STRATEGIC SUPPLY CHAIN MANAGEMENT (OM367, 04425, 04430)
SYLLABUS, SPRING 2020

MEETING TIME & LOCATION:
Tuesday and Thursday, 2:00-3:15PM CBA 4.348 (04425) | 3:30-4:45PM CBA 4.324 (04430)

INSTRUCTOR:
Guoming Lai, Associate Professor
Office Hours: Tuesday/Thursday 5:00-6:00PM
Office Location: CBA 5.228; Mailbox Location: CBA 5.202
Contact Information: guoming.lai@mccombs.utexas.edu, 471-5818

TEACHING ASSISTANT:
Jian Chu
Office Hours: Please see Canvas
Office Location: Please see Canvas
Contact Information: jian_chu@utexas.edu

COURSE DESCRIPTION:
Supply Chain Management involves the flows of materials and information among all of the firms that contribute value to a product, from the source of raw materials to end customers. We will integrate issues from marketing (channels of distribution), logistics, and operations management to develop a broad understanding of a supply chain. By taking a strategic perspective, we will focus on relatively long-term decisions involving the investment in productive resources, configuration of processes, product designs, and development of partnerships with suppliers and channels of distribution.

COURSE OBJECTIVES:
The course seeks to both improve your understanding of operations strategies and enhance your analytical skills. The course will present several analytical techniques which would aid you in making decisions in the real world. In the meanwhile, the course will introduce you various aspects, issues, and initiatives in nowadays business operations. At the end of this course, you should have:

- The understanding of the importance of operations strategies and the challenges;
- Developed an appreciation for the major strategic issues and trade-offs in supply chain management;
- Acquired analytical capability to uncover problems and improvement opportunities in supply chain management and recommend improvement along the dimensions of efficiency, quality and speed, and improved team-work capability to cooperate with others to solve business operations problems in supply chain management.

COURSE MATERIALS:
• Required Course Pack: Reading materials for the course are contained in a bulk pack that should be available for purchase at the McCombs Copy Center. Individual homework and group assignments are based on these cases. We will discuss the cases in class.


• Course website: All materials available in electronic format (lecture slides/notes, homework assignments, homework solutions, sample exams, exam solutions, etc.) will be posted at Canvas course website (http://utexas.instructure.com). Several lecture slides/notes will be posted before the class.

**COURSE EVALUATION:**

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<tr>
<th>Component</th>
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<tr>
<td>Quiz I</td>
<td>20%</td>
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<td>Quiz II</td>
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<td>Final Exam</td>
<td>30%</td>
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<tr>
<td>Homework</td>
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<tr>
<td>Class Participation</td>
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Based on the past experience of this course, most students receive grades above B-. Grades lower than B- will be assigned on a case by case basis.

**Quizzes**

There are two in-class non-comprehensive quizzes during the class period. These are closed-book, but students are permitted to bring one page of notes.

**Exam**

There is one comprehensive exam on the last day of the class. It is closed-book, but students are permitted to bring two pages of notes.

**Homework**

- **Individual Homework**
  
  Individual homework assignments serve one of two purposes. Either they are intended to provide an opportunity to use one of the analytical frameworks from class, or they are intended to help you to prepare for a class discussion of a case. Partial credit might be awarded for evidence of effort.
  
  - You may discuss the assigned problems with your classmates. But you should write YOUR OWN solutions.
  
  - You should provide formulas, steps, or reasons to support your solutions. Submissions with only the final solutions will not be given any credit. Submissions can be either typed or hand-written. However, please make sure that they are readable.

- **Group Homework**
There are four group assignments. The first two assignments require each group to conduct case analysis and then write an executive summary (ES). In those assignments, you will be asked to analyze a specific issue and make a recommendation. In general, an ES should accomplish the following:

- Articulate the operational problem in terms of how it affects important measures of the firm’s performance.
- Identify and analyze the major alternatives.
- Present a persuasive argument for a particular course of action.

