

Carnegie Mellon
The Heinz College

94-774 Business Process Modeling

Syllabus and Course Policies

Spring 2021, Section A4

Instructor

Karyn Moore

Office Hours: See Course Contacts on Course Website

Email: karyn@cmu.edu

Teaching Assistant

Contact information and office hours for the teaching assistant will be posted in the Course Contacts area of the course website by the end of first week. Zoom links will become available in Canvas by then as well.

Class Meetings

Tuesday and Thursday, 1:30 – 2:50. Zoom link is posted in Canvas.

If any of our class meetings conflict with your religious events, please let me know so that we can make alternative arrangements.

REQUIRED Textbook

- Managing Business Process Flows, Principles of Operations Management, **Third Edition**, Anupindi, Ravi, Sunil Chopra, Sudhakar D. Deshmukh, Jan A. Van Mieghem, and Eitan Zemel, Pearson Prentice Hall, 2012, ISBN-10: 0-13-603637-6

You may also use the 1st or 2nd edition. The Course Schedule contains readings for all three editions. I include the 3rd edition because it is the only edition also available in digital format, if that is your preference. If not, the 1st and 2nd editions are fine and will be less expensive.

Course Web site: canvas.cmu.edu

Harvard Business Cases

The course makes extensive use of Harvard Business Cases. Your student account will be charged a flat rate for access to the six cases used in this course.

Software Requirements

The modeling and simulation software Arena from Rockwell Automation will be used in this course. More information on accessing and using the student version of this software will be made available later in the course.

Prerequisites, Requirements & Audience

There are no formal prerequisites for this course. However, you may find it helpful to have completed your core statistics course.

Audience

The course is appropriate for graduate students who wish to understand business process modeling and improvement for any sector or industry. While there is emphasis placed on the role information technology can play in enabling process improvement, there is no technical work in this course.

Course Overview

Processes are the core technologies of all organizations for producing and delivering products and services that satisfy customer needs. Increasingly, in order to continue to serve their customers and remain competitive, organizations are required to continuously analyze, redesign, and improve their end-to-end core business processes in shorter and shorter time frames to achieve operational goals. Realizing this end-to-end business process integration requires an IT infrastructure that enables people, processes, and information to be integrated in a flexible manner.

This mini course will explore how organizations can model business processes as the first step in achieving flexible and integrated business processes. The course will also examine the information technologies and architectures that show promise for enabling this business process integration. The course will provide students with the following:

- A framework for understanding the design, control, and improvement of business processes. Much of this material will be drawn from the field of operations management.

- A methodology for analyzing, modeling, and designing business processes.
- The use of simulation for measuring and comparing performance of various what-if models.
- Appreciation for how emerging information technologies can serve as enablers of business process improvement, integration, and automation.

Course Objectives

At the end of this course, students will be able to:

- Demonstrate the relationships between business processes, strategy, and organizational performance.
- Define various process flow measurements and methods for calculating them.
- Diagnose the root causes of poor process performance and recommend appropriate managerial levers for improving them.
- Model, analyze, simulate, and redesign a process to achieve specific performance goals.
- Identify ways emerging technologies can be used to enable business process improvement and redesign.
- Model and simulate a business process using the Arena software.

Course Schedule

Please refer to the separate document titled “Course at a Glance” for a listing of weekly lecture topics, labs, and assignments. Due dates are also posted in this document, as are quiz and exam dates. This document is posted in Course Website on the Syllabus page.

Assignments and Assessments

Each student’s knowledge of the course material will be evaluated by a combination of individual and group assignments, lab assignments, case analysis, quizzes, and a final exam. Regular participation can earn an additional +1 on your final course score.

Final grades are based on the following weights:

Homework Assignments* (4)	40%
Prep Work (2)	4%
Mini Cases (3)*	6%
Lab Assignments (2)*	10%
Lab A – 4%, Lab B – 6%	
Quizzes (2)	20%
Final Exam	20%
TOTAL	100%

** Some are individual, some will be completed with an assigned work partner.*

For individual Assignments 2, 3 & 4, you have one 48-hour late pass to use. The pass extends the due date 48 hours. You may alternatively split the late pass and use two 24-hour passes. Your late pass may only be used on Assignments 2, 3 & 4.

All work, unless partner work, should reflect individual work. You may consult your fellow students for clarification of questions or assistance with troubleshooting on labs only. No collaboration with anyone is permitted on individual work, quizzes, or exam.

Unless stated, you may also not reference any materials other than those provided to you by the instructor for use in this specific course offering.

Grading

Final letter grades are assigned to a student's body of work in this course according to the following scale:

A+	97% to 100%	B-	80% to 82%
A	93% to 96%	C+	77% to 79%
A-	90% to 92%	C	73% to 76%
B+	87% to 89%	C-	70% to 72%
B	83% to 86%	R	less than 70%

The average grade in an elective course is expected to be 3.5, equivalent to slightly **less** than an A-. However, if all students earn 90% and above in this course, then all will receive grades of 'A-' or above. There is no curving of grades. Please realize that a grade of 'B' is considered an acceptable grade at Carnegie Mellon. Also note that a grade of 'C-' is considered a passing grade.

