INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad -500 043

MASTER OF BUSINESS ADMINISTRATION

COURSE INFORMATION SHEET

Course Title	**OPERATIONS MANAGEMENT**			
Course Code	**CMB0013**			
Programme	**MBA**			
Semester	**II**			
Course Type	**Core**			
Regulation	**IARE-R16**			
Course Structure	**Lectures**	**Tutorials**	**Practicals**	**Credits**
	3	**1**	**-**	**4**
Course Coordinator	**Miss Azara,Assistant Professor,MBA**			
Course Faculty	**Miss Azara,Assistant Professor,MBA**			

I. COURSE OVERVIEW:

This course is concerned with the management of resources and activities that produce and deliver goods and services for customers. Efficient and effective operations can provide an organization with major competitive advantages since the ability to respond to customer and market requirements quickly, at a low cost, and with high quality, is vital to attaining profitability and growth through increased market share. As competition becomes fiercer in an increasingly open and global marketplace, a company's survival and growth become greatly contingent on its ability to run its operations efficiently and to exploit its resources productively.

II. COURSE PRE-REQUISITES:

Level	Course Code	Semester	Prerequisites	Credits
PG	CMB005	I	**STATISTICS FOR MANAGEMENT**	3

III. MARKS DISTRIBUTION:

Subject	SEE Examination	CIA Examination	Total Marks
OPERATIONS MANAGEMENT	70 Marks	30 Marks	100

SEMESTER END EXAMINATION (SEE):

The SEE is conducted for 70 marks of 3 hours duration. The syllabus for the theory courses is divided into FIVE units and each unit carries equal weight age in terms of marks distribution. The question paper pattern is as follows: Two full questions with 'either' 'or' choice will be drawn from each unit. Each question carries 14 marks.

CONTINUOUS INTERNAL ASSESSMENT (CIA):

CIA is conducted for a total of 30 marks, with 25 marks for Continuous Internal Examination (CIE) and 05 marks for Quiz / Alternative Assessment Tool (AAT).

CONTINUOUS INTERNAL EXAMINATION (CIE):

The CIE exam is conducted for 25 marks of 2 hours duration consisting of two parts. Part–A shall have five compulsory questions of one mark each. In part–B, four out of five questions have to be answered where, each question carries 5 marks. Marks are awarded by taking average of marks scored in two CIE exams.

QUIZ / ALTERNATIVE ASSESSMENT TOOL (AAT):

Two Quiz exams shall be online examination consisting of 20 multiple choice questions and are be answered by choosing the correct answer from a given set of choices (commonly four). Marks shall be awarded considering the average of two quizzes for every course. The AAT may include seminars, assignments, term paper, open ended experiments, micro projects, five minutes video and MOOCs.

IV. DELIVERY / INSTRUCTIONAL METHODOLOGIES:

√	CHALK & TALK	√	QUIZ	√	ASSIGNMENTS	X	MOOCs
√	LCD / PPT	√	SEMINARS	X	MINI PROJECT	X	VIDEOS
X	OPEN ENDED EXPERIMENTS						

V. ASSESSMENT METHODOLOGIES – DIRECT:

√	CIE EXAMS	√	SEE EXAMS	√	ASSIGNEMNTS	√	SEMINARS
X	LABORATORY PRACTICES	X	STUDENT VIVA	X	MINI PROJECT	X	CERTIFICATION
X	TERM PAPER						

VI. ASSESSMENT METHODOLOGIES – INDIRECT:

√	ASSESSMENT OF COURSE OUTCOMES (BY FEEDBACK, ONCE)	√	STUDENT FEEDBACK ON FACULTY (TWICE)
X	ASSESSMENT OF MINI PROJECTS BY EXPERTS		

VII. COURSE OBJECTIVES:

The course should enable the students to:

I	Understand the strategic role of operations management in creating and enhancing a firm's competitive advantages.
II	Analyze the key concepts, issues and different types of techniques of Operations Management in both manufacturing and service organizations.
III	Know about the interdependence of the operations function with the other key functional areas of a firm.
IV	Apply analytical skills and problem-solving tools to the analysis of the operations problems.

