K L University
K L University Business School
Course Handout for 1st Year MBA PROGRAM
A.Y.2017-18, 2nd Semester

Course Name	**: Operations Management**
Course Code	**: 17 MB 52 C4**
L-T-P structure	**: 3 0 0**
Course Credits	**: 3**
Course Coordinator	**: Dr. A VASUDEVA REDDY**
Course Instructor	**: Dr. A VASUDEVA REDDY**
	: Dr. A SRIKANTH
Course Teaching Associates	**: Nil**

Course Objectives:

1. The basic purpose of this course is to provide students with a broad understanding and knowledge of several operations management concepts.
2. To emphasize more on operations strategy, process design, forecasting, inventory management, scheduling, and quality management.
3. To place emphasis on the application of these concepts to actual business situations.

Course Rationale: Operations management familiarizes the students about the organizational processes for sustainability.

Course Outcomes (CO):

CO No:	CO	PO	BTL
1.	**Illustrate the general concepts of overall plant and production management using appropriate analysis tools**	**A**	**2**
2.	**Establish methods for maximizing productivity and understand the purpose of setting and attaining high levels of throughput, quality, and customer service**	**B, C**	**5**
3.	**Optimize the use of resources which include: people, plant, equipment, tools, inventory, premises and information systems**	**B, C**	**6**
4.	**Make the best use of technology to achieve maximum efficiency, especially in the planning and control of operations**	**A, C**	**4**

COURSE OUTCOME INDICATORS:

CO No.	COI-1	COI-2	COI-3
1	Understanding the Overview of Operations Management	Differentiate Operations strategy for Product and process	Examining the Criteria for facility locations and layouts
2	Understanding the importance of Project Management	Applying Quality Tools for improving productivity	Evaluate key project management issues
3	Understanding the need for Demand Forecasting and SCM	Performing Vendor Analysis, Evaluating problems related to Inventory	Evaluating problems related to job sequencing, Assignment, Transportation
4	Understanding Services operations	Application of OM in allied functions	Analyzing the Methods of reducing waste and deploying DSS

SYLLABUS (As approved by BoS):

Introduction: An overview of Operations Management-Introduction and Overview-Operations Management Strategy framework-Understanding similarities and difference among Products, Goods and Services-Historical Evolution of Operations Management-Changes & Challenges-**Product development: Operations strategy-** Product Strategy and Integrated Product Development- Process Strategy- Capacity Planning Decisions- Facilities Location Strategies. **System Design-**Facilities Layout and Material Handling Strategy-Group Technology-Flexible Manufacturing System- Project Management-CPM PERT. **Productivity & Quality Tools-**Productivity Concepts-Quality Circle-Kaizen-Value Analysis and Value Engineering-Total Quality Management- Statistical Quality Control-Maintenance Planning and Control (Reliability, availability, maintainability)-Work Study-Method Study &Work Measurement-Learning Curves-Work Sampling-control charts. **Planning and Managing Operations-** Demand Forecasting-Supply Chain Management-Purchasing, Vendor Selection and Material Management-Inventory Management & Just-in-Time Systems-Materials Requirement Planning, Job Sequencing-Transportation problems-Assignment problems. **Advanced Operations Management-**Service

Operations Management – ERP – Lean systems – Constraint management (TOC-Theory of Constraints) – Computer Integrated Manufacturing – DSS for Operations Management

BoS Approved Text books:

1. Norman Gaither and Greg Frazier (2008)-Operations Management, 9th International Student Edition, South Western, Thomson Learning Inc.

BoS Approved Reference Books:

1. Chase et al, Production and Operations Management.
2. Everett Adam and Ronald Ebert, Production and Operations Management: Concepts, models and behavior, 5th edition, 2009.
3. William Stevenson, Operations Management, Tata McGraw Hill Company, New Delhi.
4. Nigel Slack, Stuart Chambers and Robert Johnston, Operations Management, fourth edition, Pearson.

