

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE II Year (Mechanical Engineering) (Full Time)			
Subject Code & Name	Instructions Hours per Week			Credits			
MER4C1 INDUSTRIAL ENGG. & MANAGEMENT	L	T	P	L	T	P	Total
	3	1	-	3	1	-	4
Duration of Theory Paper: 3 Hours							

Learning Objectives:

The basic objectives of the subject are:

1. To understand fundamentals of industrial engineering management practices.
2. To understand the linkages of concepts and organizational efficiency and effectiveness.
3. To understand the concepts of productivity.
4. To understand the basic concepts of quality and its management.

Prerequisites: Basic knowledge of engineering and English is pre requisites for this subject.

COURSE CONTENTS

UNIT-I

Methods Engineering: Introduction to Productivity and Methods Engineering, Methods study, Recording techniques, Work Measurement tool and techniques. Work place Design - Fundamental of Work place Design. Introduction to job Evaluation and Wage Incentive Schemes.

UNIT-II

Operations Management: Introduction to Operations management, manufacturing v/s service, Tools and Techniques. Types of Production system. Facilities planning, Introduction to plant layout.

UNIT-III

Organization and Management: Principles of Management and Management functions. Organization, Principles, Structures, Span of Control, Delegation, Centralization and Decentralization, Formal and Informal Organizations. Personal Management, Introduction, Communication, Motivation and Leadership.

UNIT-IV

Quantitative Techniques for Decision Making: Introduction to operation Research, Basic Transportation and Assignment Models and Their Applications, Network Techniques and its Applications.

UNIT-V

Quality Control:

Quality planning and quality control Programme. Economics of Quality Control and control chart for variables and attributes. Introduction to TQM.

Learning Outcomes:

Upon Completing the Course, Student will be able to:

1. After studying this subject the students will be able to visualize the industrial operations with respect to Productivity.
2. After studying this subject the students will be able to visualize Production Operations, Quality and Optimisation of industrial processes.
3. This subject will help the student to understand the concepts of Industrial Engineering in higher semester of this course.

RECOMMENDED BOOKS:

1. Industrial Labour Organization (I.L.O.), *Work study*.
2. Monks, J.E. *Operations Management*, Mc. Graw Hills.
3. Hira and Gupta, *Operation Research*, S. Chand and Co, New Delhi.
4. Mahajan, *Statistical Quality Control*, Dhanpat Rai, New Delhi.