



**SCMG 488 Inventory Management – Winter 2018**  
**Th 6:00 - 9:00 pm (Sec 001)**  
**Schreiber Center Room 725**

**Professor:** Çerağ Pinçe

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**Office Hours:** Th 11:30-12:30 (or by appointment)

**Catalog Description**

A study of the fundamental principles of effective management of inventory with emphasis on inventory costs, product stratification, performance measures, demand forecasting, periodic and continuous review, safety stock, material requirements planning, customer service and use of technology in inventory management. Issues related to storage and the handling of inventory stock are also studied.

Outcomes: Students will have developed an understanding of the issues involved in planning, managing and control of inventories and materials in a supply chain.

**Course Overview**

This core course is designed to focus on the importance of Inventory Management and strategic and quantitative problem solving for masters of supply chain majors. The course will cover fundamental as well as contemporary concepts, models, and practices in inventory management that are commonly used by firms. The course includes discussions and problem solving exercises, as well as lectures focusing on quantitative methods and best practices. The course also includes extensive student interaction, and team and faculty-led discussions.

**Course Objectives and Learning Outcomes**

Develop an understanding of the issues involved in planning, managing and control of inventories and materials in a supply chain. Product stratification schemes for SKU rationalization to identify right products to stock.

Develop an understanding of different demand forecasting methods and how forecast errors, lead time and demand variability can affect inventory costs. Review different inventory (periodic/continuous) and replenishment policies.

Understand how each inventory policy affects inventory and customer service levels. How to compute re-order points, order quantities, safety stock levels, and total inventory costs.

Determine how to measure and improve different productivity and customer service measures (inventory turns, inventory on-hand, fill-rate, stock outs).

### Course Materials

#### Textbooks:

Waters D., *Inventory Control and Management*, Wiley, Second Edition.

Chopra and Meindl, *Supply Chain Management: Strategy, Planning, and Operation*. Pearson, Fifth Edition.

Cachon and Terwiesch, *Matching Supply with Demand: An Introduction to Operations Management*, McGraw-Hill, Third Edition.

Class/Lecture Notes: Can be downloaded from the course web site at Sakai.

### Course Website

The course will utilize the Loyola Sakai Learning Management System, which can be accessed at <http://sakai.luc.edu>. Sakai will be used as a repository for class materials (syllabus, lecture notes, announcements etc.). Please be sure to check the Sakai web site regularly.

### Homework

There will be 3 homework assignments which will be assigned and must be submitted via Sakai. Each assignment will be graded over 100. The contribution of the first assignment to the final grade is 6%, the contribution of the second and the third assignments is 7% each.

### Grading Policy

Grading for the course will be based on total points earned by the end of the course. Your final grade will be based on a percentage scale with the scale never going above the following:

A 93% +	C 73%
A- 90%	C- 70%
B+ 87%	D+ 67%
B 83%	D 60%
B- 80%	F below 60%
C+ 77%	

The final grade will be calculated as follows:

20% - Homework Assignments (HW1-6%, HW2-7%, HW3-7%)

25% - Midterm Exam

45% - Final Exam

10% - Participation

Both exams will be closed book and closed notes. You will be allowed to bring one page of notes, double-sided. Simple calculators will be allowed during the examination. Graphing calculators, programmable calculators, cell phone calculators or any kind of computers will not be allowed during the examination. Final exam is cumulative.

Participation grade will be based on the students' contribution to class sessions based on the contributions quality and frequency. Mere attendance to the class sessions will not be counted as participation.

### **Quinlan School of Business Policies:**

#### **Attendance**

Class attendance and participation are fundamental components of learning, so punctual attendance at all classes, for the full class meeting period, is expected of Quinlan students. The student is responsible for any assignments or requirements missed during an absence.

#### **Make-Up Examinations/Assignments**

Because Quinlan faculty believe examinations represent a critical component of student learning, required examinations should be taken during the regularly scheduled class period. **Make-up examinations are discouraged.** Exceptions may be granted only by the faculty member or department chair, and only for unavoidable circumstances (illness verified by a signed physician's note, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, or religious observance). A make-up final examination may be scheduled only with the permission of the appropriate Quinlan Assistant or Associate Dean.

#### **Academic Integrity**

All members of the Quinlan School shall refrain from academic dishonesty and misconduct in all forms, including plagiarism, cheating, misrepresentation, fabrication, and falsehood...Plagiarism or cheating on the part of the student in individual or group academic work or in examination behavior will result minimally in the instructor assigning the grade of "F" for the assignment or examination. In addition, all instances of academic dishonesty must be reported to the chairperson of the department involved.

For further information about expectations for academic integrity and sanctions for violations, consult the complete Quinlan School of Business Honor Code and Statement of Academic Integrity on the Quinlan website:

<http://www.luc.edu/media/lucedu/quinlanschoolofbusiness/pdfs/Honor-Code-Quinlan-July2012.pdf>

### Week by Week Course Outline (Tentative\*)

Week	Date	Topic	Reading (Waters)
1	Nov 8	Introduction to Course and Faculty Introduction to Inventory Management	Chapters 1-2
2	Nov 15	Demand Planning and Forecasting	Chapter 7
	Nov 22	Thanksgiving Break, No classes	
3	Nov 29	Inventory Models with Deterministic Demand- Economic Order Quantity (EOQ) Model	Chapters 3-4
4	Dec 6	Inventory Models with Deterministic Demand- EOQ Extensions	Chapters 3-4
5	Dec 13	<b>Midterm Exam (Weeks 1-4)</b>	
	Dec 17 - Jan 13	Winter Quarter Break, No classes	
6	Jan 17	Inventory Models with Uncertain Demand – Single Period (Newsvendor Model)	Chapter 5
7	Jan 24	Inventory Models with Uncertain Demand – Multiple Periods (Continuous Review Policies)	Chapter 5
8	Jan 31	Inventory Models with Uncertain Demand – Multiple Periods (Safety Stocks, Reorder Points)	Chapter 5
9	Feb 7	Inventory Models with Uncertain Demand – Multiple Periods (Periodic Review Policies)	Chapter 5
10	Feb 14	<b>Final Exam (Weeks 1-9)</b>	

**\*Please note:** This class may occasionally deviate from the course outlined above. The instructor reserves the right to make changes as needed to the course syllabus.