

Faculty of Engineering & Technology, SRM University, Kattankulathur-603203
 School of Mechanical Engineering
 Department of Mechanical Engineering
 Syllabus
 M. Tech [Computer Integrated Manufacturing]

ME 2205 MANUFACTURING INFORMATION SYSTEMS

ME 2205	MANUFACTURING INFORMATION SYSTEMS	L	T	P	C
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PURPOSE

To highlight the concepts and elements of Manufacturing Information Systems

INSTRUCTIONAL OBJECTIVES

To familiarize

1. Study of MRP, MRP II with role of production organization
2. Concepts of database
3. Designing of database
4. Models in manufacturing
5. Computerized manufacturing information system with practical application.

UNIT I INTRODUCTION 5

The Evolution of order policies from MRP to MRP II- Operations control- The role of production organization.

UNIT II DATABASE CONCEPTS 10

Data modeling for a Database- Records and files- Abstraction and Data integration- Three level architecture for DBMS- Components of DBMS- Advantages and disadvantages of DBMS.

UNIT III DESIGNING DATABASE 15

Relationship among entities- ER diagram- Data Models- Relational, Network, Hierarchical - Relational Model – Concepts, principles, keys, Relational operations-Functional Dependency- Normalization- Query languages.

UNIT IV MANUFACTURING CONSIDERATION 10

The product and its structure- Inventory and process flow- Shop floor control- Data structure and procedure- Various model - The order scheduling module- Input/Output analysis module- Stock status database- Complete IOM database.

UNIT V INFORMATION SYSTEM FOR MANUFACTURING 5

Computerised manufacturing information system- Case study.

TOTAL 45

REFERENCE BOOKS

1. Date. C.J, 'An Introduction to Database systems', Narosa Publishing House, 1997.
2. Bipin C.Desai, 'An Introduction to Database systems', West Publishing Company, 1996.
3. Kerr. R, 'Knowledge Based Manufacturing Management', Addison-Wesley, 1991.
4. Luca G. Sartori, 'Manufacturing Information Systems', Addison-Wesley Publishing Company, 1988.
5. Orlicky. G, 'Material Requirements Planning', McGraw Hill Publishing Co., 1975.

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Course Plan

M. Tech [Computer Integrated Manufacturing]

Course Code: ME2205

Course title: MANUFACTURING INFORMATION SYSTEMS

Semester: III

Academic year: 2013-14 / Even Semester (December 2013 – April 2014)

Section details:

Class	Room No.	Details of faculty member				
		Name	Room No.	Intercom	e-mail id	Student contact time
M. Tech [CIM]	PG 302	Dr.T.Rajasekaran	UB 608 A	2755	rajasekaran.t@ktr.srmuniv.ac.in	Mon 12.30 – 1.30 pm

Direct assessment details:

Name of assessment	Marks	Topics	Tentative date	Duration (minutes)
Cycle test	20	The Evolution of order policies- From MRP to MRP II- Operations control- The role of production organization. Data modeling for a Database- Records and files- Abstraction and Data integration- Three level architecture for DBMS- Components of DBMS- Advantages and disadvantages of DBMS.	19.02.14	100
Surprise test	05	Relationship among entities- ER diagram- Data Models- Relational, Network, Hierarchical - Relational Model – Concepts, principles, keys, Relational operations-Functional Dependency- Normalization- Query languages.	03.03.14	15
Term paper	20	The product and its structure- Inventory and process flow- Shop floor control- Data structure and procedure- Various model - The order scheduling module- Input/Output analysis module- Stock status database- Complete IOM database	19.03.14	100

Model examination	20	Full syllabus	16.04.14	3
Attendance	05	N/A	N/A	
End semester examination	30	Full syllabus	05.05.14	3

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Sl. No	Title	Periods	References
1	The Evolution of order policies- From MRP to MRP II	2	
2	Operations control	1	
3	The role of production organization	2	
4	Data modeling for a Database	2	
5	Records and files- Abstraction and Data integration	2	
6	Three level architecture for DBMS	2	
7	Components of DBMS	2	
8	Advantages and disadvantages of DBMS	2	
9	Relationship among entities- ER diagram	2	
10	Data Models- Relational, Network, Hierarchical	2	
11	Relational Model – Concepts, principles, keys	2	
12	Relational operations	1	
13	Functional Dependency	2	
14	Normalization	2	
15	Query languages	2	
16	Query languages	2	
17	The product and its structure and Inventory and process flow	2	
18	Shop floor control	2	
19	Data structure and procedure	1	
20	Various modules - The order scheduling module	1	
21	Input/output analysis module	2	
22	Stock status database and Complete IOM database	2	
23	Computerized manufacturing information system	1	
24	Computerized manufacturing information system Case study 1	2	
25	Computerized manufacturing information system Case study 2	2	
	Total	45	

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1. Date. C.J, 'An Introduction to Database systems', Narosa Publishing House, 1997.
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Signature of Faculty 18/12/2013

Signature of HOD