

Prerequisite: OM 711 Management of Operations is required unless you have prior knowledge of OM concepts and case-based classes (and have approval from the instructor).

Class Times: Section 901, Mondays 6:00-8:40 PM (Jan 5 – Mar 9, except Jan 19), Lindner 214.

Instructor: Uday Rao, <http://www.business.uc.edu/Uday-Rao>; **E-mail:** uday.rao@uc.edu

Office: Lindner 528, **Phone:** 556-7138, **Fax:** 556-5499,
Office Hours: *TBA (tentatively M 4:15-5:30 p.m. or by appointment)*

Text: None required; course materials will be made available through blackboard.uc.edu.

Recommended books include (some may be put on reference at Langsam library):

1. Supply Chain Management: Strategy, Planning, and Operation, 3rd Edition, Sunil Chopra and Peter Meindl, 2007. 2. Designing and Managing the Supply Chain: Concepts, Strategies, and Cases, 2nd Edition, David Simchi-Levi, et al., 2003. 3. Production and Operations Analysis, 5th Edition, Steven Nahmias, 2005 (new 6th edition in 2009). 4. Factory Physics, 3rd Edition, Wally Hopp and Mark Spearman, 2000.

Other interesting “quick reads” include: The Goal, Eliyahu Goldratt, 3rd Edition, 2004. It’s Not Luck, Eliyahu Goldratt, 1994. The Machine that Changed the World, James Womack, et al., 1991. Clockspeed, Charles H. Fine, 1998. The World is Flat, Thomas Friedman, 2005. The Wal-Mart Effect, Charles Fishman, 2006

Readings: See course web site, <http://blackboard.uc.edu>, www.study.net, or class handouts.

Course Objectives: After completing this course, students should be able to:

- Explain the effect of a supply chain on business operations
- Express familiarity with different forecasting tools and understand their uses
- Model and solve “messy” supply chain problems
- Choose and apply an appropriate inventory model to improve supply chain performance
- Understand the importance of transportation and logistics in the supply chain and be familiar with ways in which transportation problems are modeled and solved
- Understand how and why companies use coordination schemes to improve supply chain performance
- Explain some of the difficulties faced by supply chains operating in a global environment
- Use Excel to solve several different supply chain operational problems
- Cite real examples of good and bad examples of supply chain management from a variety of industries and be able to identify their merits and shortcomings

Course Method: This class will be a mix of lectures and case discussions. Case studies will be heavily emphasized and active discussion is expected. This class will also include several experiential learning activities to help illustrate concepts. You are expected to come to class fully prepared and willing to participate in class discussions. Prepared means that you have read the assignments, familiarized yourself with the presented theory from the previous class, given thought to the problems presented in the case, considered how these problems could be addressed using applications of the theory presented in this class, and completed any assigned write-ups or problems. Your willingness and ability to contribute to class discussion and ask meaningful questions will be included in your class participation grade.

Assessment: Group assignments must be done in *groups of three or fewer*; you do not need to use the same team for all assignments. The final exam will be an *individual* take-home exam. The UC student code will apply to all coursework, refer to <http://www.uc.edu/ucinfo/conduct.html> for details.

- Group Case Writeups 25%
- Individual Assignments 20%
- Course Project 20%
- Final Exam 25%
- Class Participation 10%

Group Case Writeups: (25%) You will be required to provide several case write-ups and summaries for this class. Case write-ups should be done in groups of 2-3 people (you may work alone if you so desire, but a group is extremely encouraged). The case write-up will be limited to **five double-spaced pages** (you may include an additional appendix with any supporting calculations or other materials). This will force you to make difficult choices for what to include in the write-up. You may assume that your audience is familiar with the problem, so a lengthy description of the case scenario is not necessary. Often, there will not be a single correct answer for the case. You will be graded based on the reasonableness of your assumptions, the insightfulness of your analysis, your proposed recommendations, as well as your grammar, punctuation, and writing style. Refrain from “consultant speak.” For example, avoid statements such as, “Company X should use better forecasting.” In fact, every company can use better forecasting. If you want to recommend better forecasting, demonstrate how to do the better forecasting, e.g., what model should be used with what data, and then perform the analysis. Typical writeups consist of concise logical modules including: 1. Executive Summary (of report, not case) 2. Analyses – main issues, list of options considered, recommendations with qualitative justification / quantitative analyses, 3. Implementation; Limitations / Risks and Contingencies.

Each of the two case write-ups required in this course will require detailed analytical analysis and formulation of your suggested solution to the overall problem. You are expected to present your case write-up as if you are actually trying to get upper management to adopt your suggested solution. When writing the case consider what would be important and convincing for management in regards for implementing your solution. What are the important assumptions being made? Are they defensible? Why do you believe your solution method is appropriate? What other factors should be considered in implementing your recommendations? You should also note that as such, clarity and presentation will count in determining your grade. Finally, remember that **YOU MUST BACK UP YOUR RECOMMENDATIONS WITH ANALYSIS.**

Individual Assignments: (20%) Homework assignments or topic summaries. Summaries are generally concise, one-page write-ups for the assigned reading. These will typically be assigned on weeks when a case write-up is not due and are designed to be completed by individual students. Specific questions will be provided to help you to think about the assigned readings and theory applications for the next class and to guide your write-up. Individual summaries may also contain several specific homework-type questions to further your understanding of specific concepts.

