# **SUPPLY CHAIN MANAGEMENT – FALL 2013**

**COURSE:** EBGN 559, 3 Credits.

**MEETING TIMES:** Wednesdays 10:00a – 12:45p, Room 211.

**INSTRUCTOR:** Prof. Gregg Macaluso

E-mail: gmacaluso@mines.edu or Gregg.Macaluso@Colorado.edu;

(303) 492-0497

Prof. Macaluso is a now an adjunct member of the Mines ETM faculty as well as a member of the Management & Entrepreneurship Division faculty of the Leeds School of Business, University of Colorado - Boulder while continuing in the role of supply chain consultant and practitioner for companies domestic and abroad. For the last 25+ years, Prof. Mac has been the Director for Supply Chain Capability for a number of leading consulting and professional services firms including Andersen Consulting (now Accenture), Coopers & Lybrand (now IBM Global Services), Ernst & Young, UPS Supply Chain Solutions, and as the Director of Strategic Procurement for CH2MHill. Prof Mac is in his 11th year of teaching at the Leeds School of Business previously as an adjunct and his first year at Mines albeit students from Mines have taken this class at CU. The course is thus a mix of what is academically sound and practically used and in place in the field. The intent will be not only to give insight into the course topic but also to share what clients, entrepreneurs, and prospective employers look for in improving operations all over the world. Please feel free to ask for time to talk about careers in operations, supply chain science, quality and the like as your interest dictates.

**OFFICE HOURS:** 

Wednesday 1pm-3pm (Room 215) or by appointment. As an adjunct I won't have the same opportunity to be on campus but please don't let that stop us from staying in contact. I usually respond to my email within the same day and am available to talk by phone, email or Google Hangout (video conference) with almost any advanced notice so please stay in touch as you require.

**TEXTBOOK:** 

David Simchi-Levi, Philip Kaminsky, and Edith Simchi-Levi, *Designing and Managing the Supply Chain*, 3rd Edition, 2007. Irwin McGraw-Hill.

*Lean Thinking* by James P. Womack and Daniel T. Jones; Simon & Schuster, 1996. Chapters 1-6.

The Womack text is readily available in libraries and other sources if you choose not to buy but you will be responsible for the material. Supplies have been ordered for this class and are in the bookstore.

(Optional) Sunil Chopra, Peter Meindl, *Supply Chain Mnaagement*, *Strategy, Planning, and Operation*, 4<sup>th</sup> ed., 2010. Pearson, Prentice Hall.

(Optional) Copy on Reserve in Leeds Library – Paul Hawken, et. al. *Natural Capitalism*, Little, Brown & Company, 1999. Chapter 7.

## **REPRINTS:**

Hau L. Lee, V Padmanabhan, Seungjin Whang, *The Bullwhip Effect in Supply Chains*, MIT Spring 1997, Volume 38, Number 3, Reprint 3837 (available via HBR or MIT Web sites).

*Introduction to Activity-Based Costing*, Harvard Business School, Robert S. Kaplan, Reprint 9-197-076, Rev. July, 2001.

Putting Real Options to Work – Harvard Management Update, Fabian D'Sourza, Reprint U0208C, 2002.

*It May Be Cheaper to Manufacture at Home* – Harvard Business Review, Suzanne de Treville & Lenos Trigeorgis, Reprint R1010F, October, 2010.

## WEB SITE: Blackboard/D2L

Everything supplemental to the text will be on this website. Text notes, supplemental PowerPoint materials, rubrics for the assignments, answers to the in-class assignments or cases (after they are due), practice exam questions, a discussion area so that you chat with other students, the syllabus, hints, updated due dates and announcements for the class, etc. So PLEASE, check back often.

My administrative appointment with Mines (while secured in early Spring of '13) came late and development of a Blackboard site has been and may continue to be due to delayed due to account access. I will provide access to the course website on D2L at CU-Boulder in the interim or offer email for material I cannot get to you otherwise.

