted for the group.*

Extra Credit, Rework, and Assignment Review

There are no opportunities for extra credit assignments, nor do I allow you to rework assignments for a higher grade in this graduate-level course. You should submit your best effort every time that you submit an assignment. Once an assignment is graded, it may not be resubmitted for a higher grade. You should use the feedback provided to improve the quality of your work on subsequent assignments.

Submission of Work and Communications

All assignments must be submitted online through Canvas. Canvas allows you to submit online assignments using several submission types. To see your instructor's feedback for an assignment submitted through Canvas, do the following:

1) log into the course and click on the 'Grades' link

2) find the assignment and click the assignment name

3) click on 'View Feedback' to view all feedback including comments and any additional annotated comments

It is your responsibility to make sure that assignments (individual and group) are properly submitted.

I will NOT accept assignments via email in accordance with Northeastern University policy.

Late Submission of Work

I will consider extensions for assignments if the request is made by e-mail *at least 24 hours before the due date/time*. *The maximum extension on any assignment is 2 days.* You don't need to offer any reason for your request – you just need to show that you are planning ahead. I reserve the right to apply late submission penalties as outlined below. For the extension to be considered, the email request <u>must include this information</u>:

- Include the Course Number and CRN Number in the Subject line.
- Include the *weekday, date, and time* when you intend to submit the assignment.
- Email my NEU Faculty account .

No late submissions or extensions are available for the last week of class. There are no provisions for a team to submit an assignment late. Late responses (for all assignments) will be penalized 10% for each day <u>or portion of a day</u> that the assignment is late unless previous arrangements have been made. Grading feedback will be provided via Canvas within 4 business days from the due date or from when it is submitted, if submitted late.

End-of-Course Evaluation Surveys

Your feedback regarding your educational experience in this class is very important. Your comments will make a difference in the future planning and presentation of our curriculum. Your survey responses are completely anonymous and confidential. A percentage of your course grade is tied to taking this course evaluation survey.

Academic Integrity

A commitment to the principles of academic integrity is essential to the mission of Northeastern University. The promotion of independent and original scholarship ensures that students derive the most from their educational experience and their pursuit of knowledge. Academic dishonesty violates the most fundamental values of an intellectual community and undermines the achievements of the entire University.

As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, examinations of whatever kind, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Students are responsible for learning the conventions of documentation and acknowledgment of sources in their fields. Northeastern University expects students to complete all examinations, tests, papers, creative projects, and assignments of any kind according to the highest ethical standards, as set forth either explicitly or implicitly in this Code or by the direction of instructors.

Go to http://www.northeastern.edu/osccr/academic-integrity-policy/ to access the full academic integrity policy.

Dishonesty and/or carelessness violates fundamental values of an intellectual and professional community and will be reported to the Office of Student Conduct and Conflict Resolution (OSCCR) as a violation of the Academic Integrity Policy. To safeguard the integrity of assignments and programs, your course may use systems such as TurnItIn, which checks written work, and online exam proctoring services. Work that contains academic integrity violations (AIV) will be graded on a case by case basis. Work displaying AIV may earn a failing grade, a zero, or even result in the instructor assigning the student a failing grade for the class. Students may not withdraw from a class to avoid the grade penalty for serious academic integrity violations.

24/7 Canvas Technical Help: For immediate technical support for Canvas, call 1-833-450-3937. You can chat and report an issue to Canvas technical support right from within Canvas through the Help icon located in the Canvas global navigation.

- myNortheastern, e-mail, and basic technical support
- Visit the Information Technology Services (ITS) Support Portal
- Email: help@northeastern.edu
- ITS Customer Service Desk: 617-373-4357 (help)

MyNEU: For MyNEU issues and other technical support questions, please contact the University help desk by calling 617-373-HELP (4357) or email help@neu.edu

Communication / Writing Resources: If you need help to improve your written communication, the following free resources are available:

NEU Library Services: The Northeastern University Library is at the hub of campus intellectual life. Resources include over 900,000 print volumes, 206,500 e-books, and 70,225 electronic journals. For more information, visit http://library.northeastern.edu/.

