

BQ304 - PRODUCTION & OPERATIONS MANAGEMENT

Course Description and Scope

Along with marketing and finance, the operations function plays a vital role in achieving a company's strategic plans. Since the operations function produces the goods and provides the services, it typically involves the greatest portion of the company's employees and is responsible for a large portion of the firm's capital assets. This course addresses issues and methods of production/operations management. It focuses on the problems that frequently confront production/operations managers. After completing this course, the students should appreciate the role of operations managers in achieving a company's business goals. Topics discussed in this course include product strategy, process strategy and capacity planning, location and layout strategies, supply-chain management, material requirement planning, aggregate planning and scheduling.

Proposed Lecture Schedule

Week No.	Topics	Readings
1-2	1. Introduction 1.1. What is Production/Operations Management (P/OM) 1.2. The Heritage of P/OM 1.3. Production vs. Service Operations 1.4. Operations Strategies 1.5. International Competition 1.6. Preparing a Career in P/OM	HR Ch. 1, 2, 3 S Ch. 1
2-3	2. Review of Quantitative Methods 2.1. Decision Analysis 2.2. Forecasting 2.3. Linear Programming 2.4. Use of Computer	HR Ch. 5 Part Four: A, B
4	3. Product Strategy 3.1. Selection 3.2. Development 3.3. Issues of Product Development 3.4. Preparing for Production 3.5. Product Design Exercise	HR Ch. 6

Week No.	Topics	Readings
5-6	4. Process Strategy and Capacity Planning 4.1. Process Strategies 4.2. Process Analysis, Design and Reengineering 4.3. Service Process Strategies 4.4. Capacity 4.5. Break-Even Analysis 4.6. Contemporary P/OM Technologies 4.7. Site Visit	HR Ch. 7 Supplement 7
6-7	5. Location Strategies 5.1. Objectives 5.2. Factors That Affect Locations Decisions 5.3. Evaluating Location Alternatives 5.4. Transportation Modelling	HR Ch. 8 Part Four: C
8	Recess	
9	6. Layout Strategies 6.1. Types of Layout 6.2. Layout Strategies 6.3. Evaluation Project	HR Ch. 9
10	7. Supply-Chain Management 7.1. Strategic Importance 7.2. The Purchasing Function 7.3. Supply-Chain Strategies 7.4. Vendor Selection 7.5. Benchmarking Supply-Chain Management 7.6. Just-In-Time Purchasing 7.7. Learning Curves	HR Ch. 11 Part Four: E
11	8. Material Requirements Planning (MRP) 8.1. Inventory Dependency 8.2. MRP Structure 8.3. MRP Dynamics 8.4. Lot-Sizing 8.5. Extensions of MRP 8.6. Distribution Resource Planning (DRP)	HR Ch. 12 Supplement 12

Week No.	Topics	Readings
12	9. Aggregate Planning 9.1. The Planning Process 9.2. The Nature of Aggregate Planning 9.3. Aggregate Planning Process 9.4. Methods for Aggregate Planning	HR Ch. 13
13	10. Short-Term Scheduling 10.1. Strategic Importance 10.2. Process-Focused Work Centre Job-Scheduling 10.3. Work Centre Job Sequencing 10.4. Finite Scheduling 10.5. Repetitive Manufacturing	HR. Ch. 15

Basic Text

HR: Heizer J. and B. Render, *Production & Operations Management*, Prentice Hall, Fifth Edition, 1999

References

HE: Handfield R.B. and E.L. Nichols, Jr., *Introduction to Supply Chain Management*, Prentice Hall, 1999.

S: Schmenner R.W., *Service Operations Management*, Prentice Hall, 1995.

W: Waters-Fuller N., "Just-In-Time Purchasing and Supply: a Review of the Literature". *International Journal of Operations & Production Management*, Vol. 15, No. 9, 1995, pp 220-236.

E: Evans J.R., *Applied Production and Operations Management*, West, Fourth Edition, 1994 (TS155.E92).

G: Gaither N., *Production and Operations Management*, The Dryden Press, Seventh Edition, 1996 (TS155.G144)

EFKM: Emmons H., A.D. Flowers, C.M. Khot and K. Mathur: *STORM Personal Version 3.0 - Quantitative Modelling for Decision Support*, Prentice-Hall/Allyn & Bacon, 1992 (HF5548.4.S70S885)

Method of Instruction

Lecture: Two hours per week

Tutorials: Two hours per week

Course Assessment

Assignments: 20%

Final Examination: 80%

100%

Staff

Office Room No.

Telephone

Course Coordinator

Dr. Wang Qinan

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Lecturing/Tutoring

Dr. Wang Qinan