#### **OVERVIEW:**

Supply Chain Management coordinates and integrates the flow of materials, information, and capital as they move in a process from supplier to manufacturer to wholesaler to retailer to consumer, both within and among companies. Due to an increased corporate focus on operations cost reductions, Supply Chain Management has grown rapidly over the past several years. To minimize system-wide costs, firms increasingly rely on new supply chain modeling tools that allow the firm's logistics and operations to be integrated.

This course introduces students to the fundamental principles underlying supply chains, and focuses on the integration with both operations and logistics. In particular, the course will concentrate on the design and management of effective, tailored (aka segmented) supply chains, ... those that deliver customer value while maintaining cost advantage.

## **OBJECTIVES:**

The primary course objectives are as follows:

- To compare and contrast major supply chain architectures and strategies, and evaluate their applicability in different settings;
- To develop a basic familiarity with important concepts and methods related to inventory management, aggregate planning, logistics network design, transportation, lean manufacturing, supply chain (SC) mapping, operation models;
- To recognize critical coordination and integration issues in SC Management;
- To identify and analyze recent developments in Supply Chain Management (e.g. evolving role of China and the Pacific Rim in sourcing and managing risk in supply) and related technologies/methods;
- To study Supply Chains in a real-life setting, and apply your knowledge to identify opportunities for improvement.

To achieve these objectives, students will work on case studies and assignments, as well as readings. In addition, in-class exercises, games, simulations, and a course project are used to illustrate and analyze key concepts. My objective is to get you to think-critically about operations and supply chain issues so that you can discern value when presented. It is always my second and oft unstated goal to prepare you for the collaboration-task with others that comes with any proposed change ... as that is often the more difficult task between identifying and capturing value.

**PREREOUISITES:** Decision Modeling, Operations Research, and/or basic Analysis and Statistical Methods as well as equivalent graduate or undergraduate level process mapping/improvement, supply chain, logistics or operations management curriculum are very helpful, but not required. Previous Excel skill and practice in VLOOKUP, Statistical, and Pivot Table functions will also be helpful.

## **EVALUATION:**

There are four principal requirements for the course: Case reports and assignments, Exams, Class Participation, and Group Projects.

# 1. Case & Chapter Questions

I expect each student to have prepared assigned cases and chapter reading notes before they are discussed in class. For this class, case preparation will be a REQUIRED submission, chapter question responses will be OPTIONAL. By this I mean that you will be required to prepare for each case in advance of the day we discuss it by writing up the four roles for discussion (to be described in the next paragraph) and hand in after we discuss for evaluation. Chapter questions are for your consideration as you do your preparation for class. Writing answers to these questions can be helpful in articulating concepts and gaining a better understanding but they will not be evaluated for a grade. They can help me understand areas where you may need help finding your voice so consider them in your overall preparation for class. Late case submissions will not be accepted.

Case discussions with unassigned "cold calls" are a part of the class. Preparing for a case, as most of you know and appreciate, is a far different method of learning than the "lecture" method you may be familiar with from days as an undergraduate. For guidelines on preparing for case work and discussions may I suggest *The Case Study Handbook – How to Read, Discuss, and Write Persuasively about Cases* by William Ellet (available on Harvard Business Publishing).

Each case class will be introduced with 4 cold calls: 1) case introduction (company, background, complication), 2) protagonist/dilemma/objective explanation, 3) critical data and analysis, 4) key elements for consideration in a conclusion and an opinion on what you'd do & why.

When a case is assigned, 4 students will be selected at random to take 1 of the 4 elements described above. Each student should plan for 2 minutes of material for each section (uninterrupted by the prof ... although that is sometimes hard to do ... good news, if you're struggling, I'll give prompts ... learn not to struggle. Keep in mind that I know your preparation will not necessarily segue seamlessly or agree with co-day classmate comments but learning how to compliment and contrast seamlessly is part of the drill here. Look for facts you can substantiate from the reading, relax, and you should be fine. Cold-call performance is evaluated and is part of Case and Chapter Questions grade. I'm always available for coaching before case days so call if you'd like to rehearse.