This course may NOT be taken as pass/fail.

Assignments

All assignments, prep work, mini cases and labs will be due by the date/time indicated and must be submitted by this deadline. No work submitted after the deadline will be awarded points*. If you experience a problem where you will not be able to submit on time, please discuss with the instructor.

You will have ONE late pass you can use on the individual assignments (#2,3 & 4) The late pass allows you to submit assignment work 48 hours (2 days) after the due date and still receive full credit. Alternatively, you can split the one pass into TWO 24-hour passes, using on two assignments.

Instructions for submitting work is included in the Assignment description. Students should **NOT email work to the instructor or TA unless instructed to do so**. If you are unable to access the course website for technical reasons, then please email your work to the instructor AND the teaching assistant(s).

Exam & Quizzes

The dates for the exam & quizzes are indicated on the class schedule. **Make-up quizzes are not provided.**

The exam and quizzes are open book, open notes and closed computer.

Policy on Cheating and Plagiarism

It is the responsibility of each student to produce her/his own original academic work. Collaboration or assistance on academic work to be graded is not permitted unless explicitly authorized by the course instructor(s). Any other sources of collaboration or assistance must be specifically authorized by the course instructor(s).

In all academic work to be graded, the citation of all sources is required. When collaboration or assistance is permitted by the course instructor(s), the acknowledgement of any collaboration or assistance is likewise required. This citation and acknowledgement must be incorporated into the work submitted and not separately or at a later point in time. Failure to do so is dishonest and is subject to disciplinary action.

Excluding assignments and labs that are assigned as group work, the work students submit should reflect individual effort. Students are encouraged to discuss assignment questions with each other, but not the solution. **The final work product must reflect the student's knowledge and effort, not his/her classmate's (or anyone else for that matter.)**

Students have a duty to ensure that they understand and abide by the standards that apply in this course. In the absence of such understanding, it is the student's responsibility to seek clarification from the instructor.

Policy Violations

Cheating occurs when a student avails her/himself of an unfair or disallowed advantage which includes but is not limited to:

1. Theft of or unauthorized access to an exam, answer key or other graded work from previous course offerings. "Unauthorized access" refers to unauthorized by the instructor.
2. Use of an alternate, stand-in or proxy during an examination.
3. Copying from the examination or work of another person or source – with or without their permission.
4. Submission or use of falsified data.
5. Using false statements to obtain additional time or other accommodation.
6. Falsification of academic credentials.

Plagiarism is defined as the use of work or concepts contributed by other individuals without proper attribution or citation. Unique ideas or materials taken from another source for either written or oral use must be fully acknowledged in academic work to be graded. Examples of sources expected to be referenced include but are not limited to:

1. Text, either written or spoken, quoted directly or paraphrased.
2. Graphic elements.
3. Passages of music, existing either as sound or as notation.
4. Mathematical proofs.
5. Scientific data.
6. Concepts or material derived from the work, published or unpublished, of another person.

Unauthorized assistance refers to the use of sources of support that have not been specifically authorized in this policy statement or by the course instructor(s) in the completion of academic work to be graded. Such sources of support may include but are not limited to advice or help provided by another individual, published or unpublished written sources, and electronic sources. Examples of unauthorized assistance include but are not limited to:

1. Collaboration on any assignment beyond the standards authorized by this policy statement and the course instructor(s).
2. Submission of work completed or edited in whole or in part by another person.

3. Supplying or communicating unauthorized information or materials, including graded work and answer keys from previous course offerings, in any way to another student.
4. Use of unauthorized information or materials, including graded work and answer keys from previous course offerings.
5. Use of unauthorized devices.
6. Submission for credit of previously completed graded work in a second course without first obtaining permission from the instructor(s) of the second course. In the case of concurrent courses, permission to submit the same work for credit in two courses must be obtained from the instructors of both courses.

Penalties for Cheating

There is a **zero-tolerance policy** in effect for this course. Any violation of the policy on cheating and plagiarism will result in any one of the following penalties (at the instructor's discretion)

- zero points on the work product, or
- letter grade reduction on final grade (i.e grade of A- becomes B-), or
- failing grade in the course

All incidents of cheating are reported to the Associate Dean. Additional penalties may be imposed.

Respect for Diversity

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and very much appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

Disability Accommodations

If you have a disability and are registered with the Office of Disability Resources, I encourage you to use their online system to notify me of your accommodations and discuss your needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at access@andrew.cmu.edu.

Managing Stress and Obtaining Support

Take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep, and taking some time to relax. This will help you achieve your goals and cope with stress.

If you experience any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. ***Consider reaching out to a friend, faculty, or family member you trust for help getting connected to the support that can help.***

On campus, Counseling and Psychological Services (CaPS) is here to help.

Contact them at: 412-268-2922; or <http://www.cmu.edu/counseling/>

If you or someone you know is feeling suicidal or in danger of self-harm, call someone immediately, day or night:

CaPS: 412-268-2922; <http://www.cmu.edu/counseling/>

Re:solve Crisis Network: 888-796-8226

If the situation is life threatening, call the police:

On campus: CMU Police: 412-268-2323

Off campus: 911