VIII. COURSE LEARNING OUTCOMES:

Students, who complete the course, will have demonstrated the ability to do the following:

CMB0013:01	Understand about the different types of processes and its production system in organizations and also its environment.
CMB0013:02	Know the difference between the product and process focused system
CMB0013:03	Able to understand about the product life cycle and process life cycle its relationship.
CMB0013:04	Access about the scheduling, different stages and its factors affecting scheduling.

CMB0013:05	Know about the maintenance system and its objectives, different types of maintenance system.
CMB0013:06	Analyze about the concepts of capacity planning ,replacement and bathtub curve.
CMB0013:07	Able to understand about the quality control tools and techniques and also different types of controlling measures for the products in organizations.
CMB0013:08	Know about the concept of quality circles and to know about the importance and its objectives.
CMB0013:09	Understand about the acceptance sampling and its different types of sampling plans used for the products.
CMB0013:10	Able to understand about the material requirement planning and also know about its advantages and disadvantages of MRP.
CMB0013:11	Know about the concept of waste management ,different types and its benefits in an
CMB0013:12	Understand about the make or buy decision concept and its advantages , disadvantages, its factors
CMB0013:13	Know about the concept of vendor rating and also about the role of vendor in production and operation management.
CMB0013:14	Analyze the key concepts, issues and different types of techniques of Operations Management in both manufacturing and service organizations
CMB0013:15	Access the different types of EOQ models used in the inventory process in an organization for the products.
CMB0013:16	Understand about the stores and stores management and various functions
CMB0013:17	Know about the VED analysis and it benefits in an organizations

IX. HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes		Level	Proficiency assessed by
PO1	Ability to apply management fundamentals in practical world	H	Lectures and Assignments
PO2	An ability to identify, formulate and solve managerial problems.	H	Assignments
PO3	Demonstrate abilities such as initiative taking and innovative thinking in their acts.	H	Lectures/ Assignments
PO4	An ability to function effectively on multi-disciplinary teams.	N	----
PO5	To inculcate zeal of self learning	S	Guest lectures
PO6	Enhancing entrepreneurship abilities so that the students are induced to undertake independent ventures	H	Lectures and Assignments
PO7	An ability to understand professional and ethical responsibility	S	Lectures and Assignments
PO8	An ability to communicate effectively.	S	Lectures and Guest
PO9	Enhancing knowledge of contemporary issues.	S	Assignments
PO10	Recognition of the need for and an ability to engage in life-long learning	H	Lectures and Assignments
PO11	An ability to understand the impact of managerial solutions in a global, economic, environmental and societal context.	H	Lectures and Assignments
PO12	Ensuring holistic development of students.	S	Assignments

N= None **S= Supportive** **H = Highly Related**

X. HOW PROGRAM SPECIFIC OUTCOMES ARE ASSESSED:

Program Specific Outcomes		Level	Proficiency assessed by
PSO1	**Professional Skills:** Able to utilize the knowledge of management practices in innovative, dynamic and challenging environment in the organizations.	H	Lectures, Assignments
PSO2	**Creativity:** Create value through identifying customer needs and implementing integrated production and distribution of goods, services and information.	S	Assignments
PSO3	**Problem-Solving Skills:** Can develop capacity to adapt and innovative to solve problems, to cope with unforeseen events and to manage in unpredictable environments.	H	Assignments and Lectures
PSO4	**Successful Career and Entrepreneurship:** An understanding of social awareness and environmental wisdom along with ethical responsibility to have a successful career and to sustain passion and zeal for real world applications using optimal resources as an Entrepreneur.	H	Guest Lecture

N - None **S - Supportive** **H - Highly Related**

XI. SYLLABUS:

UNIT – I INTRODUCTION TO OPERATIONS MANAGEMENT

Introduction to operations management, role of operations management in total management system, and interface between the operation systems and systems of other functional areas, process planning and process design, production planning and control: basic functions of production planning and control, production cycle, characteristics of process technologies, project, job shop, assembly, batch and continuous, inter relationship between product life cycle and process life cycle.