#### 2. Exams

During the semester, there will be both a midterm and a final exam. They are both take-home exams, and the final exam is comprehensive for the entire course. The format for the tests will be a combination of multiple-choice, short-response, and case review/analysis in format.

## 3. Class Participation

Each week I will ask you to mark your attendance and rate your participation in our class discussions. This will be on the honor system unless it becomes clear that this method is not working. For many of you,

this will be your first formal class in operations and in most cases, supply chain. Since there is no prerequisite in operations management necessary to take the class, the only way we can determine if you have a broad enough perspective to be credible is to get you to talk and contribute each week. My method is very conversational and Socratic so the prompts will be there. I'd like to see each of you think in terms of at least two contributions per class period each week for full credit in participation. I retain veto rights on or about your self-evaluation so try to be as honest with yourself and your contribution as possible as I tend to go hard on those that overrate their performance. The goal here is to help you find your voice ... one that is persuasive, fact-based, yet sensitive and tuned-in to things you don't/can't know. We look to help you create a capability where your technical and design expertise will compliment others discovery of what they believe is right and will effect improvement.

## 4. Group Projects

Group projects will provide students the opportunity to analyze course topics in a real-world setting. The class will be divided into several project groups that each work on a company project related to Supply Chain Management. The purpose of the project is to perform a systematic audit of the current supply chain, and to identify opportunities for improvement.

As a team, the group will prepare both oral and written presentations for each part of the project. Although the entire group will be graded on both presentations, each team member will be allowed to provide a peer evaluation of other team members.

Peer evaluations will be valued 1, 2, or 3: 3 – clear leader in organization and analysis of the case, 110% of Group Grade, 2 – full and active team member, = Group Grade, 1 – absent, argumentative (without offering an alternative), self-interested, or non-participative member, 60% of Group Grade (or less at discretion of Mr. Macaluso). An average of the peer reviews will be taken ... the average must be greater than or equal to 1, 2, or 3 to achieve that peer evaluation level. You may vote on your own performance. Peer evaluations are submitted confidentially.

An individual student's grade will be a composite of the team grade and his/her peer evaluations.

There will be two cases included for group work: **Joe's Microelectronics & Strategic Sourcing** Cases

#### Joe's Microelectronics

This is a study of how to employ Lean techniques in a production environment. It will test the students' ability to assimilate data and make recommendations for a company that is in trouble relative to both quality and productivity. Students will be put in teams of 4 and assigned to interview Joe's executive team about the issues faced at the company.

The teams will then review information given, agree on improvement recommendations, calculate benefit, and present (via PowerPoint) to management. The instructor will look through the responses and a subset of teams may be asked to present in front of the class (time permitting). All teams will receive a review of their recommendations so an accompanying Word document (2-4 pages 1.5-2 line spacing) is required as an attachment to the PowerPoint response format.

# **Strategic Sourcing Case**

The single biggest expense incurred by most companies is for goods and services paid to other companies. Learning how to identify/capture, analyze and report strategies to save money on a company's purchases can represent millions of dollars of savings to organizations that do this successfully. Students will be given a data base of information (MS Access) on a company's spend. Students will take this data base of information, prepare various views and conclusions from the data (in MS Access or Excel) and prepare an MS PowerPoint presentation suitable for senior management evaluation and action. The presentation will point out key objectives in analyzing spend, summaries of what the data shows, pertinent analysis, and conclusions pointing out opportunity and suggesting action. The students will be evaluated on the completeness of their analysis, ability to manipulate the base data offered shown through various computer manipulations, and the completeness and persuasiveness of their final presentation to management.

## **GRADING:**

Case & Chapter Questions	10 %
Group Projects	
<ul> <li>Joe's Microelectronics</li> </ul>	20%
- Strategic Sourcing Case	15%
Midterm Exam	20 %
Final Exam	25 %
Class Participation	10 %

Grades assigned will be in conformance to the University grading system as described in the University catalog. Specifically, for the purposes of illustration, the final grade will be calculated by assigning the weighted averages of the scores received.

