

Government Engineering College-Dahod
 Mechanical Engineering Department
MID SEMESTER EXAM SYLLABUS – APRIL-2026

Semester: 6th


Subject Name: **Basics of Industrial Engineering**

Code: **3161907**

| Sr. No. | Content | CO |
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| 1. | Location Selection and Plant Layout: Nature of Location Decision, Importance of Plant Location, Dynamic Nature of Plant Location, Choice of site for selection, Comparison of location. Principles of Plant layout and Types, factors affecting layout, methods, factors governing flow pattern, travel chart, analytical tools of plant layout, layout of manufacturing shop floor, repair shop, services sectors and process plant. Quantitative methods of Plant layout: CRAFT and CORELAP, Relationship diagrams | CO-1 |
| 2. | Production Planning and Control: Types of Production systems and their Characteristics, functions and objectives of Production Planning and Control, Sales forecasting: Techniques and Applications, Steps of Production Planning and Control: Process planning, Loading, Scheduling, Dispatching and Expediting with illustrative examples, Introduction to line of balance, assembly line balancing, and progress control. | CO-2 |
| 3. | Productivity and Work Study: Definition of productivity, application and advantages of productivity improvement tools, reasons for increase and decreases in productivity. Reaction of management and labour to work study Method Study: Objectives and procedure for methods analysis, Recording techniques, Operations Process Chart, Flow Process Chart, Man-Machine , Multiple Activity Chart, Travel Chart, and Two Handed process chart, String Diagram, Therbligs. | CO-3 |
| 5. | Waste Management: Introduction and Meaning, Reasons for generation and accumulation of obsolete, Surplus and scrap Items, Identification and control of waste, disposal of scrap. | CO-5 |

Course Outcomes:

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| CO-1 | Describe location decision, Site selection and Plant layout |
| CO-2 | Demonstrate Production Planning and Control |
| CO-3 | Analyse Productivity, Work study techniques, Job evaluation and Wage plan |
| CO-5 | Understand Industrial Legislation and Entrepreneurship and waste management. |


Subject Coordinator
 (J. M. Patel)