Course Project: (20%) This project involves a brief team presentation on a supply chain issue that either provides deeper knowledge on topics covered in class or that provides breadth by supplementing OM 783 class materials (e.g. SCOR model, refer to http://www.supply-chain.org/cs/root/scor_tools_resources/scor_model/scor_model). Further details on the course project are included on the last two page of this document.

Exam: (25%) A take-home final exam (week 10 & exam week) will account for 25% of the course grade. Details on the exams, including syllabi and sample questions, will be provided on blackboard.

Class/Section Participation: (10%) Score will be based on class attendance and involvement (insightful remarks or clarifying questions) and account for 5% of course grade. Criteria: 1. Willing to participate? 2. Good listener? 3. Evidence of analysis of cases and readings? 4. Make well thought out statements that are relevant to the discussion and linked to others’ comments – identify

overlooked points or clarify, highlight, and synthesize important aspects of earlier comments leading to a clearer understanding of the concepts or to new insights. 5. Be willing to test new ideas leading to a creative discussion, rather than only “safe” comments.

Miscellaneous Items: Please talk to the instructor if you have any doubts about policies regarding assignment re-grades (must be done within 7 days of return of graded assignments), use of cell phones (turn off or put on vibrate in class), special needs policy (I seek to facilitate maximal learning), or computer usage in class.

Tentative Syllabus & Schedule: *Sources for course materials will be posted on blackboard*

Week	Lecture Materials	Readings, Cases, HWs
#1: Jan 5	Supply Chain Introduction	1. The Economist: The Physical Internet, 2. HBR: “What is the Right Supply Chain Design for Your Product?”
#2: Jan 12	Forecasting Inventory	1. Kellogg Grad School: Seven-Eleven Japan Co. Case. 2. Forecasting Notes. INDIVIDUAL SUMMARY
Jan 19	No Class, University Holiday	
#3: Jan 26	Inventory	1. HBS: L.L. Bean Case, 2. HBR: “Making Supply Meet Demand in an Uncertain World” 2. EOQ Inventory Notes FORECASTING HW
#4: Feb 2	Risk Pooling	1. MIT: Steel Works, Inc. Case, 2. WSJ: GM Cadillac Article, 3. SCM Review: The Real Cost of Holding Inventory, GROUP CASE WRITEUP
#5: Feb 9	Logistics, RFID	1. HBS: Burlington Northern Case, 2. The Distribution Game, The Warehouse Game. LOGISTICS HW
#6: Feb 16	Global Supply Chains	HBS: Applichem Case, GROUP CASE WRITEUP
#7: Feb 23	RFID	Tuck/Stanford: Quad Wants to be a Savi Player in Agribusiness. INDIVIDUAL SUMMARY
#8: Mar 2	Beer Game	HBS: “The Beer Game”, PROJECT PRESENTATIONS
#9: Mar 9	Supply Chain Collaboration	1. HBS: Barilla SpA Case, 2. WUSTL: “Video Rental Developments and the Supply Chain: Netflix, Inc” INDIVIDUAL SUMMARY, PROJECTS CONTD.
TBA	Final Exam	FINAL

Miscellaneous Readings: Will be listed on Blackboard and made available, whenever permitted by copyright (e.g., UC Libraries Business Databases). Copyrighted materials HBS cases will be available through www.study.net.

OM 783 Supply Chain Course Project Information:

Each group will select a topic of their own related to Manufacturing or Service Operations OM Management, which offers the potential to explore Supply Chain issues. Projects relating to actual company problems are encouraged. Your background and interests in conjunction with the topics in the course schedule should guide you to possible areas. Research potential topics with a view to understanding key managerial challenges and implementation issues. The main deliverables are:

1. Presentation by team (~15 min including Q&A)
2. Report (formatting details provided below, other details will be available on blackboard)

Detailed schedule for presentation will be announced in class.

Initial project groups and tentative topics must be finalized by the end of the third week of class.

Soon after, course groups and project titles will be made available on the blackboard web page. Feel free to contact me any time you want to discuss potential project topics or obtain information on specific topics of interest.

Group size of at most four is acceptable. I am flexible on project topic, structure, and content; if you have something you are interested in, please run your project idea by me and I will provide quick feedback on appropriateness. You are responsible for the planning and execution of your course project (a good project management learning experience).

I expect all teams to have a draft project presentation outline completed and sent to me by the end of week 7 (you can consider this a project progress milestone). As soon as your team has a rough outline of its project presentation ready, you should show this to me for my initial feedback. (Either drop by my office to discuss, or e-mail me your presentation, or drop your PowerPoint file on blackboard's digital dropbox and notify me by e-mail.)