	Numerical
Grade	Value
A	4.000
A-	3.700
B+	3.300
В	3.000
B-	2.700
C+	2.300
С	2.000
C-	1.700
D+	1.300
D	1.000
D-	0.700
F	0.000

3.71 - 4.00	A
3.31 - 3.70	A-
3.01 - 3.30	B+
2.71 - 3.00	В
2.31 - 2.70	B-
2.01 - 2.30	C+
1.71 - 2.00	C
1.31 - 1.70	C-
1.01 - 1.30	D+
0.71 - 1.00	D
0.31 - 0.70	D-
< 0.3	F

## **ACCOMODATIONS:**

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and <a href="https://www.Colorado.EDU/disabilityservices">www.Colorado.EDU/disabilityservices</a>

Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations. The syllabus statements and answers to Frequently Asked Questions can be found at <a href="https://www.colorado.edu/disabilityservices">www.colorado.edu/disabilityservices</a>.

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, students who have conflicts should contact me as soon as possible (i.e. at least two weeks in advance) so that arrangements

in accordance with the campus policy can be made. Policy details can be found at http://www.colorado.edu/policies/fac\_relig.html

## **CLASSROOM POLICY:**

It is expected that each student will have read the assigned material before he/she comes to class.

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Facult have the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See polices at

http://www.colorado.edu/policies/classbehavior.html and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\_code

## **HONOR CODE:**

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <a href="http://www.colorado.edu/academics/honorcode/">http://www.colorado.edu/academics/honorcode/</a>

#### SEXUAL HARASSMENT POLICY:

The University of Colorado at Boulder policy on Discrimination and Harassment (<a href="http://www.colorado.edu/policies/discrimination.html">http://www.colorado.edu/policies/discrimination.html</a>, the University of Colorado policy on Colorado policy on Amorous Relationships applies to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination

or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <a href="http://www.colorado.edu/odh">http://www.colorado.edu/odh</a>

Date	Topic	Due (@ beginning of class)
8/21	Course, Website, Syllabus Overview	(Optional primer) ASU Carey – Introduction to Supply Chain Management (SCM) episodes (12).
	Introduction to Supply Chain (SC) Management:	Visit youtube.com for each of these 3-4 minute segments on the major topics in SCM.
	<ul> <li>Definitions</li> </ul>	
	<ul> <li>Fundamental         Challenge –         CELT         length/expectation         s &amp; Responding         inside CELT     </li> </ul>	
	Tenets of Great Supply Chains	
	<ul> <li>Comparative Supply Chain Models</li> </ul>	
	Assign Beer Game Teams	
8/28	SC Tenets (Keys to good or causes for poor SC performance)	Read Ch 1, Chapter Q's (1,4,7,8) optional written responses
In C et.al	In Class Discussion: Bullwhip (Lee et.al.)  Case Discussion: Barilla Spa (eg.	Read – Bullwhip (Lee, et. al). Investigate and <b>briefly</b> describe (written; include with question submission above) a company (separate from Barilla Spa) that overcame or were setback by the Bullwhip effect.
	VMI)	<b>Case Prep</b> : Read Barilla Spa – pgs 143-152 & Section 5.2.3 Methods for Coping with the Bullwhip Effect, pgs 161-162.
Game: Beer Game comparisons by team we will work in teams of 2 where all will play the role of the Distributor (computer will play all other roles).	Practice mechanical use of Electronic Beer Game, (with team) Go to: <a href="http://beergame.bus.umich.edu/guide.htm">http://beergame.bus.umich.edu/guide.htm</a> for the instructions Go to: <a href="http://beergame.bus.umich.edu/gameapplet.asp">http://beergame.bus.umich.edu/gameapplet.asp</a> to start/practice use	
		DON'T DO JUST MAKE SURE YOU READ INSTRUCTIONS, KNOW ACCESS INSTRUCTIONS,, and KNOW HOW TO MANIPULATE.
9/4	Supply Chain Strategy	Read Supply Chain Story Narrative on D2L
	The Supply Chain Story	Read Course Website Powerpoints – SC Segmentation and
	In Class Lecture:, SC Identification, Segmentation, & Mapping, Demand Profiling, Risk Pooling	Mapping.  Read Ch 2 On Risk Pooling and Inventory Strategies. (Q's 2-5, 8, 10, 16) p 60-61.
	In Class Presentation: Implication of Next-Day Availability (Lowes) if not presented earlier	Case Prep: NFL Reebok – pgs 172-177. Answer (optional) Q's 1-3 pg 177.
	Case Discussion: NFL Reebok Replica Jerseys (eg Postponement)	
9/11	Making the Case for Supply Chain Improvement	Read Market Capitalization Optimization – Marsh (pdf) on Course Website.
	In Class Discussion: S/C Impact on	Read Introduction to Activity-Based Costing, Harvard Business