Each ES will provide several questions that are intended to guide your analysis/thought process. However, although the ES that you submit should reflect your consideration of the assignment questions, it should not be just a list of answers to these questions. Instead, it should be a logical and persuasive recommendation for action. A brief description of an ES and a sample are provided at the end of this document. Please restrict yourselves to one page of text (additional pages may be attached for exhibits). You may use single-spacing, but please use a reasonable font size, i.e. at least 11 pt.

The third group assignment is based on the global supply chain simulation. To play, you will need to log on to the simulation and pay a fee of $15 with a credit card ($15 per group). Specific instructions for the exercise will be provided. Grades will be based on both your write-up and your performance in the game.

The fourth group assignment will be the final project of the course. The project consists of two parts. The offline part requires you to conduct some quantitative analysis of a global procurement context. Then, you will compete in the class by groups. The winner will be the group that gets the highest profit. After the game, each group will write up the offline analysis and also describe the optimal inventory and procurement strategy you believe based on the simulation game.

**Grading**

Please turn in all assignments at the beginning of the class session listed on the schedule. Solutions to the homework assignments will be distributed in class or on the web-page. Please study each solution carefully even if you received full credit on the assignment. I do not accept the submission of written assignments after class on the day that they are due. However, I do allow students to drop one individual homework grade.

**Class Participation**

To foster a productive learning environment, it is important that everyone come to class prepared and willing to contribute to discussion. Ideally, you will make concise, insightful, and eloquent comments in every class. However, I also recognize the importance of making smaller contributions, including asking good questions. I believe that the learning environment is best when the discussion is not dominated by a few, but moved along incrementally by all of us. Do not be afraid to make points that you may regard as minor, ask clarifying questions, or otherwise contribute in small ways.
I will be using the attendance tool available at: https://arkaive.com/  (For 2PM class 04425, the registration code is KF2W; and for the 3:30PM class 04430, the registration code is GY4R)

**Laptops in Class**
Unless explicitly stated otherwise at the beginning of class, the use of laptop computers during class is prohibited.

**Feedback**
Your informal feedback is very important to me. Please let me know throughout the semester if there is anything I can do to make this class better for you.

**COURSE SCHEDULE:**
The following is a tentative schedule of meetings, readings, and deliverables for the semester. This is subject to change. When there are major changes, you will be notified by email; a current schedule will always be available on the Canvas course website. *Note.* CP: the course pack.

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<th>Date</th>
<th>Topic</th>
<th>Recommended Reading List</th>
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<td>Capacity Sizing under Uncertainty</td>
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<td>Long Term Capacity Planning</td>
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<td>Product Design to Hedge Demand Risk</td>
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<td>2/18</td>
<td>Value of Operations Flexibility</td>
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<td>Economies of Scale and Logistics Design</td>
<td>CP: Dollar Tree Logistics</td>
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<td>CP: Cross River Product</td>
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<td>3/12</td>
<td>Supply Chain Coordination</td>
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<td>Global Production Outsourcing</td>
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<td>4/7</td>
<td>Pricing and Demand Management</td>
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<td>4/9</td>
<td>Guest Lecture (Jason Shirazi@PWC)</td>
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<td>4/14</td>
<td>Pricing and Demand Management</td>
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<td>4/16</td>
<td>Product Design and Revenue Management</td>
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<td>4/21</td>
<td>Negotiation and Auction</td>
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<tr>
<td>4/23</td>
<td>Negotiation and Auction (simulation game)</td>
<td>6:30-8:00PM CBA 4.328</td>
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<td>4/28</td>
<td>Dual Sourcing Simulation: Mexico vs. China</td>
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<tr>
<td>4/30</td>
<td>Dual Sourcing Simulation: Mexico vs. China</td>
<td>CP: China/Mexico Sourcing</td>
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<td>5/5</td>
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<td>5/7</td>
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THE EXECUTIVE SUMMARY

Typically, an executive summary is a short synopsis of a longer report. However, for the purposes of this course, your entire report will be a single-paged executive summary, the objective of which is to describe and justify a specific course of action as concisely as possible. The intention, in limiting you to a single page of text, is to force you to focus on the most compelling arguments for the course of action that you are advocating. Although you are restricted to a single page of text to present your recommendation, you may attach additional pages as exhibits. For example, it would be appropriate to include details of any quantitative or financial analysis as an exhibit. However, you should make sure that any exhibits are well documented, and you should certainly not include an exhibit that does not merit specific reference in the text of your executive summary.

