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## SYLLABUS

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**Date/ Revision** April 10, 2017  
**Faculty** Business and Social Sciences  
**Approval** Dr. Samuel Prasetya

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### SUBJECT : SUPPLY CHAIN MANAGEMENT

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#### 1. Identification of Subject:

Name of Subject : Supply Chain Management  
Code of Subject : SUCM-2000  
SKS / ECTS : 3 SKS  
Semester : 4/5/6  
Study Program : B-AVM/B-IBA/B-MGT  
Lecturer : Ficky Alkarim, MSc, Dr. Samuel Prasetya, Dr. Satiri & Dr. Firdaus Basbeth

#### 2. Competency

After having the course, students are expected to:

- a) understand what is the Supply Chain
- b) understand the Supply Chain Performance: Achieving Strategic Fit and Scope
- c) understand the Supply Chain Drivers and Metrics
- d) understand the Network Design in the Supply Chain
- e) have the ability to analyze the Pricing and Revenue Management in a Supply Chain
- f) understand the Information Technology and the Supply Chain
- g) understand the Coordination in a Supply Chain

#### 3. Description of Subject:

This course bring together the strategic role of the supply chain, key strategic drivers of supply chain performance, and the underlying tools and techniques for supply chain analysis. Students are able to articulate the strategic importance of supply chain thinking and support their ideas with evidence that can be built using models.

#### 4. Learning Approach

Approach : Combination of expository - inquiry and collaborative  
Method : Discussions, questions/answers, sample problems/cases  
Student Task : Quizzes and group projects  
Media : LCD projector

#### 5. Evaluation

a) Non-attendance maximum : 25%  
b) Homework/Projects : 20 points  
c) Presentation, Simulation : 10 points  
d) Quiz : 10 points  
e) Final Examination : 60 points  
Total : 100 points

## 6. Contents/Topics of Lecturing:

Week	Content / Topics of Lecturing	Text Book Chapter	Remark
1	<p>Understanding the Supply Chain &amp; Supply Chain Performance: Achieving Strategic Fit and Scope</p> <ul style="list-style-type: none"> <li>• What Is a Supply Chain?</li> <li>• The Objective of a Supply Chain</li> <li>• The Importance of Supply Chain Decisions</li> <li>• Decision Phases in a Supply Chain</li> <li>• Process View of a Supply Chain</li> <li>• Examples of Supply Chains</li> <li>• Competitive and Supply Chain Strategies</li> <li>• Achieving Strategic Fit</li> <li>• Expanding Strategic Scope</li> </ul>	Chapter 1 & 2	
2	<p>Supply Chain Drivers and Metrics</p> <ul style="list-style-type: none"> <li>• Drivers of Supply Chain Performance</li> <li>• Framework for Structuring Drivers</li> <li>• Facilities</li> <li>• Inventory</li> <li>• Transportation</li> <li>• Information</li> <li>• Sourcing</li> <li>• Pricing</li> <li>• Obstacles to Achieving Fit</li> </ul>	Chapter 3	
3	<p>Designing Distribution Networks and Applications to e-Business</p> <ul style="list-style-type: none"> <li>• The Role of Distribution in the Supply Chain</li> <li>• Factors Influencing Distribution Network Design</li> <li>• Design Options for a Distribution Network</li> <li>• E-Business and the Distribution Network</li> <li>• Distribution Networks in Practice</li> </ul>	Chapter 4	
4	<p>Network Design in the Supply Chain</p> <ul style="list-style-type: none"> <li>• The Role of Network Design in the Supply Chain</li> <li>• Factors Influencing Network Design Decisions</li> <li>• Framework for Network Design Decisions</li> <li>• Models for Facility Location and Capacity Allocation</li> <li>• The Role of IT in Network Design</li> <li>• Making Network Design Decisions in Practice</li> </ul>	Chapter 5	Quiz 1 Draft 1
5	<p>Network Design in an Uncertain Environment</p> <ul style="list-style-type: none"> <li>• The Impact of Uncertainty on Network Design</li> <li>• Discounted Cash Flow Analysis</li> <li>• Representations of Uncertainty</li> <li>• Evaluating Network Design Decisions Using Decision</li> </ul>	Chapter 6	