	Market Capitalization	School, Robert S. Kaplan, Reprint 9-197-076, Rev. July, 2001.
	In Class Discussion: Activity Based Costing & Real Valuation Project Justification in Supply Chain Management  In Class Discussion: Real Option Valuation as a compliment/addition/alternative to Net Present Value (NPV) project evaluation in consideration of offshoring or other capital projects.  Guest Speaker: Mr. William Carey CPA –Getting to the C-Suite & Staying There. Speaking the language of change with executives relative to Supply Chain & other initiatives.	Read Putting Real Options to Work – Harvard Management Update, Fabian D'Sourza, Reprint U0208C, 2002. (hd:research)  Read It May Be Cheaper to Manufacture at Home – Harvard Business Review, Suzanne de Treville & Lenos Trigeorgis, Reprint R1010F, October, 2010.
9/18	SC Make – Creating Rhythm &	Review: Lean materials (Course Website)
9/10	Flow- Lean/Six Sigma (cont)  In Class Lecture: Lean/JIT/Six/Sigma Introduction (website material)  Introduction: Joe's Microelectronics Case Material (website)	Read Ch 1-6 Womack, Q: How are pull and flow related? Q: What is the relationship between pull concepts and inventory (particularly Work in Process – WIP)? Q: Describe 3 instances where the author describes <i>muda</i> and how it was addressed.  Q: Investigate the Six Sigma acronym DMAIC, write a one-paragraph summary as to its meaning and its value (if any) in context of your understanding of Lean from Womack.  1st Read and review Joe's Microelectronics (website material)
9/25	SC Make (cont)	Your Homework inbound to the Lean Game is to look at
3,20	Introduction: Answer questions relative to website video introducing Joe's Microelectronics Case Material (website)  Game: Lean Game (Beat the \$10 sales price and Make the Plaque of Fame)	Lecture – 1 Introduction to Joe's Microelectronics on Mediasite link:  http://lsbmedia.colorado.edu/Mediasite/Catalog/Full/0e16983c-e864-470f-a2e3-658c89fb4550/  for 3/5/12. The video should be viewed with the Joe's Microelectronics case materials that are posted on the class website for this session.
10/2	SC Make (cont)	Prepare staff interview questions for use not for hand-in.
	Review: Lessons from the Lean Game  In Class Exercise: Joe's Microelectronics Staff Interviews  In Class Lecture: Implementing Lean:  - calculating Takt - determining staffing, bus scheduling	Watch the Mediasite link on Course Website for 3/5/12 for Lecture 2 – Toolset for Case and Lean Manufacturing as a prelude to seeing these tools in action in class. You will need these tools to navigate the case successfully.

