The Lee Kong Chian School of Business
Academic Year 2015/16
Term 1

OPIM 325 SALES AND OPERATIONS PLANNING
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COURSE DESCRIPTION
Planning is an essential element in today's complex and high variability supply chains. Global leaders such as, Apple, Walmart, P&G, and Toyota understand this, and are able to bring their entire organizations into an integrated planning and execution mode. Sales and Operations Planning (S&OP) is an approach for establishing such an integrated framework and has emerged as an essential top management tool.

This course is integrative and practice-oriented. It integrates concepts in business planning, demand and supply planning, design, IT and change management. A wide array of business cases, real life examples and role play-based learning will be used to cover the state-of-the-art practices in S&OP. Capabilities of best practice systems such as SAP, Oracle, i2, etc., and impact of ‘Big Data’ on planning will also be provided as added insight. This course is highly recommended for students keen on taking on consulting, general management, and operations and sales careers.

LEARNING OBJECTIVES
The Sales and Operations Planning course will provide students with a comprehensive understanding of organization-wide planning processes, methodologies and tools.

By the end of this course, students will be able to:
1. Demonstrate a clear understanding of the role and place of Business Planning, Demand Planning, Supply Planning and Sales and Operations Planning in complex supply chains
2. Demonstrate a clear understanding of how the four critical dimensions of Demand vs Supply and Volume vs Mix impact the planning processes
3. Describe the Demand Planning processes and Distinguish between Demand Planning and Demand Forecasting
4. Describe the hierarchical Supply Planning processes and be able to clearly distinguish the role and place of Master Scheduling, MRP, Distribution Planning, Capacity Planning and Inventory Planning within the Supply Planning area
5. Identify the need for developing a consensus forecast and a supply plan through a collaborative approach and information sharing across Finance, Sales, Marketing, Logistics, Production, and Procurement
6. Describe the set of processes involved in Sales & Operations Planning and establish the need for a S&OP process approach to bring about organization collaboration and transformation
7. Relate to process and systems best practices in Industry today
8. Apply the theoretical frameworks and concepts of Financial Planning, Demand Planning, Supply Planning and S&OP in solving case situations for real life business environments
9. Design a S&OP implementation plan for a business case
10. Identify and Construct high-level planning strategies using S&OP to help choose the optimum course of action given demand and supply mismatches in a business case context
11. Role play a S&OP meeting from the point of view of Demand Planner, Supply Planner, CEO, COO, Chief of Marketing, Chief of Sales, CFO and the CIO
PRE-REQUISITE/ CO-REQUISITE/ MUTUALLY EXCLUSIVE COURSE(S)

Please refer to the Course Catalogue on OASIS for the most updated list of pre-requisites / co-requisites for this particular course. Do note that if this course has a co-requisite, it means that the course has to be taken together with another course. Dropping one course during BOSS bidding would result in both courses being dropped at the same time.

ASSESSMENT METHODS

<table>
<thead>
<tr>
<th>Component</th>
<th>Weightage</th>
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<tbody>
<tr>
<td>Class Participation</td>
<td>10 %</td>
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<tr>
<td>Class Quiz</td>
<td>20 %</td>
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<tr>
<td>Group Project Research</td>
<td>20 %</td>
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<tr>
<td>Group Case Write-ups and Presentations</td>
<td>20 %</td>
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<tr>
<td>Final examination</td>
<td>30 %</td>
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<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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ACADEMIC INTEGRITY

All acts of academic dishonesty (including, but not limited to, plagiarism, cheating, fabrication, facilitation of acts of academic dishonesty by others, unauthorized possession of exam questions, or tampering with the academic work of other students) are serious offences.

All work (whether oral or written) submitted for purposes of assessment must be the student’s own work. Penalties for violation of the policy range from zero marks for the component assessment to expulsion, depending on the nature of the offence.

When in doubt, students should consult the course instructor. Details on the SMU Code of Academic Integrity may be accessed at [http://www.smuscd.org/resources.html](http://www.smuscd.org/resources.html).

INSTRUCTIONAL METHODS AND EXPECTATIONS

This course will be delivered through a mix of Lecture sessions, Class Discussions, Case Analysis and Presentations and Management Games. A high-energy learning environment will be created and full participation from all students (physical and mental presence) is desired and required.