Other Books, References: (As recommended for reference by the course team, if any): NIL

Deviations (if any) from B o S approved syllabus and the topics planned: NIL

COURSE DELIVERY PLAN:

Sess. No.	CO	COI	Topic (s)	Teaching-Learning Methods	Evaluation Components
1.	1	1	Introduction to Operations Management	Lecture by ppt and Q&A	In-sem (Test-1) Q&A and ES
2.	1	1	Historical Evolution of Operations Management	Lecture by ppt and Q&A	In-sem (Test-1) Q&A and ES
3.	1	2	Operations strategy	Lecture by ppt and Q&A	In-sem (Test-1) Q&A and ES
4.	1	2	Production processes.	Lecture by ppt and Q&A	In-sem (Test-1) Q&A and ES
5.	1	2	Capacity Planning Decisions	Lecture by ppt and Q&A	In-sem (Test-1) Q&A and ES
6.	1	3	Facilities Location Strategies	Lecture by ppt and Q&A	In-sem (Test-1) live project and ES
7.	1	3	System Design-Facilities Layout	Video Lecture	In-sem (Test-1) live project and ES
8.	1	3	Material Handling Strategy	Lecture by ppt and Q&A	In-sem (Test-1) live project and ES
9.	1	3	Group Technology	Lecture by ppt and Q&A	In-sem (Test-1) live project and ES
10.	1	3	Flexible Manufacturing System	Lecture by ppt and Q&A	In-sem (Test-1) live project and ES
11.	2	1	Project Management	Lecture	In-sem (Test-2) and ES
12-16	2	3	Problems on CPM & PERT	Problems	In-sem (Test-2) and ES
17.	2	2	Productivity & Quality Tools	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
18.	2	2	Kaizen	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
19.	2	2	Value Analysis and Value Engineering	Video Lecture	In-sem (Test-2) live project and ES
20.	2	2	Total Quality Management- Statistical Quality Control	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
21.	2	2	Maintenance Planning and Control	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
22.	2	2	Work Study	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
23.	2	2	Method Study & Work Measurement	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
24.	2	2	Learning Curves & Work Sampling	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
25-26	2	3	Control Charts	Problem solving	In-sem (Test-2) and ES
27.	3	1	Demand Forecasting	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
28.	3	1	Supply Chain Management-Purchasing	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
29.	3	2	Vendor Selection and Material Management	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
30.	3	3	Inventory Management	Problem solving	In-sem (Test-3) and ES
31.	3	2	Just-in-Time Systems-Materials Requirement Planning	Lecture by ppt and Q&A	In-sem (Test-2) live project and ES
32-33	3	3	Job Sequencing (problems)	Problem solving	In-sem (Test-3) and ES
34-35	3	3	Transportation problems	Problem solving	In-sem (Test-3) and ES
36-38	3	3	Assignment problems	Problem solving	In-sem (Test-3) and ES
39.	4	1	Advanced Operations Management	Lecture by ppt and Q&A	End Exam
40.	4	2	Enterprise Resource Planning	Lecture by ppt and Q&A	End Exam

41.	4	2	Lean systems	Lecture by ppt and Q&A	End Exam
42.	4	3	Constraint management (TOC)	Lecture by ppt and Q&A	End Exam
43.	4	3	Computer Integrated Manufacturing	Lecture by ppt and Q&A	End Exam
44-45	4	3	DSS for Operations Management	Lecture by ppt and Q&A	End Exam

Session wise Teaching – Learning Plan

Session Number: 1

Session Outcome: Student able to understand importance of Operations Management

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	Operations Management	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 2

Session Outcome: Student able to Understand Historical Evolution of Operations Management

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Historical Evolution of Operations Management**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 3

Session Outcome: Student able to interpret Operations strategy of an organization

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Operations strategy**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 4

Session Outcome: Student able to classify different production processes.

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**production processes**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 5

Session Outcome: Student able to take decisions on Capacity Planning.

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Capacity Planning Decision**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 6

Session Outcome: Student able to demonstrate Facilities Location Strategies

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Facilities Location Strategies**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 7

Session Outcome: Student able to illustrate Facilities Layout

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Facilities Layout**	2	Video Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 8

Session Outcome: Student able to classify Material Handling of an organization

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Material Handling**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 9

Session Outcome: Student able to compare Group Technology with other processes

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Group Technology**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 10

Session Outcome: Student able to summarize Flexible Manufacturing System

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Flexible Manufacturing System**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 11

Session Outcome: Student able to Understand Project Management.

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Project Management**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 12-16

Session Outcome: Student able to solve problems related to CPM/PERT

Time(min)	Topic	BTL	Teaching – Learning Method
05	Revision		Lecture
30	**Problems solving - PERT/CPM**	5	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 17

Session Outcome: Student able to analyze the importance of Productivity & Quality Tools.

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Productivity & Quality Tools**	4	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 18

Session Outcome: Student able to apply the concept of Kaizen

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Kaizen**	3	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 19

Session Outcome: Student able to distinguish Value Analysis and Value Engineering.