	<ul> <li>line balancing and layout principles</li> </ul>	
	<ul> <li>value stream mapping, spaghetti diagram, kanban location &amp; sizing.</li> </ul>	
	Discussion Area (Website or Conference Call) Time: tentatively set for 10/4, 3pm, 1 hour of Q&A on Joe's Case with Professor Mac.	
10/9	Joe's Microelectronics Select	Joe's Microelectronics Case (MS PPT and Word documents)
	Class Presentations	Read Ch 3,7 Simchi-Levi and Chapter 3, 7 notes (Course
	SC Move - Network Planning & Distribution Strategies	Website)  Case Prep: Q: 8 (a&b) p 241. – Amazon.com European
	In Class Lecture: Introduction to	Distribution Strategy (Ch 7)
	Distribution/Transportation Terms, Modes, Methods, Contract (INCO)	
	Terms	Midterm content will include material through 10/9 (SC Move
	Guest Speaker: Mr. Jay B Freeman, Director – Innovation &	content)
	Outsource Solutions – CH	
	Robinson Co. "The Role of	
	Outsourced Supply Chain Services"	
	Case Discussion: Amazon.com European Distribution Strategy	
	Review: Midterm preparation	
	MIDTERM (Take Home) – Due	
	back via email, 11:59pm (midnight) evening of 10/11/13.	
10/16	Scheduled Off at this Time.	
	Reserved for content makeup & review as necessary. Will be	
	announced go/no-go for additional	
	content 1-2 weeks prior.	
10/23	Closed Loop, Sustainable Supply Chains	Read/listen Website/podcast Mediasite material (Masdar City, Matworks)
	Guest Speaker: Richard Reynolds	Website: masdarcity.ae
	Live/Recorded Podcast – Masdar City, Zero Carbon-Footprint	
	City.	Natural Capitalism (Ch 7 excerpts on Course Website).
	Guest Speaker: Tom Uhlig, VP of	
	Operations, Matworks –	
	Live/Recorded Podcast, Making Sustainable Supply Chains	
	Financially Viable.	
10/30	SC Plan/Sell	Read Ch 6 SC Plan/Sell - Sections 6.1-6.4 pgs 188-198
	In Class Lecture: Forecasting	
	Demand, CPFR, Integrated Planning, Sales & Operations	
	Planning, Demand Shaping, Push-	

	Pull Boundary Design	
11/6	SC Buy - Strategic Sourcing/Alliances & Procurement	Read & Ch 8 (Sections 8.1 – 8.3 Only) Q: (1,2) pg 263.
	Available: Strategic Sourcing Case Material	Read Strategic Sourcing Introduction Material (Course Website)
	In Class Lecture: Strategic Sourcing Theory and Case Introduction (D2L). Contract Type Introduction.	
	Guest Speaker: Mr. John Mika – Sr VP Procurement CH2MHill	
11/13	SC Buy - Strategic Sourcing (cont), International Outsourcing	Read & Ch 9 Q's on Zara and rest of Chapter Q: 1, 2,4, 5, 7, 8 pg 294.
	Review: Strategic Sourcing Case Material	<b>Case Prep</b> : Read – Zara – JIT Fashions vs China Outsourcing pgs 267-279
	Case Discussion: Zara – JIT Fashions vs China Outsourcing	
	Available: Tentatively scheduled conference call (1 hour) for case questions and discussion – Fri 3p, 11/15/13 Google Hangout video conference.	
11/20	Strategic Sourcing Select Class	Strategic Sourcing Case (MS PPT and Word documents)
	Presentations International & Outsourced Supply Chains	Read articles that interest you from McKinsey & Co., Boston Consulting, and NY Times Outsourcing Material (Course Website) particularly recommend "How US Lost iPhone work".
	Presentation/Lecture: Peter v Porter: The Debate that Should Have Happened	Read: BCG-US Manufacturing at a Tipping Point (Course Website)
	Discussion: BCG-US Manufacturing at a Tipping Point	Review (Course Website) – Presentation: Peter v Porter: The Debate that Should Have Happened
12/4	IT and Supply Chain Management	Read Ch 14,15 Select Sections (14.1, 14.2, 14.3, 14.4.2, 14.5,
	Guest Speaker: Mr. Chris	15.5) NO Q's
	Imamura - SAP Software Tool Integration into Supply Chain Management	Read: Seven-Eleven Japan Co (Kellogg, Chopra – Course Website)
	Case Discussion: 7-11 Stocks Up on Tech Savvy	Case Prep: – 7-11 Stocks Up on Tech Savvy pgs 418-421.
	Prepare for Final Exam	
	FINAL EXAM (Take Home) – Due back via email, 11:59p (midnight) evening of 12/6/13.	