VEER NARMAD SOUTH GUJARAT UNIVERSITY

MASTER OF BUSINESS ADMINISTRATION

(Full Time)

(With Effect From July 2002)

Semester – III

Optional Courses

4. Production & Operations Management Group

OP&O 301	**Production Planning & Control**
OP&O 302	**Applied Operations Research**
OP&O 303	**Total Quality Management**
OP&O 304	**Logistics Management**
OP&O 305	**World Class Manufacturing**

VEER NARMAD SOUTH GUJARAT UNIVERSITY

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PRODUCTION & OPERATION MANAGEMENT GROUP

OP & O 301

Production Planning & Control

Objectives :

This course is meant to familiarise the students with various techniques useful for production planning and control.

Course Contents :

Introduction to P.P.C. Basic Approaches to Aggregate Production Scheduling, Quantitative Approaches to Aggregate Planning, Evaluation of Decision system and Rules for Aggregate Planning, Aggregate Production Inventory Policies, Materials Requirement Planning, Batch Planning and Shop Loading, Safety Stock Policies, Mass/Production Flow Line Design System, Order Delivery and Production Control, Job Scheduling – Flow Shop, Job Scheduling-Job shop.

Suggested Readings:

1. Burbidge, John L. Principles of Production Control. London, Donald and Evans,1981.
2. Caubang, Ted C. Readings on Production Planning and Control. Geneva,ILO.
3. Greene, James H. Production and Inventory Control Handbook, New York,McGraw Hill, 1987.
4. Mc Leavey, Dennis W and Narasimhan, S L Production and Inventory

VEER NARMAD SOUTH GUJARAT UNIVERSITY

MBA (Full Time)

Semester – III

PRODUCTION & OPERATION MANAGEMENT GROUP

OP & O 302

Applied Operation Research

Objectives :

The course is designed to present the scope of various Quantitative methods with enough specification so that the manager understands the reasoning behind the methods and is able to interpret their results.

Course Contents :

Linear Programme, Formulations of Linear Optimisation Models, Simplex and Transportation Models, Sensitivity Testing and Duality, Dynamic Programming and its applications, Integer Programming and Combinational Models, Network Analysis, Shortest Route and other Network Models, Waiting Lines and its Applications, Simulation and its Applications, Goal Programming and its application to business.

Suggested Readings :

1. Ahuja A K. etc. Network Flows. Englewood Cliffs New Jersey, Prentice Hall Inc. 1993.
2. Gould, F J. etc. Introduction to Management Science. Englewood Cliffs New Jersey, Prentice Hall Inc. 1993.
3. Gupta, M P and Sharma J K. Operation Research for Management. New Delhi, National, 1997.
4. Taha Harndy A. Operations Research : An Introductions. Macmillan, New York, 1992.
5. Mathur, K and Solow D. Management Science. Englewood Cliffs, New Jersey, Prentice Hall Inc. 1994.
6. Sharma S. J K. Operations Research : Theory and Applications, New Delhi, Macmillian India, 2001.
7. Srinath, L S. Operation Research for Executive. New Delhi, Affiliated East West Press, 1994.

VEER NARMAD SOUTH GUJARAT UNIVERSITY

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Semester – III

PRODUCTION & OPERATION MANAGEMENT GROUP

OP & O 303

Total Quality Management

Objectives :

The objective of this course is to acquaint the students with to make clear to candidates the basic concept of Total Quality (TQ) from design assurance to service assurance; to give emphasis on International Quality Certification Systems – ISO 9000 and other standards and their applicability in design manufacturing quality control and services, to closely interlink management of quality, reliability and maintainability for total product assurance; to focus on quality of services in contemporary environment.

Course Contents :

Basic Concept of Total Quality (TQ); Evolution of Total Quality Management ; Components of TQ Loop; Conceptual Approach to S.Q.C. Acceptance Sampling and Inspection Plans; Statistics Process Control; Process Capability Studies; Humanistic Aspects of TQM; Management of Q. C. and Z.D. Programmes; Quality Improvement Teams; Q-7 tools; Quality Costs, Taguchi Loss Function; Functional Linkage of Quality with Reliability and Maintainability Failure Analysis; (FTA/FMEA) and Optimum Maintenance Decisions; Total Productive Maintenance (TPM); Quality Audits; Lead Assessment and ISO-9000 Standards; Marketing Aspects of T.Q.; Total Quality of Services; Total Quality and Safety; Six Sigma.

Suggested Reading :

1. Carruba, Eugene R and Gorden, Ronald D. Product Assurance Principles : Integrating Design Assurance & Quality Assurance, New York, McGraw Hill, 1991.
2. Grant, Eu-gene L and Leavenworth, Richards. Statistical Quality Control, McGraw Hill, New York, 1991.

