

INDUSTRIAL MANAGEMENT

OE –I: VI Semester: AERO / MECH / CIVIL OE – III: VIII Semester: CSE / CSE (AI & ML) / CSE (DS) / CSE (CS) / CSIT / IT / ECE / EEE								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
AMEC34	Elective	L	T	P	C	CI A	SEE	Total
		3	0	0	3	30	70	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			

I.COURSE OVERVIEW:

The industrial management prepares engineers to design, improve, install, and operate the integrated systems of people, materials, and facilities needed by industry, commerce, and society. Industrial engineers solve problems that arise in the management of systems, applying the principles of engineering science, product/service and process design, work analysis, human factors principles, and operations research. The focus of this course is how to improve processes or design things that are more efficient and waste less money, time, raw resources, man-power and energy while following safety standards and regulations

II. COURSE OBJECTIVES:

The students will try to learn:

- I Organization principles and management
- II The production planning and control procedures and types
- III The work study procedures and quality concepts to enhance more productivity
- IV The significant exposure on some maintenance practices in industry for consistent productivity

III. COURSE OUTCOMES:

After successful completion of the course, students should be able to:

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|------|--|------------|
| CO 1 | Understand the basic principles of organization structure for efficient management | Remember |
| CO 2 | Calculate the work content of a specific job for employees of any organization | Understand |
| CO 3 | Understand the methods used by the organization for effective inventory management | Apply |
| CO 4 | Develop a sound knowledge of the supply chain management in today's business environment | Understand |
| CO 5 | Understand the concepts underlying statistical quality control techniques and apply those concepts to the design and management of quality control processes in industries | Understand |
| CO 6 | Develop skills required for demand planning and forecasting and apply those Techniques/Models for demand planning and management | Apply |

IV. COURSE SYLLABUS:

MODULE-I: CONCEPTS OF INDUSTRIAL MANAGEMENT (9)

Principles of management- Growth of management thought, Functions of management, Principles of organization, Types of organization and committees.

MODULE –II: WORK STUDY (9)

Concept of productivity, Method Study - Basic steps in method study, Process charts, Diagrams, Principles of motion economy, Micro motionstudy, Therbligs, SIMO chart. Work Measurement - Stop watch procedure of time study, Performance rating, allowances, Work sampling, Simple problems.

MODULE –III: INVENTORY CONTROL (9)

Inventory Control: Inventory, Cost, Deterministic Models and Introduction to Supply Chain Management.

MODULE –IV: QUALITY CONTROL (9)

Quality Control: Process control, SQC, Control charts, Single, Double and Sequential Sampling, Introduction to TQM.

MODULE –V: DEMAND FORECASTING AND COST ESTIMATION (9)

Demand Forecasting and cost Estimation: Characteristics of Forecasts, Forecasting Horizons, Steps to Forecasting, Forecasting Methods, Seasonal Adjustments, Forecasting Performance Measures, Cost Estimation, Elements of cost, Computation of Material Variances Break-Even Analysis.

V. TEXT BOOKS:

1. O.P. Khanna, “Industrial Engineering and Management”, Khanna Publishers.
2. T.R. Banga and S.C.Sarma, “Industrial Engineering and Management Science”, Khanna Publishers.

VI. REFERENCE BOOKS:

1. Ralph M Barnes, “Motion and Time Study”, John Willey & Sons Work Study ILO.
2. Ernest J McCormick, “Human factors in Engineering & Design”, TMH.
3. Paneer Selvam, “Production & Operation Management”, PHI.
4. NVS Raju, “Industrial Engineering Management”, Cengage Learning.

VII. REFERENCE BOOKS:

1. <https://nptel.ac.in/courses/112/107/112107142/#>
2. <https://nptel.ac.in/courses/112/107/112107143/#>