PG DIPLOMA IN OPERATIONS AND PROJECT MANAGEMENT

Non-Semester
(With Effect from the Academic Year 2013-14)

ELIGIBILITY FOR ADMISSION

Candidates who apply for the degree of PG Diploma shall possess the following qualifications.

(a) AGE LIMIT:

There is no upper Age Limit.

(b) QUALIFICATION:

Any Degree

3. DURATION OF THE COURSE

The course will be conducted for one year

3.1. EXAM : There will be an examination conducted by the University at the end of the year.

3.2. Passing minimum : 50

3.3. MEDIUM OF INSTRUCTION: The Medium of instruction will be English.

Course Profile

| Computer Integrated Manufacturing |
| Management Information System |
| Advanced Operations Management |
| Facilities Location and Process Design |
| Product Design and Project Management |
| Supply Chain and Logistics Management |
| Advanced Maintenance Management |
PAPER I: COMPUTER INTEGRATED MANUFACTURING

Course Objective

The objective of this course is to expose the students to the role of computer in the manufacturing process. It also aims to improve the understanding of students about the technological aspects and the implementation issues computer integrated manufacturing.

UNIT I


UNIT II


UNIT III

Fundamentals of Design for Manufacturing (DFM) - Computer Aided Design (CAD) - 3D Modeling packages - Finite Element Analysis packages and Transportability - NC, CNC and DNC machines - Introduction to part-programming - Tool Management - Data Logging and acquisition - Automated data collection.

UNIT IV


UNIT V


REFERENCES

PAPER II: MANAGEMENT INFORMATION SYSTEM

Objectives: Make the students to understand the interface of the Human Resources function with Operations, Marketing, and Finance functions and to impart knowledge on information systems and its relevance to business decisions.


UNIT V: DSS: DSS models and software: The decision making process - Structured, Semi Structured and Unstructured problems; Managing Information Technology: Managing Information Resources and technologies - Security and Ethical Challenges: IS controls - facility control and procedural control

References

PAPER III: ADVANCED OPERATIONS MANAGEMENT

Course Objective
The objective of this course is to enable the students to understand the advanced techniques of operations management. It also helps the students to gain an insight into the trends in operations management.

UNIT I
Current challenges in Operations management - Product development considerations - Value engineering, concurrent engineering, Robust design - Modular design - Selection and Justification of Advanced Manufacturing Technology.

UNIT II
Strategic capacity planning for products and services - Scheduling for batch processing – The design and scheduling of flow processing system – Production planning and control - Routing, sequencing, loading, scheduling – master scheduling.

UNIT III
Operating value chains – Information technology - value chain – Material management - supply chain – Special inventory models, Selective inventory control, Operations decision making tools – Acceptance sampling.

UNIT IV
Recent Trends in operations management – Lean manufacturing - Resource requirement planning, Synchronous manufacturing - theory of constraints – Agile Manufacturing

UNIT V
Cases in operations management

REFERENCES:
PAPER IV : FACILITIES LOCATION AND PROCESS DESIGN Course Objective

This course has the objective of enhancing the understanding of the students of location and layout decisions. It also helps the students to gain an insight into the organisational nuances and implementation issues.

UNIT I
Facilities requirements, need for layout study – types of layout, Model Classification, Criterion Selection, Model Validation, Design Process.

UNIT II
Layout problems - Plant layout procedures- various approaches - Flow and activity analysis - Designing the layout

UNIT III
Plant location analysis – factors, costs, location decisions – simple problems in single facility location problems - multi-facility location problems - network location problems.

UNIT IV

UNIT V

REFERENCES
PAPER V :PRODUCT DESIGN AND PROJECT MANAGEMENT

Course Objective

This course has the objective of enhancing the understanding of the students of product design and project management. It also helps the students to gain an insight into the process of product design and the functions and implementation issues of project management.

UNIT – I

UNIT – II

UNIT – III
Concept Selection – Concept Screening - Concept Scoring - Concept Testing- Product Architecture - Platform Planning - Robust Design- Collaborative Product development

UNIT – IV
Project - Definition –Scope – Significance – Project Proposal - Project management – Functions - organization - planning - human aspects and pre-requisites.

UNIT – V

REFERENCES

PAPER VI: SUPPLY CHAIN AND LOGISTICS MANAGEMENT

Course Objective

The objective of this course is to enable the students to understand the scope and significance of supply chain and logistics management. It also expose the students to the structural framework and the functional implications of logistics.

UNIT I

Supply Chain management and logistics management – Definition - Evolution. Supply Chain – Fundamentals - and Importance. Supply chain strategy - Drivers of Supply Chain Performance - Supply Chain relationships

UNIT II

Logistics – functions, objectives - solution- Customer Service - Warehousing and Material Storage - Material Handling, Transportation and Packaging – 3PL and 4PL.

UNIT III


UNIT IV

Sourcing – Make or buy decision, Creating World Class Supply base, World Wide Sourcing Inventory Management – managing cycle inventory, safety inventory. Value of information, Bullwhip effect, Coordination in supply chain, Analysing impact of supply chain redesign on the inventory

UNIT V


REFERENCES

PAPER VII: ADVANCED MAINTENANCE MANAGEMENT

Course Objective

This course has the objective of imparting in-depth knowledge to the students with respect to maintenance management. It also helps the students to gain an insight into the advanced techniques and trends in maintenance management.

UNIT I
Objectives and functions of Maintenance, Types, Maintenance Strategies - Organization for Maintenance. Five Zero Concept

UNIT II

UNIT III
Overhaul and Repair - Meaning and Difference – Optimal overhaul/Repair/Replace maintenance policy for equipment subject to breakdown - Optimal interval between preventive replacement of equipment subject to breakdown - group replacement

UNIT IV
Fixed Time Maintenance - Condition based Maintenance- Operate to Failure - opportunity maintenance - Design out maintenance - Total Preventive maintenance.

UNIT V

References

2. Sushil Kumar Srivatsava, Industrial Maintenance Management, S. Chand & Company, 2005