

MBA SYLLABUS: SEMESTER IV
OPERATIONS MANAGEMENT - SPECIALIZATION

Semester	IV	Specialization	Operations Management
Course Code	403OPE	Type	Subject Core
Course Title	Operations Strategy and Research		

Course Objectives:

1	To emphasize the key role of operations in bringing about the growth and profitability of organizations.
2	To impart ideas, concepts and principles in operations strategy.
3	To understand use of quantitative tools in solving typical Operations Domain Problems

Syllabus:

Unit Number	Contents	Number of Sessions
1	<p>Introduction: Importance and Linkage with Corporate strategy, Strategies and values, Competing through operations. Operation strategy in global economy- Strategic alliances and production sharing, fluctuations of international financial conditions and international companies. Changing nature of world business.</p> <p>Quality, Customer service and cost challenges and social responsibility, Current perspective-Strategic fit</p>	7 + 2
2	<p>Methodology for Developing Operations Strategy: Value as business concept – strategic issues in manufacturing – Value Chain concept Focus, core competence and distinctive capabilities – stake holders & strategy, Checking markets, Outcome of Market debate – Linking manufacturing to Markets – strategic integration – why products sell in the markets – Order Winners, Order Qualifiers. Lean systems-Eliminating waste.</p>	7 + 2
3	<p>Operation Strategy Implementation: Technology strategy Issues in New Product development Time to market – strategic nature of process– Business implication of Process choice – Hybrid Process. Change management and Sustainability Procedure – company or plant based profiles – decisions for product reallocation – downsizing – Capacity decisions Progression & Regression. Evaluating various</p> <p>tradeoffs alternatives – Focused manufacturing – Product or process focus – Make or Buy – merits /demerits – value chain approach – just in time – lean manufacturing.</p>	7 + 2
4	<p>Linear Programming: Formulation of LPP, Simplex method, Duality, Sensitivity Analysis, Goal Programming, (Numerical is expected on simplex method)</p>	7 + 2

5	Decision trees: Concept of decision making & decision trees; Application of decision trees in making manufacturing decisions like expansion of present plant, build new plant or sub-contract. (Numerical is expected on decision tree)	7 + 2
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Learning Resources:		
1	Text Books	<ul style="list-style-type: none"> • Operations Research- by Nita Shah, Ravi Gor, Hardik Soni- Prentice Hall India • Operations Management by Terry Hill, Palgrave, 2nd Edition. • Operations Now by Byron Finch, TMGH, 3rd Edition. • Operations Management by Norman Gaither, Greg Frazier, Cengage Learning, India Ed. • Operations Research- Hari Prakash et.al.- Scitech Publications
2	Reference Books	<ul style="list-style-type: none"> • Managerial Decision Modeling with Spreadsheets by Nagraj Balakrishnan, Barry Render, Ralph M. Stair Jr.- Pearson • Introduction to Operations Research-by Billey E. Gillett- Tata Mc Graw Hill • Operations Management – An Integrated Approach by Samson and Singh, Cambridge. • Operations Management for Competitive Advantage by Chase, Jacobs, Aquilano and Agarwal, TMGH, 11th Edition.
3	Supplementary Reading Material	<ul style="list-style-type: none"> • Operations Research- Hamdy A. Taha- Pearson Publication • Strategic Operations Management by Brown, Lamming, Bessant and Jones, Butterworth Heinemann, 2nd Edition.
4	Journals	<ul style="list-style-type: none"> • International Journal of Operations and Quantitative Management • International Journals of Operations Research and Management Science

Semester	IV	Specialization	Operations Management
Course Code	404OPE	Type	Subject Core
Course Title	Total Quality Management		

Course Objectives:

1	To give various perspectives on Quality and various contributors to Quality.
2	To provide an in-depth understanding of the various QC tools.
3	To introduce the frameworks of Global Quality Awards.

Syllabus:

Unit Number	Contents	Number of Sessions
1	<p>Quality Concepts :Defined, Quality Cost perspective ,Cost of Quality</p> <p>Quality Function, Spiral of Progress in quality, Little q and Big Q, Juran Trilogy, Internal and external quality perspective. Goods and service quality. Cost of poor quality, internal failure cost and external failure cost, appraisal cost, Prevention cost, Analysis of quality cost, hidden quality cost, Discovering the optimum, economic models of quality of conformance-Zone of improvement, zone of high appraisal, zone of indifference.</p> <p>Strategic Quality management: Companywide quality culture, Organizational vision, Mission and quality policy, formulation of quality goals, competitive benchmarking, Steps in implementing Total quality-Decide, Prepare, Start, Expand and Integrate. Quality Circle</p>	7 + 2
2	<p>Quality Gurus: Demings' 14 point philosophy, Juran, Crosby philosophy, Ishikawa, Taguchi, Feigenbaum. Comparison of quality philosophy.</p>	7 + 2
3	<p>QC Tools: Problem Solving Methodology - Check list, Flow Chart, Tally charts and Histograms, Graphs, Pareto Analysis ,Cause and Effect Diagram, Brainstorming, Scatter diagram and regression analysis. Quality Function Deployment - Introduction, Customer needs, Customer priorities and competitive comparisons and planned improvements, Design features or requirements, Central relationship matrix-What's versus the How's , relative weights of importance. Design features interactions, target values, Technical comparison ,service information and special requirements-Difficulties associated with QFD, Implementation of QFD</p>	7 + 2
4	<p>Statistical Quality Control: Necessity and Importance of SQC, Process capability, Six Sigma quality, Process control, Process control for attributes, p charts and c charts, Process control for variables, X bar R chart, acceptance sampling, OC curves, Average Outgoing Quality Limit (AOQL),Sampling plans</p>	7 + 2

5	Quality Management Awards and frameworks: Malcolm Baldrige National quality award, Deming prize, ISO 9000-2000,CII, Ramakrishna Bajaj Awards, Tata Business Excellence Model (TBEM)	7 + 2
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Learning Resources:		
1	Text Books	<p>Operations Management: Theory and Practice by B Mahadevan, Pearson, 2nd Edition</p> <p>Production and Operations Management by RB Khanna, PHI</p> <p>Managing Quality by Dale, Blackwell Publication.</p> <p>Quality Management by Howard Gitlow, Alan Oppenheim, Rosa Oppenheim and David Levine, TMGH, 3rd Edition.</p> <p>Total Quality Management - Senthil Arasu et.al. 2nd Edn Sci-tech Publications</p>
2	Reference Books	Operations Management: An Integrated Approach by Danny Samson and Prakash Singh, Cambridge University Press.
3	Supplementary Reading Material	Managing Quality Edited by Barrie G Dale, Ton van der Wiele and Jos van Iwaarden, Blackwell Publishing, 5 th Edition.
4	Websites	<p>http://managementhelp.org/quality/total-quality-management.htm</p> <p>www.isixsigma.com</p> <p>www.asq.org</p>
5	Journals	<p>Journal of Operations Management</p> <p>Total Quality Management & Business Excellence</p> <p>Quality Assurance</p> <p>International Journal of Reliability, Quality & Safety Engineering</p> <p>Journal of Quality Management</p>