NEU Writing Center: To learn more about what the Writing Center has to offer, please see:
http://www.northeastern.edu/english/writing-center/

ESL Language Co-op tutoring - is a free service that international students (both undergrad and grad) are welcome to use. This service allows students to work 1:1 with ESL trained writing specialists. You can sign up for one-hour sessions by accessing this website: (http://neu.mywconline.net/) and making an online appointment.

International Tutoring Center: Provides international students with free, high-quality English language instruction and support in Snell Library, Room 088. To sign-up for an appointment, visit http://neu.mywconline.net/ for instructions.

Accent & Communication Training - The Accent & Communication Training is for non-native speakers of English who want to enhance their communication skills in academic, professional, and social situations. It is offered through the Department of Speech-Language Pathology and Audiology at Northeastern University's Bouvé College of Health Sciences. Website:
http://www.northeastern.edu/bouve/csd/clinic/accent-and-communication-training-act/

NUCALLS - NUCALLS is a student organization at Northeastern University that is dedicated to offering free language classes to the Northeastern community. Students who are interested in improving their English language or other foreign language skills can take advantage of these resources. Website: http://www.nucalls.neu.edu/

Northeastern University Online Policies and Procedures

For comprehensive information please visit: Policies and Procedures - Northeastern University College of Engineering

Student Accommodations: The College of Engineering is committed to providing equitable access to learning opportunities to students with documented disabilities (e.g. mental health, attentional, learning, chronic health, sensory, or physical). To ensure access to this class, and program, please contact The Disability Resource Center   (http://www.northeastern.edu/drc/) to engage in a confidential conversation about the process for requesting reasonable accommodations in the classroom and clinical or lab settings. Accommodations are not provided retroactively so students are encouraged to register with the Disability Resource Center (DRC) as soon as they begin their program. The College of Engineering encourages students to access all resources available through the DRC for consistent support.

Diversity and Inclusion: Northeastern University is committed to equal opportunity, affirmative action, diversity, and social justice while building a climate of inclusion on and beyond campus. In the classroom, member of the University community work to cultivate an inclusive environment that denounces discrimination through innovation, collaboration, and an awareness of global perspectives on social justice.

Please visit http://www.northeastern.edu/oidi/ for complete information on Diversity and Inclusion

Student Privacy (FERPA): The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. For information about these rights, visit the Northeastern University Office of the Registrar.

TITLE IX

Title IX of the Education Amendments of 1972 protects individuals from sex or gender-based discrimination, including discrimination based on gender-identity, in educational programs and activities that receive federal financial assistance.

Northeastern's Title IX Policy prohibits sex and gender-based discrimination, including sexual harassment, sexual assault, sexual exploitation, relationship or domestic violence, and stalking. The Title IX Policy refers to sex and gender-based discrimination as Prohibited Offenses. The Title IX Policy applies to the entire Northeastern community, including students, faculty, and staff of all gender identities. https://www.northeastern.edu/ouec/

Allegations of Prohibited Offenses can be reported to the Title IX Coordinator within The Office for University Equity and Compliance at: titleix@northeastern.edu and/or through the Northeastern University Police Department (NUPD) by phone: for an Emergency 617.373.3333; for Non-Emergency 617.373.2121. Reporting to NUPD does NOT commit the victim/affected party to future legal action.

Faculty members are considered responsible employees at Northeastern University, meaning they are required to report all reports of and information about alleged Prohibited Offenses to the Office for University Equity and Compliance.

If you or someone you know has experienced a Prohibited Offense, confidential support and guidance can be found through (https://www.northeastern.edu/ouec/resources/main-campus-resources/), University Health and Counseling Services (UHCS) staff (http://www.northeastern.edu/uhcs/) and the Center for Spiritual Dialogue and Service (CSDS) clergy members (http://www.northeastern.edu/spirituallife/). Employees within the VRC, UHCS, and CSDS are not required to report allegations of Prohibited Offenses to the Office for University Equity and Compliance.

In case of an emergency, please call 911 OR NUPD'S Emergency line: 617-373-3333.
Please visit www.northeastern.edu/titleix for a complete list of reporting options and resources, both on-and off-campus.

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The instructor reserves the right to amend this syllabus, both online and the document itself, during the term and will notify students of the change(s). The revised syllabus is the official record of class policies and schedule of due dates