3. Ireson, W G. and Coombas, C P. Handbook of Reliability Engineering & Management, New York, McGraw Hill, 1988.
4. Lochner, Robert H. and Matar, Joseph E. Designing for Quality. London , Chapman & Hill, 1990.
5. Pike, John and Barnes. Richard. TQM in Acton. London, Chapman & Hill, 1994.
6. Schmidt, Warren H. and Finnigan, Jerome P. TQ Manager. San Francisco, Jossey Bass, 1993.
7. Spenley. Paul. World Class Performance Through TQ, London, Chapman & Hill, 1992.

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MBA (Full Time)

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PRODUCTION & OPERATION MANAGEMENT GROUP

OP & O 304

Logistics Management

Objectives :

The Course is designed to explain basic theory and techniques of logistics to examine the issues and problems associated with logistics in a changing business environment, and to show how logistics can improve an enterprises effectiveness and competitiveness. Students would be encouraged to use computer software packages for problem solving.

Course Contents :

Introduction to logistics and its Interface with Production and Marketing; Measure of Logistics; Physical Distribution and Logistics; Logistics System Analysis and Design; Warehousing and Distributing Centers, Location; Transportation System; Facilities and Services; Dispatch and Routing Decisions and Models; Inventory Management Decisions; Logistics Audit and Control; Packaging and Materials Handling; International Logistics Management; Logistics Future Directions.

Suggested Readings :

1. Ballau, Renald H. Business Logistics Management. Englewood Cliffs, New York, Prentice Hall Inc., 1992.
2. Beal K. A Management Guide to Logistics Engineering, U.S.A., Institute of Production Engineering, 1990.
3. Benjamin S.B. Logistics Engineering and Management. Englewood Cliffs, New York, Prentice Hall Inc. 1996.
4. Bowersox, D J and Closs, D J. Logistics Management : A System Integration of Physical Distribution, New York, McMillan, 1986.
5. Christopher, M. Logistics and Supply Chain Management : Strategies for Reducing Costs and Improving Services, London, Pitsman, 1992.
6. James, C J. and Wood, Donald F. Contemporary Logistics. New York, MacMillan, 1990.
7. Shapiroa, R. Logistics Strategy : Cases and Concepts. St. Paul, West. 1995.

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MBA (Full Time)

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PRODUCTION & OPERATION MANAGEMENT GROUP

OP & O 305

World Class Manufacturing

Objective:

To acquaint the students with the world class manufacturing environment and optimised production principles.

Course Contents :

World Class Manufacturing Environment; Imperatives for success – Technology, System approach and change in the mindset; Strategic decisions in manufacturing Management; Choice of Technology, Capacity, Layout/Automation in Material handling system; Aggregate Planning and Master Production Scheduling-Materials Requirement Planning (MRP) – Software in Use, Manufacturing Resources Planning (MRP-11) Software in Use, Implementation Problems/Indian experience; Optimised Production; Technology Principles advocated by Eliyahu Goldtratt; just – in – Time System; JIT Manufacturing System, JIT Pull system Use of Kanban, JIT Purchase – Source Development, Buyer – seller relation; Supply Chain Management/Bench Marking; Total Quality Management-TQM Philosophy, TQM Principles, TQM tools including Circles, SQC / Acceptance samplings, Quality through design, QFD – Quality House, Failure Mode effect analysis, Fault – tree analysis, Concurrent Engineering Principles Taguchis' Quality loss function and Robust Design concept, Designing products thro 'Fuzzy' logic, Quality Management System and ISO9000 Standards; Total Productive Maintenance, Objective of TPM – total system effectiveness, Break – down Maintenance, Prevention, Maintenance, Predictive. Maintenance, Condition Monitoring Systems Maintenance Prevention, Maintainability improvement, Reliability improvement, Total employee Involvement and small Group Activities, Customer- Driven Project Management (Integration of TQM, Project Management System with customer – driven team structure); Automation in Design and Manufacturing, Flexible manufacturing System (FMS), Group Technology/Cellular manufacturing Systems; Six Sigma,

Suggested Readings :

1. Buffa, Elwoods and et al Programmed leaming at for Production and Operation Management – IIIinois, learning System Co., 1981.
2. Dervitsiptis, Kostas N : Operations Management Auckland, McGraw-Hill, 1981.
3. Hughes, Chris, Productions and Operations Management – London, Pan Books, 1985.
4. Schonberger, Richard J : Japanese manufacturing techniques, NY, Free-Press, 1982.