Class Participation

Participation is a central part of the learning process for you and your classmates. When you contribute, you help others learn. Your participation mark reflects your contribution to your classmates’ learning. This includes attendance, full preparation prior to class including reading assigned materials and completion of mini assignments, and active participation in class discussions and group activities. Active and quality participation is encouraged and will be rewarded.

Class Quiz

There will be surprise quizzes administered in the class throughout the term. This is to reinforce class learning and ensure that the concepts discussed in the class are getting reviewed and assessed. These would be multiple choice questions or short structured questions on topics already covered in the class.

Groupings and group size

Please form groups of between four and seven. You are encouraged to find your own group members. The group-member list should be submitted to the Faculty no later than XXX.

Group Case Write-ups and Presentations

There will be a total of three case write-ups and presentations for this course. The objective of this set of cases is to help you apply the theoretical concepts and frameworks you learnt in the class to real life business environments. Your outputs will be graded based on the depth and breadth of your analysis of the case questions and your ability to synthesize theories and concepts to arrive at the set of recommendations.
Group Project Research
The objective of the project is to allow you to conduct research in a particular area relevant to Sales and Operations planning. The potential topics are very wide. You should choose a topic that you are keen to know more about, and then delve into it. Please provide me with a hard copy of your PowerPoint slides during class and a soft copy of the slides before or right after your presentation. Note: You do not need to submit any report other than the PowerPoint slides.

Final Examinations
There will be a cumulative final exam. This will be a closed-book and closed-notes exams and will focus on the materials covered in class. No make-up exams will be allowed without prior permission.

I expect all of you to follow the school’s examination policy. Among other things, you need to bring your own calculator(s) to the exams; you are not allowed to share calculator(s) with one another; you also need to silence your cell phone and keep it away from the desk during the entire duration of each exam.

CLASS TIMINGS
This course will be taught in one 3-hour session once a week. I will hold regular office hours on TBD for 1 hr every week. If you need to see me at other times, please contact me to make appointment. My office and contact information are listed at the top of this course outline. I am also readily available by email.