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	Value Analysis and Value Engineering	4	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 20

Session Outcome: Student able to apply the techniques of quality management

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**techniques of quality management**	3	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 21

Session Outcome: Student able to simplify maintenance and control plans

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	Maintenance Planning and Control	4	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number:22

Session Outcome: Student able to apply the concept of Work Study

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Work Study**	3	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 23

Session Outcome: Student able to apply the concepts of Method Study & Work Measurement

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Method Study & Work Measurement**	3	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 24

Session Outcome: Student able to examine Learning Curves & Work Sampling.

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Learning Curves & Work Sampling**	4	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 25-26

Session Outcome: Student able to solve problems related to Control Charts

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Control Charts**	5	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 27

Session Outcome: Student able to Understand Demand Forecasting

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Demand Forecasting**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 28

Session Outcome: Student able to Understand Supply Chain Management

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	Supply Chain Management	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 29

Session Outcome: Student able to apply the concepts of Vendor Selection and Material Management

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Vendor Selection and Material Management**	3	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 30

Session Outcome: Student able to evaluate the application of Inventory Management

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Inventory Management**	5	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 31

Session Outcome: Student able to relate the concept of Just-in-Time System

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Just-in-Time System**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 32-33

Session Outcome: Student able to solve Job Sequencing (problems)

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
40	**Job Sequencing (problems)**	6	Lecture
05	Revision		Interaction

Session Number: 34-35

Session Outcome: Student able to solve Transportation problems

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
40	**Transportation problems**	6	Lecture
05	Revision		Interaction

Session Number: 36-38

Session Outcome: Student able to solve Assignment problems

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Assignment problems**	6	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 39

Session Outcome: Student able to understand Operations Management in the advanced mechanism

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Advanced Operations Management**	2	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 40

Session Outcome: Student able to examine the Implementation of ERP

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Enterprise Resource Planning**	3	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 41

Session Outcome: Student able to apply lean Systems

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**lean Systems**	3	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 42

Session Outcome: Student able to analyze Constraint management (TOC)

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Constraint management (TOC)**	4	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 43

Session Outcome: Student able to analyze the impact of Computer Integrated Manufacturing in manufacturing sector

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**Computer Integrated Manufacturing**	4	Lecture
10	Q & A		Interaction
05	Revision		Interaction

Session Number: 44-45

Session Outcome: Student able to examine DSS in Operations Management

Time(min)	Topic	BTL	Teaching – Learning Method
05	Introduction		Lecture
30	**DSS for Operations Management**	4	Lecture
10	Q & A		Interaction
05	Revision		Interaction

EVALUATION PLAN: OPERATIONS MANAGEMENT

Evaluation Component	Weightage/ Marks	Date	Duration (Hours)	CO 1			CO 2			CO 3			CO 4		
COI Number				1	2	3	1	2	3	1	2	3	1	2	3
BTL				2	2	2	2	3	5	2	6	6	2	4	4
Test 1	**Weightage (10%)**		90 mins	3	3	4									
	Max Marks (20)			6	6	8									
Test 2	**Weightage (10%)**		90 mins				3	3	4						
	Max Marks (20)						6	6	8						
Test 3	**Weightage (10%)**		90 mins							3	3	4			
	Max Marks (10)									6	6	8			
Live Project	**Weightage (15%)**				**Live Project**										
	Max Marks (15)														
Attendance	**Weightage (5%)**				**Attendance**										
	Max Marks (5)														
Semester End Exam	**Weightage (50%)**		180 mins	2	4	4	2	4	4	2	4	4	4	8	8
	Max Marks(50)			2	4	4	2	4	4	2	4	4	4	8	8
	Question Number			1	2	3	1	3	8	1	4	5	1	6	7

Course Team members, Chamber Consultation Hours and Chamber Venue details: Only Subject Teacher

S.No.	Name of Faculty	Chamber Consultation Day(s)	Chamber Consultation Timings for each day	Chamber Consultation Room No:	Signature of Course faculty
1	A Vasudeva Reddy	Monday	5 P.M to 7 P.M-2 hours	Faculty Chamber	
2	Dr. A Srikanth	Monday	5 P.M to 7 P.M-2 hours	Faculty Chamber	

Signature of COURSE COORDINATOR:

Recommended by HEAD OF DEPARTMENT:

Hari Kiran Vege,

Assoc.Dean-TLP

for **Approved By: DEAN-ACADEMICS**

(Sign with Office Seal)

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