

NOTE: On Sept 30, 6:20PM – 9:20PM, you will be participating in an experience based learning exercise, in-class. MARK YOUR CALENDER.

THE KATZ GRADUATE SCHOOL OF BUSINESS

University of Pittsburgh

Process Engineering BQOM 2523-14827(Prerequisite: BQOM 2411)

Production Management & Process Improvement BQOM 2524-14828(Prerequisite: BQOM 2523)

Fall 2014, Tuesday 6:20 PM - 9:20 PM, 270 Mervis Hall

Instructor: Dr. GG Hegde 348 Mervis Hall, University of Pittsburgh, Pittsburgh, PA 15260.

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Office Hours: Tuesdays 5:00PM-6:00 PM and any day by appointment.

ABSTRACT:

Process Engineering BQOM 2523(Prerequisite: BQOM 2411 or permission from the instructor):

This course introduces principles of engineering, design, and management of business processes - the way businesses organize 'work' in service as well as manufacturing operations. The interrelationships among design parameters, market/demand variability, and performance measures will be studied. The principles learnt here are critical in engineering and/or reengineering of the business processes in a supply chain.

The course provides foundations for design and management of business processes-the process of producing goods and services. Whether it is a service business or a manufacturing business serving domestic market or global market, the needs and fundamental problems of any manager are: taking inputs and transforming them efficiently and effectively into products and services resulting in a "satisfied" customer. In particular, it helps to view the activities one performs at the operations level as activities that improve the quality of goods and services supplied to customers. As such, the management of production is the management of the processes at all stages of the business.

ABSTRACT:

BQOM 2524-14828(Prerequisite: BQOM 2523)

we will continue with the study of continuous improvement principles. We provide procedures for an efficient management and improvement of the flow of materials within an organization

characterized by multiple products and uncertain demand conditions.

Clearly, the management of production and operations requires multi disciplinary tools and principles of operations research, economics, accounting, marketing, and information systems. And, our discussion will emphasize the multi disciplinary thrust.

SYLLABUS for BQOM 2523 and BQOM 2524:

Overview:

This course introduces principles of engineering, design, and management of business processes - the way businesses organize 'work' in service as well as manufacturing operations. The interrelationships among design parameters, market/demand variability, and performance measures will be studied. The principles learnt here are critical in engineering and/or reengineering of the business processes in a supply chain.

The course provides foundations for design and management of business processes-the process of producing goods and services. Whether it is a service business or a manufacturing business serving domestic market or global market, the needs and fundamental problems of any manager are: taking inputs and transforming them efficiently and effectively into products and services resulting in a "satisfied" customer. In particular, it helps to view the activities one performs at the operations level as activities that improve the quality of goods and services supplied to customers. As such, the management of production is the management of the processes at all stages of the business.

In the second part of the course (BQOM2524), we will continue with the study of continuous improvement principles. We provide procedures for an efficient management and improvement of the flow of materials within an organization characterized by multiple products and uncertain demand conditions.

Clearly, the management of production and operations requires multi disciplinary tools and principles of operations research, economics, accounting, marketing, and information systems. And, our discussion will emphasize the multi disciplinary thrust.

Text/Supplementary Material:

Required

- 1) HBS Course packet: Please buy one case and two “Notes” from HBS. Visit: <https://cb.hbsp.harvard.edu/cbmp/access/28588240>. Buy before the second class.
- 2) Operations Game by Sam Wood, Responsive Learning Technologies, San Jose, CA: Internet code/access to be given in class. Please make cheque for \$20 made payable to: Responsive Learning Technologies, no cash please, bring the cheque to class.
- 3)The Goal: A Process of Ongoing Improvement by Goldratt and Cox ISBN: 0-88427-178-1 Available on any online book store(approx. cost: \$15)

Recommended : Today and Tomorrow by Henry Ford

Grading:	<u>BQOM 2523</u>	<u>BQOM 2524</u>
Class Participation:	15%	15%
Case Analysis, Book Report and HW:	10%	20%
Game on 9/30 Tue. 6:20PM-9:20PM:	25%	15%
Test1, In-class, closed book, closed notes:	50%	----
Project:	----	25%
Final, Open Book:	----	25%

Class Participation: Please do take class participation, with all seriousness. I strongly believe that it is an excellent component of learning process. Input for class participation grades are:

- (i) Thoughtful, concise comments/questions during the class
- (ii) Summary of previous class(class summary), hard copy(ppt or word doc), 1-2 pages. If you miss a class, you may submit class summary for 80% grade.