STRUCTURE

Although executive summaries can be written in different forms, it is important that you open with a statement that sets the tone and context for the recommendation that you will be presenting and captures the strategic relevance of the problem at hand.

Following the opening statement, there are two main approaches that can be adopted. The first is to lead off with the recommendation, and then provide the rational for it. Alternatively, one can adopt a more linear approach by presenting the analysis that leads logically to the recommendation. Depending upon the situation, either of these two approaches can be effective.

As you write your executive summary, you may want to consider the following:

- The recommendation should be sufficiently operationally specific that it can be acted upon. Avoid wishy-washy phrases like, “They should consider…”; “They might want to…”; etc.
- Explain why you have rejected any reasonable alternatives to the course of action that you are advocating.
- Recognize any significant risks that might be associated with the course of action that you are recommending and suggest how they might be mitigated.
- To the extent that it is possible, quantify the benefits / costs associated with your recommendation. Details of any quantitative analysis can be attached (and appropriately referenced) as exhibits.

When writing an executive summary it is important to focus on important data, conclusions, and recommendations. Avoid including excessive background and detail. One approach developing your executive summary is to imagine that you need to present your recommendation to the CEO of your company while you are with her on an elevator. You need to capture the significance of the issue and make a logical, compelling case for your recommendation in a very short amount of time. Therefore, you cannot afford to waste time on minor points or on summarizing information that is not directly relevant for justifying your recommendation.

The following example shows how an executive summary can be structured and written. Although a right format is important, to provide concise while insightful summary, analysis and recommendation is crucial.
EXECUTIVE SUMMARY

Introduction: BMW faces a threat from the Japanese entry into the high end segment of the automobile market. Although BMW’s share has not yet been affected, the threat is real, especially due to the lower prices, better quality and shorter lead times for new product introductions by the Japanese. It takes BMW six years to launch a new product, but the Japanese can do it in four. This difference is due to the fact that the Japanese introduce incremental changes frequently, while BMW made big changes infrequently. It has been proposed that BMW adopt a prototyping system more like that of the Japanese, by requiring design decisions to be locked in 12 months prior to each prototype in order to allow pre-production grade tooling to be used in the construction of each set of prototypes.

Analysis: The major advantage of BMW’s current prototyping approach is that it affords maximum flexibility in the design process; i.e., BMW can make changes relatively late in the design cycle. Not only does this allow them to respond to the changing tastes of the market, it also allows them to incorporate technological breakthroughs into their products, enhancing their reputation as a technological leader.

Advantages of proposed approach:

- Improved product quality at launch.
- Using actual materials bought from suppliers will lead to a more accurate prototype testing.
- Use of pre-production tools enables BMW to discover tooling or parts’ problems earlier in the product development cycle. Also by procuring parts from suppliers at the prototype stage, any incompatibility issues with parts can be identified earlier.
- Using plant workers for the final prototype more closely approximates the actual assembly line.
- The new approach would speed up the ramp-up and pilot processes due to production problems being identified earlier, and it will allow them time for fine tuning.
- Lower warranty expenses due to improved quality of products at launch.

Disadvantages of proposed approach:

- Higher tooling costs
- Loss of flexibility in design commitment for each prototype build cycle.