Week	Content / Topics of Lecturing	Text Book Chapter	Remark
	<p>Trees</p> <ul style="list-style-type: none"> <li>• AM Tires: Evaluation of Supply Chain Design Decisions Under Uncertainty</li> <li>• Risk Management and Network Design</li> <li>• Making Supply Chain Decisions Under Uncertainty in Practice</li> </ul>		
6	<p>Demand Forecasting in a Supply Chain</p> <ul style="list-style-type: none"> <li>• The Role of Forecasting in a Supply Chain</li> <li>• Characteristics of Forecasts</li> <li>• Components of a Forecast and Forecasting Methods</li> <li>• Basic Approach to Demand Forecasting</li> <li>• Time-Series Forecasting Methods</li> <li>• Measures of Forecast Error</li> <li>• Forecasting Demand at Tahoe Salt</li> <li>• The Role of IT in Forecasting</li> <li>• Risk Management in Forecasting</li> <li>• Forecasting in Practice</li> </ul>	Chapter 7	
7	Review	Chapter 1-7	Quiz 2 Draft 2
8	<b>Semester Break: Only Make-Up Classes</b>		
9	<p>Aggregate Planning in a Supply Chain &amp; Planning Supply and Demand in a Supply Chain: Managing Predictable Variability</p> <ul style="list-style-type: none"> <li>• The Role of Aggregate Planning in a Supply Chain</li> <li>• The Aggregate Planning Problem</li> <li>• Aggregate Planning Strategies</li> <li>• Aggregate Planning Using Linear Programming</li> <li>• Aggregate Planning in Excel</li> <li>• The Role of IT in Aggregate Planning</li> <li>• Implementing Aggregate Planning in Practice</li> <li>• Responding to Predictable Variability in a Supply Chain</li> <li>• Managing Supply</li> <li>• Managing Demand</li> <li>• Implementing Solutions to Predictable Variability in Practice</li> </ul>	Chapter 8 & 9	
10	<p>Managing Economies of Scale in a Supply Chain: Cycle Inventory &amp; Managing Uncertainty in a Supply Chain: Safety Inventory</p> <ul style="list-style-type: none"> <li>• The Role of Cycle Inventory in a Supply Chain</li> <li>• Economies of Scale to Exploit Fixed Costs</li> <li>• Economies of Scale to Exploit Quantity Discounts</li> </ul>	Chapter 10 & 11	

Week	Content / Topics of Lecturing	Text Book Chapter	Remark
	<ul style="list-style-type: none"> <li>• Short-Term Discounting: Trade Promotions</li> <li>• Managing Multi-echelon Cycle Inventory</li> <li>• Estimating Cycle Inventory-Related Costs in Practice</li> <li>• The Role of Safety Inventory in a Supply Chain</li> <li>• Determining Appropriate Level of Safety Inventory</li> <li>• Impact of Supply Uncertainty on Safety Inventory</li> <li>• Impact of Aggregation on Safety Inventory</li> <li>• Impact of Replenishment Policies on Safety Inventory</li> <li>• Managing Safety Inventory in a Multi-echelon Supply Chain</li> <li>• The Role of IT in Inventory Management</li> <li>• Estimating and Managing Safety Inventory in Practice</li> </ul>		
11	<p>Determining the Optimal Level of Product Availability &amp; Transportation in a Supply Chain</p> <ul style="list-style-type: none"> <li>• The Importance of the Level of Product Availability</li> <li>• Factors Affecting Optimal Level of Product Availability</li> <li>• Managerial Levers to Improve Supply Chain Profitability</li> <li>• Setting Product Availability for Multiple Products Under Capacity Constraints</li> <li>• Setting Optimal Levels of Product Availability in Practice</li> <li>• The Role of Transportation in a Supply Chain</li> <li>• Modes of Transportation and Their Performance Characteristics</li> <li>• Transportation Infrastructure and Policies</li> <li>• Design Options for a Transportation Network</li> <li>• Trade-Offs in Transportation Design</li> <li>• Tailored Transportation</li> <li>• The Role of IT in Transportation</li> <li>• Risk Management in Transportation</li> <li>• Making Transportation Decisions in Practice</li> </ul>	Chapter 12 & 13	
12	<p>Sourcing Decisions in a Supply Chain</p> <ul style="list-style-type: none"> <li>• The Role of Sourcing in a Supply Chain</li> <li>• In-House or Outsource</li> <li>• Third- and Fourth-Party Logistics Providers</li> <li>• Supplier Scoring and Assessment</li> <li>• Supplier Selection-Auctions and Negotiations</li> <li>• Contracts and Supply Chain Performance</li> </ul>	Chapter 14	Quiz 3 Draft 3