Case Analysis/HW/Class summary: You will hand in typed analysis of the case questions at the beginning of the class (hard copy).

“The Goal” Book Report(due 9/23): Begin reading the text book “The Goal” – an excellent exposition of lean management principles disguised as a novel. You must read at least first 50 pages of the book before the first session –Aug 26th. Nothing due on Aug 26th. You will submit a report (hard copy) on the book on September 23rd. Your report should have: A summary of the book (exposition of lean principles used in the book), 2-3 pages, line spacing 1.5 lines, font 12

pt. You may summarize the book focusing on the following questions:

- “A business system’s performance is determined by its bottleneck performance.” What are the “metaphors” Goldratt uses to illustrate this principle?
- “Things average out,” or do they?
- We should target 100% utilization of all resources, agree or disagree.

Test consists of case analysis, and questions based on the concepts discussed in class. I will look for your ability to analyze new operations problems.

Game: You will manage a web-based “factory.” You will be graded based on:

(i) Memo which outlines the logic in managing the “factory.” (10%).

(ii) Cash reported at the end of the Game for the “factory” (15%).

Project: I will provide information on project (for students registered for 3 credits.

Code of Ethics: Do not communicate with anyone while preparing the case analysis, and the Game. I trust you 100%, and I never had any problems in the past. However, to avoid any perceptions of violations of code of ethics, (i) different versions of cases and Game may be given to individual students (ii) I will assign seats during the tests. I am confident you will co-operate with me to maintain the integrity and intellectual environment throughout the course.

Disability Resources and Services :

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 216 William Pitt Union, (412) 648-7890/(412) 383-7355 (TTY), as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course

BQOM 2523 Class Schedule as of August 26, 2014(Class meets Tuesdays, 6:20PM-9:20PM in 270 Mervis)

Week#	Date	Topic	Assignment
1	8/26	<ul style="list-style-type: none"> • Course overview & introduction • Business Process Parameters 	Start reading “The Goal” Book summary is due on 9/23 Nothing Due
2	9/02	<ul style="list-style-type: none"> • Process and Bottleneck analysis • Assign HW due next class 	Nothing Due
3	9/09	<ul style="list-style-type: none"> ○ Opportunity cost of capital/capacity ○ Instructions for Donner Case 	Bring Laptop DUE: HW DUE: Class 1 & Class 2 Summary
4	9/16	<ul style="list-style-type: none"> • Donner Company • Marketing, Accounting and Operations Interface. 	DUE: Donner Case DUE: Class 3 Summary
5	9/23	<ul style="list-style-type: none"> • Batching and the EOQ model • NVAT and Utilization 	DUE: “The Goal” book summary DUE: Class 4 Summary
6	9/30	<ul style="list-style-type: none"> • Experience Based Learning: Littlefield Game 	Bring Laptop configured for internet access. Nothing Due
7	10/07	Test In-class, closed book	DUE: Game report
	10/14	No class for the courses which meet Tuesdays-Fall Break, Monday class moved to Tue, Tue classes canceled	

		<u>BOOM 2524 as of 8/26/14 (to be revised).</u>	
8	10/21	<ul style="list-style-type: none"> • Project Information • TEST REVIEW • Process Improvement Examples 	Read BTF Paper (on the courseweb), form a team of size two/three, identify a process improvement project in your workplace, prepare a synopsis for project.
9	10/28	<ul style="list-style-type: none"> o Utilization, Variability, and Non value added time o Instructions for Glass Processing Case 	Great Nuclear Fizzle due
10	11/04	<ul style="list-style-type: none"> • Customer Service and Variability • Performance measures for continuous processes. 	Capacity & Inventory Case due Glass Processing Case due
11	11/11	Atlanta Distribution case: Demand variability and customer service Lean Six Sigma: Process Interactions Variability(Internal), Process Capability, and Control.	Atlanta Distribution case due
12	11/18	Process Interactions and Productivity: In a multi-plant network, identifying root causes of productivity problems Process Design and Product Choice	Transformer case due Continuous process case due
	11/25	No class-Happy Thanksgiving	
13	12/02	Project Presentations. Game	<u>Project Report due</u>
14	12/09	Final open book	