

QMB 7933
PhD Seminar in Operations Management
Spring 2017
Module 4

Instructors: Janice Carrillo
Meeting Time: TBA
Location: ISOM Conference Room, STZ 355

Description

This course provides an overview to several contemporary research topics in the area of operations management, including the following: supply chain management, optimal control theory, product development, and environmental issues.

Course Readings

The course materials will consist of various research papers, book chapters, lecture notes, etc. that are relevant to the topic of discussion for the week. Students are responsible for reading all of the assigned course materials and contributing to the in-class discussions. Participation will be factored into your course grade. In addition, students must prepare short summaries for particular assigned papers.

Short Summaries

For certain assigned readings, students should prepare a 2-3 page short summary which includes the following items:

1. Overview of the problem
2. Overview of the assumptions
3. Summary of the results
4. Critique of the results
5. Suggestions for future research based on this paper

These summaries can be used as a study guide for qualifying exams, and for future reference.

Presentations

Students are expected to lead the class discussion of certain research papers as assigned. A presentation (45 minutes) should be prepared, which includes a set of slides and hand-outs for the seminar participants. The presentations should include summary information, as well as a more detailed analysis of the model presented in the papers.

Short Summaries for Empirical Papers

Students should write a short presentation of the empirical paper assigned to them including the following items:

1. Introduction/overview of the topic being studied
2. Description of the methodology
3. Description of the data source
4. Overview of the key results

5. Critique of the results/suggestions for future research

Final Presentation

A final presentation on an original research topic is due at the end of the seminar. The presentation should include the following:

1. An overview of the research problem. Why is this topic important?
2. A summary of the related literature. How does your research relate to the previous literature?
3. A description of the model. What are the significant factors and decision variables? What assumptions does the model make? What is the methodology chosen?
4. Describe initial results. Are these results intuitive? Why are they important?

Students should start work on their project early in the semester. First year students can focus on the overview and literature review portions of the model. Other students may present work associated with doctoral and/or second year paper projects.

Grading

Your grade will reflect your performance on class participation, summaries, and presentations.

Date

Topic and Assignments

(Please double check the course website for an updated schedule.)

Topics and papers will be determined before the first week of class. A sample schedule of topics from the previous course includes the following:

Week 1 Introduction to Course

1. **Discussion of Research Outlets**
 - a. "A Vision for Management Science," by Cachon
 - b. Ira Article
 - c. List of Journals
2. **Overview and Discussion of Innovation Topics**
 - a. "Innovation Within and Across Borders"
3. **Assignment: Create a list which contains the following items**
 - a. Three general topical research areas that you are interested in.
 - b. Five specific research ideas. List and give a brief description of these.

Week 2 Introduction to Course and Optimal Control Models

1. **Overview of Optimal Control Theory**

Week 3 Optimal Control Models in Product Development and Technology Management

1. "Improving Manufacturing Performance by Process Change and Knowledge Creation," By Carrillo and Gaimon
2. "Knowledge Creation and Knowledge Transfer in New Product Development Projects," Working Paper by Xiao, Gaimon and Carrillo

Week 4 Reviews and Lean NPD

1. **“Reconceptualizing the effects of lean on production costs with evidence from the F-22 program”**
2. **Working paper on Sustainability**

Week 5 *Empirical Papers of Choice*

- “Have U.S. Manufacturing Inventories Really Decreased? An Empirical study”**
- “The Demand Effects of Joint Product Advertising in Online Videos”**
- “How Sales Taxes affect Customer and Firm Behavior: The Role of Search on the Internet”**

Week 6 *Product Line Design*

- “Coproduct Technologies: Product Line Design and Process Innovation”**
- “Assortment Planning for Vertically Differentiated Products”**
- “The Impact of Contracts and Competition on Upstream Innovation in a Supply Chain”**

Week 7 *Final Presentations*