

NATIONAL UNIVERSITY OF SINGAPORE
School of Business
Department of Decision Sciences

DSC3202 Purchasing and Materials Management

Lecturer: Keith B. Carter

Session: Semester I, 2014/2015

Curriculum For Purchasing and Materials Management (P&MM)

Best-in-class Purchasing and Materials Management (P&MM) functions support corporate performance by delivering the appropriate balance of Cost, Quality and Speed-To-Market. The function can include sourcing, costing, supplier relations, logistics, and goods storage.

While organizations buy varying combinations and amounts of raw materials, manufactured parts/components, and services, they all have to perform this procurement function efficiently and effectively. In many organizations, the value of purchased goods and services could account for more than 80% of their total COGS. Therefore, PMM represents one of the most current frontier available for generating competitive advantage.

Students will learn about supply chain strategy, and then align the P&MM strategy and tactics. Negotiations, supplier relationship management (SRM), contract performance management, and actionable intelligence are foundational elements in the class.

Each class session is run as a business meeting with regular coaching on how to be prepared for the business environment including: ideation sessions, making persuasive arguments, and delivering business cases.

The class also has speakers from industry to discuss real-world situations.

In this course students will learn how to deliver best-in-class P&MM results by:

- Studying P&MM strategy, tactics and capabilities used by corporations today
- Practicing negotiations in-class
- Delivering senior management level presentations with cost/benefits of recommended strategies and tactics

By the end of the course, students will be ready to be active and contributing members of a P&MM function. They will have the foundational knowledge to support senior management in strategy development and building cases for tactical improvements in People, Processes, and Technology.

Assessment Methods

Individual Assignments	20%
Class Participation	10%
Midterm	20%
Group Activity	20%
Final Group Presentation	30%

Course Schedule & Contents

Pre-work: Create an introduction slide following the template in the IVLE workbook

Session	Lecture Topics	Readings and Assignments
1	<p>Overview of Purchasing and Materials Management Course:</p> <p>Purchasing Concepts:</p> <ul style="list-style-type: none"> - Negotiations - Supplier Relationships - Purchasing Processes and Contracts - Ethics <p>Materials Management Concepts:</p> <ul style="list-style-type: none"> - Inventory Fundamentals (ABC, EOQ, Safety Stock) - Planning (forecasting and production) - Warehouse Management and Physical Distribution <p>Class Activity: Introductions</p> <p>Video: KPMG Purchasing at Vodafone</p> <p>P&MM Technology Review</p> <ul style="list-style-type: none"> - Show inventory at stores - Vendor Performance Tool 	<p>Homework(HW):</p> <ul style="list-style-type: none"> - Select and Review one Qlikview Tool at Qlikview.com Retailer POS, Plant Operations, Executive Dashboard, Order and Inventory Management, GPS Store Finder <p>Read:</p> <p>HBR, Procurement as Strategy</p> <p>Introduction to Materials Management, Chapter 1</p> <p>Materials Management and Purchasing Chapter</p> <p>Summarize article on Purchasing Best Practices</p>
2	<p>Purchasing Basics</p> <p>The role of Purchasing, Measurement, Supplier Selection</p> <p>Keywords: Bill of Material(BOMs), SCOR, 3PL, Contract buying, Purchasing Cycle, Specifications</p> <p>The Purchasing Process:</p> <p>CASE:</p> <p>HBS Precision Steel Fabrication: An Equipment Purchase Decision</p>	<p>HW:</p> <ul style="list-style-type: none"> - Complete Qlikview Online Training - Read about Kraljic Portfolio Purchasing Model - Read "Designing For Supply Chain" Carter, Murphy in Beauty Packaging Magazine

	<p>P&MM Technology:</p> <ul style="list-style-type: none"> - Diagnose supplier contract performance 	
3	<p>Materials Planning Best Practices & Negotiations: Managing Inventory, ABC Inventory Control, Inventory on the Balance Sheet, Standard Cost</p> <p>ABC Inventory Calculations</p>	<p>HW: Read Inventory Fundamentals</p> <p>Read Physical Inventory & Warehouse Management</p>
4	<p>Negotiations in class</p> <p>Harvard Business School case: Reed – YPEC</p>	<p>HW: Read Forecasting</p>
5	<p>Planning and Forecasting: The impact on purchasing Bias, Demand Management, Forecast error, Lead times, Forecast Waterfall (A must to diagnose issues)</p> <ul style="list-style-type: none"> - News Vendor - Supply and Demand Patterns <p>Case: Northcutt Bikes a Forecasting Issue</p> <p>Mid-term Preparation</p>	<p>No assignment, prepare for mid-term</p> <p>Group Assignment: - Create News Vendor Tool</p>
6	<p>In-class midterm</p>	<p>HW: Read Chapter on Physical Distribution</p>
7	<p>Visit A Warehouse</p> <p>Keywords: Warehouses(Distribution Center), INCO Terms (FOB, EXWORKS, Delivered), Materials Handling, Pallet, 3PL, LTL, Racks, Pick To Light, Pick To Voice, Forklifts, Value Added Services (Labelling, Pick Pack, Filling)</p> <p>Apply learnings against what you see in the warehouse</p> <p>Evaluate Warehouse against Business Excellence Framework in preparation for final projects</p> <p>Review Final Project Requirements</p>	<p>Group assignment: - Start Purchasing and Planning Simulation</p>
8	<p>Physical Warehouse Management and Purchasing 3PL Services</p> <p>Supply Chain Simulation Activity</p>	<p>Group assignment: - Continue Purchasing and Planning Simulation</p>

	Supplier Collaboration and Performance Management - Bring the concepts of P&MM together in results based simulation	
9	Review Products and Services Purchasing Case: Purchasing services	Group assignment: - Continue Purchasing and Planning Simulation
10	Purchasing performance management In-class activity: Metrics selection and alignment with strategy P&MM Technology Review - Dashboards and Analytics	
11	Purchasing Organization, Ethics, and Government Regulations	
12	Final Case Reviews and in-class presentations	
13	Final Case Reviews and in-class presentations continued	

Case Study Assignment

Analysis of a publicly traded company's procurement and materials management SWOT (Strengths, Weaknesses, Opportunities, Threats)

Goal: Understand how P&MM impacts the performance of a company by analyzing publicly available information on current and planned activities to improve Cost Of Goods (COGs) and Sales and General Administration (SGA). Then review the most recent reported quarterly results to see how effective the company was at executing their plans against the current environment.

- Students will know how to make a case for P&MM strategy, tactics, and plan for execution.
"Prepared to become Chief Procurement Officers"