RECOMMENDED TEXT AND READINGS

## WEEKLY LESSON PLANS

<table>
<thead>
<tr>
<th>Week</th>
<th>Module</th>
<th>Session Objectives</th>
<th>Topics</th>
<th>Assessment of Learning (Formative / Summative)</th>
<th>Instructional Strategies</th>
<th>Required reading / Exercise Worksheets</th>
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<tbody>
<tr>
<td>1</td>
<td>Module 1: Planning in Complex Supply Chains – The Big Picture</td>
<td>A good overview understanding of 1. How Supply Chain Principles have evolved over time, given different economic imperatives 2. How Planning processes link with the rest of the processes in Supply Chain 3. The need for integrated IT solutions to support planning functions</td>
<td>1. Course Outline, Introductions and Ground rules 2. Evolution of Supply Chain Management 3. Enterprise Planning  - Strategic, Financial, Supply Chain Planning  - The planning hierarchy and the need to link strategic plans to operational plans  - Financial and Supply Chain Measures  - The role of Information technology in planning</td>
<td>• Oral questioning during class</td>
<td>• Icebreakers &amp; Introduction  • Lecture  • Group Discussions and debrief on class learning</td>
<td>1. The Demand Driven Supply Chain – Making it work and deliver results. In BCG Perspectives, May 2012 2. Faculty notes</td>
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<td>2</td>
<td>Module 1: Planning in Complex Supply Chains – The Big Picture(contd.)</td>
<td>1. Understand the critical linkages across different supply chain functions. 2. Understand the prevalent supply chain organization structures in companies today and the Demand and Supply Planning roles 3. Help students understand why the objectives of Demand and Supply Planning is intrinsically tied to the Supply Chain</td>
<td>1. Planning Process Overview  - Linking Financial Planning with operational Planning  - Demand and Supply planning 2. Demand Planning  - Existing and New Products  - Promotions  - Inventory Planning and Optimization 3. Supply Planning  - Aggregate Planning  - MPS / MRP  - Capacity and Inventory Planning</td>
<td>• Oral questioning during class  • Reflection Question (online submission)</td>
<td>• Lecture  • Group Discussions and debrief on class learning</td>
<td>1. Faculty notes 2. Chapter 1 and 2, Sales &amp; Operations Planning by Wallace and Stahl 3. KDX Systems Case – Prepared by Faculty. To be distributed during class</td>
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<td>4</td>
<td>Module 2 – Demand Planning – Demand Planning Process</td>
<td>1. Provide an overview of the Demand Planning Function and process to help answer the following questions • Why is it necessary? • What are the key components of the Demand Planning Process? • How do you measure the effectiveness of the Demand Planning process? • The need to develop a consensus forecast</td>
<td>1. Overview of Demand Planning Function • Need for Demand Planning • Role in the organization • Issues and Trends • Types of Demand (Independent and Dependent Demand) • Process • Measures • How Demand Planning links to Supply Planning and S&amp;OP Processes 2. Process of developing Consensus Forecasts 3. Sport Obermeyer Case Introduction</td>
<td>• Oral questioning during class</td>
<td>• Lecture • Group Discussions and debrief on class learning</td>
<td>1. Hierarchical Supply Chain Planning and Scheduling Frameworks, Chapter 3, Supply Chain Planning: Practical Frameworks for Superior Performance, by Matthew J. Liberatore and Tan Miller (available on HBS) 2. Making Supply meet Demand in an Uncertain World. HBR Article on Sport Obermeyer 3. Demand Management Process – Faculty Notes</td>
</tr>
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</table>
|   | Module 3 – Supply Planning – Supply Planning Process | 1. Provide an overview of the Supply Planning Function and process to help answer the following questions:  
   - Why is it necessary?  
   - What are the key components of the Supply Planning Process?  
   - How do you measure the effectiveness of Supply Planning? | 1. Overview of the Supply Planning Function:  
   - Need for Supply Planning  
   - Role in the organization  
   - Issues and Trends  
   - Supply Planning Process  
   - Measures  
   - How Supply Planning links to Supply Planning and S&OP Processes  
   2. Supply Planning Process Components overview:  
      - Aggregate Planning or Master Scheduling  
      - Rough Cut Capacity Planning | 1. Oral questioning during class  
   2. Lecture  
   3. Group Discussions and debrief on class learning  
   4. Sports Obermeyer Case – HBR  
   5. Supply Management Process – Faculty Notes  
|---|---|---|---|---|
|   | Module 3 – Supply Planning – Supply Planning Process | 1. Provide a real life context to the need for, challenges and the process of supply planning using the Sport Obermeyer article. | 1. Sports Obermeyer Case presentations  
   - Oral questioning during class  
   - Case Presentations | 1. Oral questioning during class  
   2. Lecture  
   3. Group Discussions and debrief on class learning  
   4. Sports Obermeyer – HBR Case  
   5. Supply Management Process – Faculty Notes  
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<th>Module 4 – Role of IT in supporting Planning processes</th>
<th>1. Provide a clear understanding of how IT systems have evolved for supporting planning processes 2. Also, provide them with an understanding of the ERP context and link how transactional data captured in ERP systems are used by planning systems 3. Develop a clear understanding on how IT is facilitating the demand, supply planning and S&amp;OP processes 4. How IT provides a collaboration platform to support multi-geo, multi-echelon and multi-party planning</th>
<th>Guest Faculty Presentation 1. Evolution of IT systems for supporting Planning processes 2. Collaboration platforms 3. Integration with ERP systems • Linking transaction systems with planning systems 4. Challenges of implementing sophisticated planning systems in the industry today</th>
<th>Oral questioning during class</th>
<th>1. IT in supporting Planning Processes – Faculty notes</th>
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<tbody>
<tr>
<td>8</td>
<td>Mid Term Break</td>
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<tr>
<td>Week</td>
<td>Module</td>
<td>Activities</td>
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| 11   | Module 4 – S&OP – Extended S&OP | 1. Explain the concept of S&OP in a case context  
2. Explain the need for extending S&OP to Customers and Suppliers  
3. Role play exercise, help students look at S&OPs from each C Level stakeholders point of view |
|      |              | 1. Extended S&OP: Learning from the Barilla Case  
2. Demand and Supply Planning conclusions and final wrap up |
|      |              | • Oral questions during class  
• Role play based group Presentation evaluations  
• Lecture  
• Group Discussions and debrief on class learning |
|      |              | 1. HBR Case - Barilla SpA  
2. Class Notes – Prepared by Faculty |
| 12   | Module 4 – S&OP – Learning Review and Conclusions | 1. Final Case Presentation  
2. Course wrap up and final clarifications |
|      |              | 1. Barilla SpA Case presentations |
|      |              | • Case Presentation evaluation  
• Group Discussions and debrief on class learning |
|      |              | 1. HBR Case - Barilla SpA |

Final Exam