



Aalto University
School of Business

Product and Inventory Management (35E00300) Course introduction

Markku Kuula

Program

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Hands on approach



- PIM is a hands-on course for active learning by doing.
- The emphasis is on students personally analyzing and solving of quantitative assignments and a case.

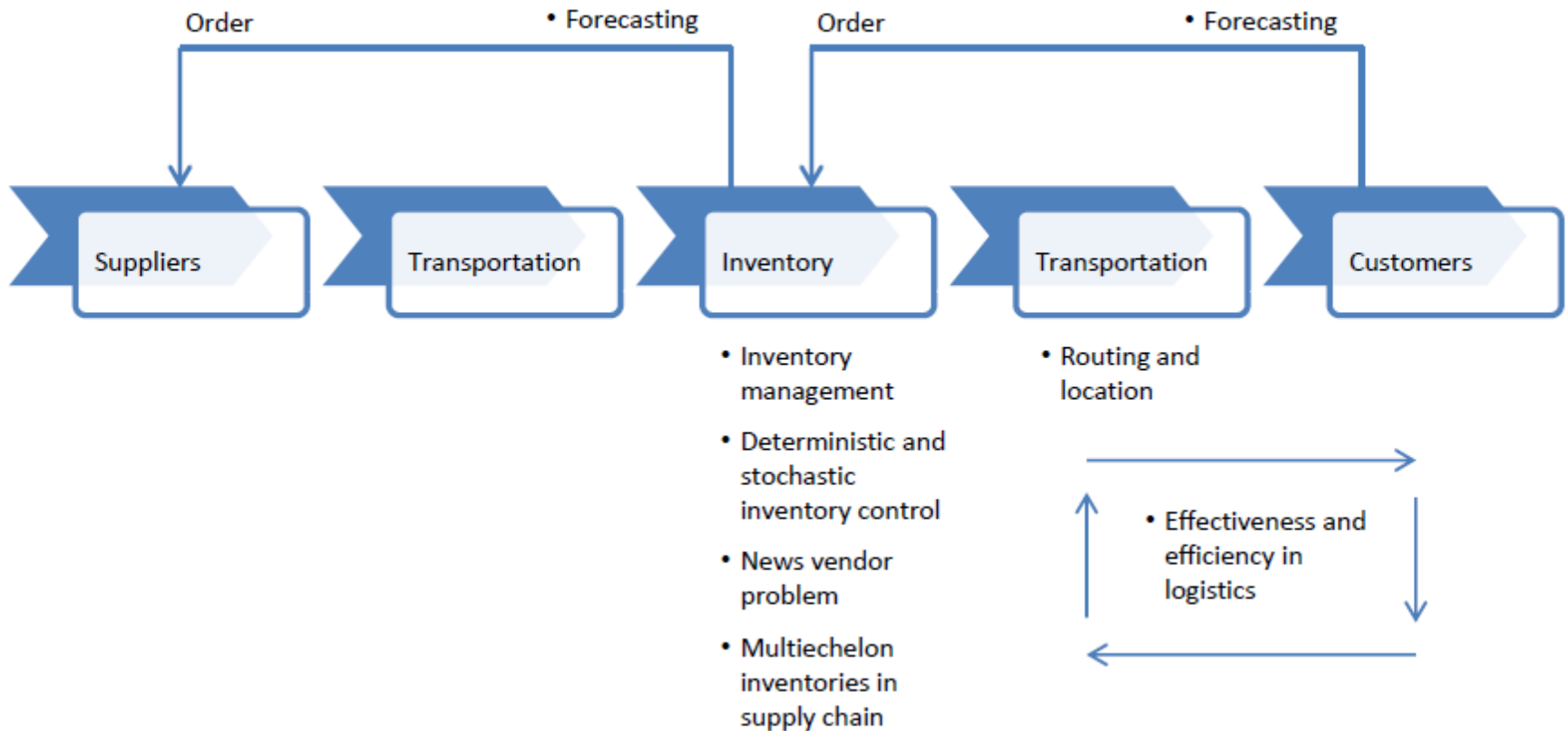
Course objectives

- The course provides an integrated methodology for strategy based inventory and product management in supply chains.
- Students learn to analytically solve problems and make decision considering forecasting, inventory planning and service levels, profitability, product range, supply chain dynamics, facility location, distribution, and routing.

