

Industrial Engineering

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The American Institute of commercial Engineers (AIIE) has defined the economic Engineering as "Concerned with design, improvement and installation of integrated systems of individuals, materials, equipment and energy." Industrial Engineering goes to play a pivotal role in increasing the productivity. it's the engineering approach to the detailed analysis of the utilization and price of the resources of a corporation . the most resources are men, money, materials, equipment and machinery. The Industrial Engineer carries out such analysis so as to realize the objectives (to increase productivity or profits etc) and policies of the organization.

Main function of an Industrial Engineer

- Design of a system and management of that system
- Productivity Improvement

Productivity Improvement means

- More efficient use of resources
- Less waste per unit of input supplied
- Higher levels of output for fixed levels of input supplied

The inputs are

- Human efforts
- Energy
- Materials
- Invested capital

Present state of commercial Engineering:

- Value engineering
- Operation research
- CPM and PERT
- Human Engineering (Ergonomics)
- System analysis
- Advances in Information Technology and Computer packages
- Mathematical and statistical tools

Activities of commercial Engineering

- Selection of processes and assembling methods
- Selection and style of tools and equipment
- Design of facilities including plant location layout of buildings, machines

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and equipments material handling system, raw materials and finished goods storage facilities.

- Design and improvement of designing and system for production, inventory, quality and plant maintenance and distribution systems.
- Developing a price system like budgetary control, analysis and standard costing.
- Development of your time standard, costing and performance standards
- Development and installation of job evaluation system
- Installation of wage incentives schemes
- Design and installation useful engineering and analysis system
- Operation research including mathematical techniques and statistical analysis
- Performance evaluation
- Organization and methods
- Project feasibility studies
- Supplier selection and evaluation

Objective of commercial Engineering

- To determine methods for improving the operations and controlling the assembly costs
- To develop programs for reducing those costs

Technique of commercial Engineering

- Method study
- Time and motion study
- Time and motion study
- Financial and non-financial incentives
- Value analysis
- Production, planning and control
- Internal control
- Job evaluation
- Material handling analysis
- Ergonomics (Human engineering)
- System analysis
- Operation research techniques
- Other techniques

Applications of commercial Engineering :

- In health services
- In government organizations
- In banking

Others like marketing, finance, purchasing, industrial relation.

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