UNIT – II SCHEDULING AND CONTROL OF PRODUCTION OPERATIONS

Aggregate planning, operations scheduling and product sequencing: sequencing of products in multi-product multi stage situations, plant capacity and line balancing. Plant layout, different types of layouts, location and the factors influencing location. Maintenance management: objectives, failure concept, reliability, preventive and breakdown maintenance, replacement policies.

UNIT – III QUALITY CONTROL

Standards and specifications, quality assurance and quality circles, statistical quality control: control charts for variables, average, range and standard deviation. Control charts for attributes, fraction defective and number of defects, acceptance sampling plans, oc curve work study. Various techniques in the methods study for identifying the most appropriate method; Work measurement, its uses and different methods, computation of allowance and allowed time.

UNIT – IV MATERIALS MANAGEMENT

Need and importance of materials management-materials requirement planning materials budgeting-techniques for prioritization of materials-sources of supply of materials ,selection, evaluation and performance of suppliers make or buy decisions and its implications under various circumstances vendor rating , determinants of vendor rating, concept of waste management

UNIT – V STORES MANAGEMENT

Objectives of stores management, requirements for efficient. Management of stores, safety stock inventory control, different systems of inventory control types of inventory. Costs systems of inventory control ABC, VED and FNSD analyses. Value analysis, importance in cost reduction, concepts and procedures.

TEXT BOOKS:

1	Aswathappa K. and Sridhara Bhat, "Production and Operations Management", 2010, HPH.
2	Stevenson J. William, "Operations Management", 2009, 9th Ed. Tata McGraw-Hill.
3	KanishkaBedi, "Production and Operations Management", 2007, 2ndEd,Oxford University Press.

REFERENCES:

1	James R Evans, David A. Collier, "Operations Management", 2007, Cengage Learning
2	Upendra Kachru, "Production and Operations Management", 2010, Excel Books

XII. COURSE PLAN:

The course plan is meant as a guideline. There may probably be changes.

Lecture No.	Learning Objectives	Topics to be covered	Reference
1-2	**Able** to gain the knowledge in operations management	Introduction to operations management, role of operations management in total management system	T1&T2
3-4	Able to understand the use of different processes designs in manufacturing and production industries	process planning and process design, production planning and control	T2
5-6	Acquires the concept and its benefits and know about its functions and Identify the significance of production cycle in industries	basic functions of production planning and control and production cycle	T3
7-8	To know the stages in sequencing of products	sequencing of products in multi-product multi stage situations	T1
9-10	Awareness of different types of production	project, job shop, assembly, batch and continuous production	T1,T3
10-11	To acquire the knowledge of product and process life cycles	inter relationship between product life cycle and process life cycle	T2
12-13	Understand the concepts of plant capacity and line balancing	plant capacity and line balancing	T2
14-15	Acquire the knowledge in different types of layouts in productions	Plant layout, different types of layouts. location and the factors influencing location	T3 &T1
15-17	To acquire the knowledge of material management ,different types of maintenance	Maintenance management: objectives, failure concept, reliability preventive and breakdown maintenance	T1
18-19	Understand the policies Analyze the quality control	Replacement policies. Standards and specifications of quality control, quality assurance and quality circles	T2
20-21	Evaluate the different types of graphs	statistical quality control ,Control charts for attributes, fraction defective and number of defects	T3
21-22	Acquire about the work study	Acceptance sampling plans. OC curve, work study. Various techniques in the methods. Study for identifying the most appropriate method.	T3&T2