Course outline

- ♠ Course introduction
- ♠ Effectiveness and efficiency in logistics
- ♠ Demand forecasting
- ♠ Inventory management
 - Deterministic inventory control
 - Stochastic inventory control
 - News vendor problem
 - Multiechelon inventories in supply chain
- ♠ Routing and location
- ♠ Case Sport Obermeyer
- ♠ Case Capacent
- ♠ Course wrap-up

Course flow



Course prerequisites

- Comprehensive familiarity in Tuotantotalous (35A00110), Operations Management (35A00210), or matching knowledge acquired is highly recommended.
- Recommended mathematical skills recommended: Basic calculus, polynomial functions and their derivation, regressions.
- Recommended statistics skills: Statistical distributions and central limit theory.
- Students are expected to know or self acquire the MsExcel skills needed for solving the assignments.

Course requirements

- Lectures: Mondays and Wednesdays (G-112) 13.15-14.45
- Assignment feedback sessions starting 22.9.2017: Fridays (G-112) 10.15-11.45
- Obligatory 5 home assignments (max 30 points)
- Obligatory Case Sport Obermeyer (max 20 points)
- Obligatory Case Capacent (max 10 points)
- Obligatory Final exam (max 40 points)

How to pass the course

- Student pass the course if he receives:
 - At least 15 points from the assignments (= 50% x 30)
 - At least 10 points from Case Sport Obermeyer (= 50% x 20)
 - At least 5 points from Case Capacent (= 50% x 10)
 - At least 20 points from final exam (= 50% x 40)
 - At least 50 points from the whole course (= 50% x 100)

Reporting assignments and case

- ♣ Make your reports user friendly, clear and concise.
- ♣ Explain how you reached your results by showing your formulas and your reasoning.
- ♣ You can solve your assignments by using pen and paper or by using Microsoft Excel.
- ♣ Prepare to answer to teachers questions relating to your reports.

Returning assignments

- Return your assignments before assignment feedback session on designated Fridays at 10.15 which is deadline. You can return your assignments to:
 - –room G-112 before the start of feedback session
 - –teacher’s (Markku Kuula) letter box on Chydenia’s 5th floor
 - –or by email to Markku.Kuula@aalto.fi
- Late deliveries are not accepted.
- When solving the assignments, students groups are allowed to discuss with each other. However, identical reports are not accepted.
- You are assumed to think and report your assignments yourself. If you happen to find, e.g.in internet, teaching notes or other “correct answers”, DON’T USE THEM.
- Direct copying and pasting of answers means failure of the course and warning by the rector. Plagiarism is not tolerated.

Contact information

Professor Markku Kuula

- Markku.Kuula@aalto.fi
- Reception Chydenia's 5th floor when needed at room H5.27

Course material

♥ Book

- Silver E. A., Pyke D. F. & Peterson R.: Inventory Management and Production Planning, 3rd ed., Wiley 1998 (pp. 1 – 531). ISBN 0-471-11947-4
- For quantitative assignments you need to study chapters 4-12.

♥ Course Handout

- Chapters from books
- Case Sport Obermeyer
- Case Capacent

♥ Articles to download from course home page

- Fisher, Marshall L. & Hammond, Janice H. & Obermeyer, Walter R. & Raman, Anathan (1994), Making Supply Meet Demand in an Uncertain World, Harvard Business Review, May–June, pp. 83–93.
- Lee, Hau L. & Padmanabhan V. & Seungjin Whang (1997), Bullwhip Effect in Supply Chains, Sloan Management Review, Spring, pp. 93–102

♥ Lecture notes and supplementary material on course home-page <https://mycourses.aalto.fi/course/view.php?id=3752>

♥ Assignments are available from course home page a week before deadline.