Recommendations: To adopt the new prototyping approach BMW will have to trade off flexibility and quality. While to make design changes later is important to keep up with changing consumer demands, the higher quality levels of the Japanese vehicles are a bigger threat. BMW can balance these issues by:

- For now, use the new approach for the cockpit design. The cockpit seems to be the area where design and manufacturing quality matter the most, and it would benefit from the new approach.
- However, in general they should adopt this approach only in the last one or two batches of the prototype development cycle. This would minimize the investment needed in pre-production tools and still offer them enough opportunities to identify problems before the pilot stage.
- They should assess each of the 30 major subsystems regarding the relative importance of design flexibility versus conformance quality at launch. The new approach should be used only for those subsystems in which conformance quality is judged to be more important than design flexibility.

Although there is incremental investment required for the new prototyping approach, the overall savings from all 3 stages (Prototyping, Pilot and Ramp-up) will more than justify these investments. (Attachments skipped.)
HONOR CODE:

The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the BBA Program’s Statement on Scholastic Dishonesty at http://my.mccombs.utexas.edu/BBA/Code-of-Ethics. By teaching this course, I have agreed to observe all faculty responsibilities described there. By enrolling in this class, you have agreed to observe all student responsibilities described there. If the application of the Statement on Scholastic Dishonesty to this class or its assignments is unclear in any way, it is your responsibility to ask me for clarification. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since dishonesty harms the individual, all students, the integrity of the University, and the value of our academic brand, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Judicial Services website at http://deanofstudents.utexas.edu/sjs/ to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

Please do not use any materials (packet of overheads, homeworks, course notes, handouts, exams, homework solutions, case summaries) from previous semesters or from other sections of the course being offered in this semester unless the same has been made available by me to every one of your fellow students in this class. If the application of the Honor System to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification.

MCCOMBS CLASSROOM PROFESSIONALISM POLICY:

The highest professional standards are expected of members of the McCombs community. The collective class reputation and the value of the McCombs experience hinges on this.

Faculty are expected to be professional and prepared to deliver value for each and every class session. Students are expected to be professional in all respects. Classroom expectations of students include:

- Students will arrive on time.
- Students will be fully prepared for each class.
- Students will attend the class section to which they are registered.
- Students will respect the views and opinions of their colleagues. Disagreement and debate are encouraged. Intolerance for the views of others is unacceptable.
- Phones and wireless devices are turned off unless otherwise instructed by the professor.

COURSE WEBSITES & STUDENT PRIVACY:
Password-protected class sites will be available for all accredited courses taught at The University. Syllabi, handouts, assignments and other resources are types of information that may be available within these sites. Site activities could include exchanging emails, engaging in class discussions and chats, and exchanging files. In addition, class e-mail rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Building, Rm 1. For information on restricting directory information see: http://www.utexas.edu/student/registrar/catalogs/gi02-03/app/appc09.html.

ACADEMIC ACCOMMODATIONS:
Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, http://diversity.utexas.edu/disability/. Additionally, accommodation for observance of religious holidays is also possible. Following UT Austin policy, please notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, a test, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

HARASSMENT REPORTING REQUIREMENTS:
Senate Bill 212 (SB 212), which goes into effect as of January 1, 2020, is a Texas State Law that requires all employees (both faculty and staff) at a public or private post-secondary institution to promptly report any knowledge of any incidents of sexual assault, sexual harassment, dating violence, or stalking “committed by or against a person who was a student enrolled at or an employee of the institution at the time of the incident”. Please note that both the instructor and the TA for this class are mandatory reporters and MUST share with the Title IX office any information about sexual harassment/assault shared with us by a student whether in-person or as part of a journal or other class assignment. Note that a report to the Title IX office does not obligate a victim to take any action, but this type of information CANNOT be kept strictly confidential except when shared with designated confidential employees. A confidential employee is someone a student can go to and talk about a Title IX matter without triggering that employee to have to report the situation to have it automatically investigated. A list of confidential employees is available on the Title IX website.

CAMPUS SAFETY:
Please note the following recommendations regarding emergency evacuation, provided by the Office of Campus Safety and Security, 512-471-5767, http://www.utexas.edu/safety:
• Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
• Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
• Students requiring assistance in evacuation should inform their instructor in writing during the first week of class.
• In the event of an evacuation, follow the instruction of faculty or class instructors.
• Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
• Further information regarding emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency.”