

Programme Name: MMS - Operations	Semester: IV
Name of the subject: Operations Applications and Cases	
Maximum marks: 100	No. of Sessions: 14 (40 hours)
Name of the Faculty: Dr. S Rajagopalan	
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Weblink:	

Learning Objectives:

1. To provide thorough understanding of theoretical concepts, various quantitative techniques applicable for the subject.

2. To develop ability to analyze business cases using appropriate techniques.

3. To develop Quantitative models and solve the same using Excel wherever applicable.

4. To develop ability to interpret the results keeping in view the limitations of the models and offer suggestions and recommendations to the management

Reference Books:

1. Operations Management—B. Mahadevan

2. Production Operations Management – Chase and Jacob

- 3. Operations Management L C Jhamb
- 4. Other open sources.

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Session	Topics to be covered	Books referred/ Recommended/	Learning outcomes	Evaluation of Students
Νο		References-Print/Articles/		understanding by
		News/Research papers/ Online		MCQs, Quiz, Short Test
		database/ Software /Simulations used		
1	Module 1 - Application of Operations Management in Complex situations, Resource planning, Process analysis review	Operations Management by M Mahadevan, Other open sources; Lecture discussions on the topics.	Understanding of theoretical concepts	Evaluation of students' understanding will be done through following methods: i. conducting quiz programs from time to time during the sessions. ii. Class Test will be
2	Module 1 contd.	Examples on Excel, Case studies with use of excel	Develop quantitative models and analyze the results	
3	Case studies on Module 1	Analysis of business cases by students with facilitation by the faculty.	Ability to use quantitative techniques and interpret the results	
4	Module 2 - Applications in production & retail sector, practical examples of MRP-I & II on Excel	Operations Management by M Mahadevan, Chase and Aquino; Lecture discussions on the topics.	Understanding of theoretical concepts	
5	Module 2 continued	Examples and case studies involving use of excel	Developing appropriate quantitative techniques	
6	Case Studies on Module 2	Analysis of business cases by students with facilitation by faculty	Ability to develop and analyze quantitative models for decision making	
7	Module 3 - Applications related with	Operations Management by M	Understanding of theoretical	

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	workforce, examples of aggregate planning on Excel	Mahadevan, and Chase and Aquino; Lecture discussions on the topics.	concepts related to APP.	conducted as part of internal assessment. iii. Case study presentations by students in the last session.
8	Examples and Case studies on Module 3	Analysis of business cases involving use of excel solver	Ability to develop and analyze quantitative models for decision making	
9	Module 4 - Applications related with plant, investment, replacement &maintenance, Robotic process and financial evaluation, optimum period of replacement on excel	Operations Management by M Mahadevan, Quantitative Methods in Mgmt by N D Vohra, and Operations Mgmt by Chase and Aquino; Lecture discussions on the topics.	Understanding of theoretical concepts related to Replacement and Maintenance Management	
10	Examples and case studies on Module 4	Analysis of business case on excel	Ability to use quantitative techniques for decision making	
11		Production Operations Management by Chase nd Aquino, and other open sources; Lecture discussions on the topics	Understanding of theoretical concepts related to estimates and tender evaluation	
12	Module 6 - Uses in insurance, BPO/KPO, entertainment, production, etc. Examples in insurance cases;	Open sources; Lecture discussions on the topics; Examples from insurance sector	Understanding of theoretical concepts related to application of operations in insurance.	
13	Class Test for students. Feedback and revision			
14	Case Presentations by Students			
15				



2. Practical Approach : Other activities (At least 4 distinct activities)

Sr. No.	Activity Name	Topic Covered	Learning outcomes	Source
1	Role Play			
2	Industry Visit			
3	Academic Projects	Projects involving process analysis, and other topics from manufacturing and service industry	Understanding practical applications in industry	
4	Book Review	Review of cases from books and discussion in the class	Relating theoretical concepts to practical applications	
5	Group Discussion			
6	Business Quiz / Business News sharing	Business quiz covering topics related to operations applications	Understanding of theoretical concepts	
7	Videos / Simulation			
8	Use of Softwares and Labs	Use of excel solver and other excel functions on topics related to APP, MRP, Replacement and maintenance	Developing Quantitative ability for decision making	
9	Any other activity			



Evaluation:

I) Internal:

Component	Details	Marks
Class Test	Class test of one hour duration with questions from selected topics	20
Presentation	Project presentation by student groups on cases assigned to them.	10
Case Study	Case presentation on selected cases from books	5
Participation	Participation on analysis of business cases	5
Others		

Signature of Faculty

Signature of the Co-ordinator

Signature of HOD