Operations Management

Course Name	**Operations Management**
Program	**1-year Executive MBA, FT**
Batch	**2022-23**
Term	**2**
Credits	**3**
Course Instructor	**Prof. Manimay Ghosh, Ph.D.**

1. Course Introduction and Objectives

Most businesses are engaged in various activities and processes to create value for their customers by supplying various products and services. Operations managers focus on designing and monitoring each work processes, identifying bottlenecks in the process, managing various resources such as people, machines, and materials judiciously, and measuring plant performances so that right quality and quantity of goods are offered to the customers timely, and in the most efficient manner. Operations is thus a core function in most business organizations translating inputs to outputs (for example, flour to bread, or wood to furniture) for use by the customers.

The objective of this course is to expose the EMBA students to various issues that an operation manager is likely to be involved to manage a plant – strategic, tactical, and operational. Representative strategic issues include forecasting, capacity planning, locating the plant, and deciding the layout of the manufacturing/service facility. Tactical issues include aggregate planning. Operational issues involve managing production of parts, inventory, and quality of the products and services, and planning the quantity and timing of components (MRP) to produce a complete product. All these key activities are performed keeping in mind the cost and waste reductions.

2. Tentative Course Content

a) Forecasting
b) Capacity and Facilities Planning
c) Location of plants
d) Lean Manufacturing
e) Inventory Management
f) Aggregate Planning
g) Material Requirements Planning (MRP) or Resource Planning
h) Scheduling of operations

i) Quality Management

3. Course Learning Outcomes (CLOs): On successfully completion of this course, the following outcomes are likely to emerge:

a) **CLO1**. In a given situation in a manufacturing/service sector, students will be able to demonstrate basic understanding of strategic, tactical, and operational issues.

b) **CLO2**. In a given situation, students will be able to solve operations-related problem using their analytical skills.

c) **CLO3**. Students will exhibit voluntary cooperation and effective teamwork in a group setting and communicate findings to the class by presenting and submitting an e-report.

4. Reading and References

A. Textbook: Russell and Taylor, "*Operations and Supply Chain Management*", 8th Ed

B. Reference Book: Chase, R.B., Sankar, R. and Jacobs, R.F. (2019), *Operations and Supply Chain Management*, McGraw-Hill, 15E.

5. Pedagogy and Students Workload

The following pedagogies will be followed for better learning:

1. Class lectures
2. Case discussions
3. In-class problem solving or home assignments on case
4. Short videos
5. Group projects

In each class students will discuss their learnings from the previous class. They will be assigned cases for reading and discussing in the next class. They will work on a project (group initiative) and present in the class.

6. Tentative Session Plan

Session No.	Topics	Student Learning	Pre-reading*
1,2,3	Forecasting	Why forecasting, planning horizons in forecasting, laws in forecasting, types of forecasting, forecasting techniques, measuring errors and biases in forecasting	Chap 3
4,5	Capacity Planning	Importance of capacity, defining capacity, types of capacity, bottlenecks, capacity cushion and utilization, various capacity expansion strategies	Chap 5
6	Plant Location	Why location decisions, location options, factors affecting location decision, various location analysis techniques	Chap 8
7,8	Plant Layout	Why layout decisions are important, objectives of layout, types of layouts.	Chap 6
9,10,11	Inventory Management	Definition of inventory, types of inventories, Inventory classifications schemes, basic inventory models, cost of inventory, concept of service level and safety stock	Chap 13
12,13	Aggregate Planning (AP)	Definition of AP, basic AP strategies, mixed strategies, cost for each strategy, various techniques in AP to manage demand and capacity	Chap 11
14,15	MRP	Definition of MRP, inputs and outputs of MRP, capacity planning, safety stocks in MRP, MRP nervousness, pegging, MRP II and ERP	Chap 12
16,17	Quality Management	Definition of quality, broad categories of quality, costs of quality, reasons for variability in quality, statistical process control and different types of control charts, process capabilities	Chap 10
18	Lean Manufacturing	Understanding the word “Lean”. Defining waste and types of waste, Lean tools and techniques to eliminate waste	Chap 14
19,20	Group Presentations	OM related projects	

Component	Weightage (%)	Assessment of Course Learning Outcome(s) (CLO)
Two Quizzes (15% each)	30%	CLO1 and CLO2
End-Term (All topics)	40%	CLO1 CLO2
Class attendance and participation	10%	CLO1
Group Project	20%	CLO3

7. Academic Discipline and Integrity

Students will have to come to the class before the scheduled start times. Late-comers will not be entertained after the class has started and will be marked absent for the day. Personal needs need to be addressed before entering the class. Leaving the class when the session is in progress is completely prohibited except in case of medical emergencies and with the due permission of the faculty.

Utmost care will be to be taken to maintain class decorum, follow the exact evaluation norms, conduct fair examinations, fair and transparent evaluation of examination to maintain the highest academic integrity.

8. Mapping Course Leaning Outcomes (CLO) with the Program Learning Goals (PLG)

PLG#	Program Learning Goal	Trait	Addressed by Course	
			Yes	No
PLG1	Functional and Business Skills	The students will demonstrate understanding of the fundamental concepts of OM (CLO1)	Yes	
PLG2	Analytical Skills	The students will use analytical techniques to identify an operational	Yes	

		problem and suggest a solution (CLO2)		
PLG3	Collaboration and teamwork attributes	The students will exhibit voluntary cooperation and effective teamwork to solve operational problems with all stakeholders in a group setting (CLO3)	Yes	
PLG4	Ethical responsibility	The students will understand the ethical complexities of managing operational function in business. The students will adopt techniques in scenarios involving ethical dilemma and offer resolution	Yes	
PLG5	Communication	The students will produce reasonably good quality business documents. The students will become effective and confident communicators (CLO3)	Yes	

Secretary: Ms. Sushila Nayak, Old Academic Block, 2nd Floor, Email: sushila@ximb.ac.in