Week	Content / Topics of Lecturing	Text Book Chapter	Remark
	<ul style="list-style-type: none"> <li>• Design Collaboration</li> <li>• The Procurement Process</li> <li>• Sourcing Planning and Analysis</li> <li>• The Role of IT in Sourcing</li> <li>• Risk Management in Sourcing</li> <li>• Making Sourcing Decisions in Practice</li> </ul>		
13	<p>Pricing and Revenue Management in a Supply Chain</p> <ul style="list-style-type: none"> <li>• The Role of Pricing and Revenue Management in a Supply Chain</li> <li>• Pricing and Revenue Management for Multiple Customer Segments</li> <li>• Pricing and Revenue Management for Perishable Products</li> <li>• Pricing and Revenue Management for Seasonal Demand</li> <li>• Pricing and Revenue Management for Bulk and Spot Contracts</li> <li>• The Role of IT in Pricing and Revenue Management</li> <li>• Using Pricing and Revenue Management in Practice</li> </ul>	Chapter 15	
14	<p>Information Technology and the Supply Chain</p> <ul style="list-style-type: none"> <li>• The Role of IT in a Supply Chain</li> <li>• The Supply Chain IT Framework</li> <li>• Customer Relationship Management</li> <li>• Internal Supply Chain Management</li> <li>• Supplier Relationship Management</li> <li>• The Transaction Management Foundation</li> <li>• The Future of IT in the Supply Chain</li> <li>• Risk Management in IT</li> <li>• Supply Chain IT in Practice</li> </ul>	Chapter 16	
15	<p>Coordination in a Supply Chain</p> <ul style="list-style-type: none"> <li>• Lack of Supply Chain Coordination and the Bullwhip Effect</li> <li>• The Effect on Performance of Lack of Coordination</li> <li>• Obstacles to Coordination in a Supply Chain</li> <li>• Managerial Levers to Achieve Coordination</li> <li>• Building Strategic Partnerships and Trust Within a Supply Chain</li> <li>• Continuous Replenishment and Vendor-Managed Inventories</li> <li>• Collaborative Planning, Forecasting, and Replenishment (CPFR)</li> <li>• The Role of IT in Coordination</li> </ul>	Chapter 17	Quiz 4 Draft 4

Week	Content / Topics of Lecturing	Text Book Chapter	Remark
	<ul style="list-style-type: none"> <li>Achieving Coordination in Practice</li> </ul>		
16	<b>Semester Break: Only Make-Up Classes</b>		
17	<b>Final Examination</b>	All Chapters (1-17)	

## 7. Book Reference:

### a) Main Textbook

Sunil Chopra and Peter Meindl, Supply Chain Management: Strategy, Planning, and Operation, 3th Edition, New Delhi : Dorling Kindersley (India) Pvt. Ltd

### b) Supplement Articles

Various online journal articles