Pick a **topic** (business, company, real OM problem or activity, an OM physical or computer game, new product or project, or articles / cases / software) of interest to you. Search for further information on your selected topic. This may include a general web search (via, say, www.google.com) or you could check one of the library databases (online through www.libraries.uc.edu) for magazines, newspaper, and journal articles on your selected topic. You can also access Harvard Business School (HBS) publishing for project ideas at <http://harvardbusinessonline.hbsp.harvard.edu> - We have access to Harvard Business Review articles through UC Libraries – Business Source Complete Database; I will try to get you other relevant copyrighted HBS materials (such as cases), to the extent possible. Alternatively, meet with me for one-on-one consultations on possible project areas or potential sources of information or for directions on how to proceed.

Projects may take on several flavors. The key requirement is that the project be interesting and informative, involve original work done by the student team specifically for this OM783 class, and be related to Supply Chain Management. Projects could include description of:

- the evolution of a company's business supply chain, what it competes on or its competitors,
- a plant tour / management interview / textbook chapter (or OM event / managerial practice),
- global operations issues, capacity expansion, mergers and acquisitions, facility planning, process technology, work force and human resource management, production planning and inventory control, quality, sourcing / procurement, packaging and distribution,
- key organizational challenges facing a company or industry,
- impact of fuel costs, ERP, Internet, RFID, cross-functional / entrepreneurial issues.

Try to enjoy this project opportunity!! (Only then will you do a good job and really benefit.)

Project Assessment: The presentation will count for 75 % and report for 25 %. Project presentation will be assessed based on rating [1 (unsatisfactory) to 5 (excellent)] by the audience. This rating will have two components - Presentation Style [Creativity, Structure & Flow, Clarity, Team Dynamics (if

applicable) and Response to Q & A] and Presentation Content [Grasp of Issues, Logic, Breadth / Depth of Analysis]. Audience Rating will be incorporated with Instructor Rating, you will be provided a summary of numerical rating and comments as part of your project assessment.

Presentation schedule details will be posted soon. On each presentation day, the instructor will keep track of time. Each presentation is allotted 15 minutes (approximately 10 minutes for presentation and 5 minutes for Q&A). Brief clarification questions may be asked during the talk, others should be deferred to the end of the presentation. If time is short, the speakers reserve the right to say they will address the issue later (e.g., via e-mail or by sending a response to the instructor). After 10 minutes of the presentation have elapsed, the instructor will signal time left using a hand-signal (raising five fingers for five minutes left), you will also be told when your 15 minutes are up. It is the team's responsibility to not go over their allotted time. If a team goes over by more than 100 seconds, they will be asked to stop abruptly (immediately).

Project reports will be assessed to be Excellent, Very Good, and Good (based on my assumption that smart UC College of Business graduate students would at least do Good project work). Please keep your report concise, use of modular presentation (bullet points and tables are encouraged), a listing of agenda / contents or an executive summary is advisable, use appendices for necessary details.

The project report will simply be a copy of your in-class PowerPoint presentation, along with any additional supplementary slides (or text added in the Notes Pages of each slide) including relevant descriptive materials and a bibliography stating sources of information. Thus, the report will be submitted as an appropriately annotated PowerPoint presentation file. (You may add extra slides at the end of your submitted presentation file that are not used in your class presentation to either provide additional information, such as to cite references, or to address specific questions that may have arisen during your talk's Q& A that you did not have time to answer well.)

Sample Project Reports / Presentations: FYR samples from related OM courses will be available from blackboard. **Project Presentation Schedule:** To be posted on blackboard.

Project Presentation Evaluation Form: Your Name or Initials (e.g. USR): _____

Note: This evaluation sheet is confidential. Purpose: To obtain feedback on your personal viewpoint. PLEASE PROVIDE AN HONEST ASSESSMENT OF EACH PROJECT PRESENTATION. DO NOT ASSESS YOUR OWN TEAM'S PRESENTATION. (THIS SURVEY MAY BE ADMINISTERED ONLINE.)

Team or Project being Evaluated (e.g. Cintas): _____

I) PRESENTATION STYLE, CREATIVITY, STRUCTURE AND FLOW:

1 (Poor)..... 2..... 3..... 4..... 5 (Excellent)

[Clear & Articulate Speakers, Slides (Easy to Understand / Follow), Team Dynamics (if applicable), Response to Questions]

II) PRESENTATION CONTENT:

1 (Poor)..... 2..... 3..... 4..... 5 (Excellent)

[Grasp of Issues, Strength/Logic behind Arguments/Justifications, Breadth/Depth (Completeness) of Analysis]

III) OTHER FEEDBACK / COMMENTS ON PRESENTATION OR TOPIC ITSELF

(This feedback will be summarized and returned to each team.)