23-24	Able to know about the techniques	Work measurement, its uses and different methods.	T2
25-26	To acquire about the charts	Charts for attributes and variables.	T1 &T2
27-29	Able to know about the materials management	materials management Need and importance of materials management. materials requirement planning materials budgeting	T2
30-32	Able to understand about the different techniques	techniques for prioritization of materials. sources of supply of materials	T3
33-34	Know about the selection of materials	Selection of materials. evaluation and performance of suppliers	T1 &T2
34-36	Able to understand about the make or buy concept	make or buy decisions Applications of make or buy decisions..	T1
37-40	Know about the concept of waste management	determinants of vendor rating, concept of waste management	T1 &T2
40-42	Able to know about the objectives of stores management	Objectives of stores management requirements for efficient. Management of stores	T3
43-45	Acquire the knowledge about the safety stock inventory	safety stock inventory control different systems of inventory control types of inventory	T1
46-48	Know about the Costs systems of inventory control.	Costs systems of inventory control.	T1&T3
49-51	Able to know about the different concepts and procedures	ABC, VED and FNSD analyses importance in cost reduction, concepts and procedures.	T1

XIII. GAPS IN THE SYLLABUS - TO MEET INDUSTRY / PROFESSION REQUIREMENTS:

S. NO	DESCRIPTION	PROPOSED ACTIONS	RELEVANCE WITH POs	RELEVANCE WITH PSOs
1	Statistical quality control tools and techniques	Seminars	PO 2, PO 4, PO 8	PSO 2
2	Different types of product layouts and process layouts in organisations	Seminars/ Industrial Visit	PO 1, PO 7, PO11	PSO 4
3	Inventory controlling measures and also cost reduction techniques.	Seminars / Guest Lectures	PO6, PO 9, PO 12	PSO 5

XIV. MAPPING COURSE OBJECTIVES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Objectives	Program Outcomes (POs)												Program Specific Outcomes (PSOs)			
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3	PSO 4
I	H	-	-	-	S	-	-	-	-	-	-	S	H	-	-	H
II	-	S	-	-	S	-	-	-	H	-	-	-	H	-	S	-
III	-	-	-	-	S	-	-	-	-	-	-	-	S	-	-	-

IV	-	-	-	-	-	-	-	-	H	-	-	-	S	-	S	-

S= Supportive **H = Highly Related**

XV. MAPPING COURSE LEARNING OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)			
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3	PSO 4
CMB0013:01	S	S	-	-	-	-	-	-		-	-	S	S	-	-	-
CMB0013:02	S	S	-	-	-	-	-	-	S	S	-	S	S	-	-	-
CMB0013:03	-	H	-	-	-	-	-	-	S	-	-	-	-	-	-	S
CMB0013:04	-	-	-	-	S	-	-	S	S	S	-	S	-	-	-	-
CMB0013:05	-	-	-	-	S	-	-	-	-	S	-	-	-	-	S	S
CMB0013:06	-	S	-	-	-	-		-	-	-	-	H	S	-	-	-
CMB0013:07	S	S	-	-	S	-	-	-	-	-	-	S		-	-	-
CMB0013:08	S	-	-	-	-	-	-	-	-	-	-	S	S	H	-	-
CMB0013:09	H	H	-	-	S	-	-	-	S	-	-	-	-	-	-	S
CMB0013:10	S	-	-	-	-	-	-	-	S	S	-	S	S	-	-	-
CMB0013:11	-	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMB0013:12	H	H	-	-	-	-	-	-	S	-	-	H	S	-	S	-
CMB0013:13	S	S	-	-	H	-	-	-	-	-	-	S		-	-	-
CMB0013:14	-	-	-	-	S	-	-	-	-	-	-	-	S	-	S	S
CMB0013:15	-	-	-	-	-	-	-	-	-	S	-	-	S	-	-	H
CMB0013:16	-	-	-	-	S	-	-	-	-	-	-	-	H	-	S	S
CMB0013:17	H	-	-	-	S	-	-	-	-	H	-	S	S	-	S	-

S= Supportive **H = Highly Related**

XVI. DESIGN BASED PROBLEMS (DP) / OPEN ENDED PROBLEM:

1. What changes did you make that resulted in increasing productivity, improving efficiency, or lowering costs and What are some industry trends that have an impact on your role as a manager?

2. Have you ever had to execute a project with a small budget, or a lack of resources? How did you address these issues? An unintended consequence of exaggerated maximum-discount tensile price claims

3 .What did you learn about our company in your research? Why do you think you are a strong fit for this role, through a typical day at your last position. How do you prioritize your tasks?

HOD, MBA