ORGANIZATION AND MANAGEMENT

ENME 304

Lecture : 3 **Year : III**
Tutorial : 1 **Part : I**
Practical : 0

Course Objectives:
The objective of this course is to familiarize engineering students with the principles and practices of organization and management. Students will develop an understanding of organizational structures, functions of management, leadership, motivation, management information system, decision-making, and the application of management concepts in engineering and industrial contexts.

1 Organization (8 hours)

- 1.1 Concepts and definition
- 1.2 Historical development
- 1.3 Role of people and society
- 1.4 System approach in organization
- 1.5 Principles of organization
- 1.6 Formal and informal organization
- 1.7 Forms of ownership
  - 1.7.1 Single ownership
  - 1.7.2 Partnership
  - 1.7.3 Joint stock company
  - 1.7.4 Co–operative societies
  - 1.7.5 Public corporations
- 1.8 Organization structure
  - 1.8.1 Line organization
  - 1.8.2 Functional organization
  - 1.8.3 Line and staff organization
  - 1.8.4 Committee organization

2 Management (8 hours)

- 2.1 Concepts and definition
- 2.2 Levels of management
- 2.3 Managerial skills
- 2.4 Principle of management (Fayol, Taylor and modern perspectives)
- 2.5 Theory of management
  - 2.5.1 Classical management theories (Scientific management, administrative theory, bureaucratic management)

2.5.2 Behavioral management theories (Hawthrone studies, Maslow's hierarchy of needs, Douglas McGregor's theory)
2.5.3 Quantitative/management science approach
2.5.4 Systems theory
2.5.5 Contingency theory
2.5.6 Modern management approaches

2.6 Relevance of management in engineering and industrial contexts

3 Functions of Management (6 hours)

3.1 Planning
3.1.1 Nature, importance, and types of planning
3.1.2 Steps in the planning process
3.1.3 Objectives, policies, strategies, and procedures
3.1.4 Decision-making process, tools, and techniques for engineers
3.1.5 Project planning and scheduling

3.2 Organizing
3.2.1 Delegation of authority and responsibility
3.2.2 Centralization vs. decentralization
3.2.3 Organizational design in engineering industries

3.3 Staffing
3.4 Directing
3.5 Motivating
3.6 Controlling
3.7 Co-ordinating
3.8 Communicating

4 Purchasing and Marketing Management (4 hours)

4.1 Purchasing
4.1.1 Functions of purchasing department
4.1.2 Methods of purchasing

4.2 Marketing
4.2.1 Functions of marketing
4.2.2 Types of marketing

4.3 Advertising

5 Personnel Management (5 hours)

5.1 Functions
5.2 Development of personnel policy
5.3 Manpower planning
5.4 Recruitment and selection
5.5 Training and development
5.6 Wages and incentives
5.7 Industrial relations
5.8 Employee welfare

5.9 Performance appraisal

6 Motivation and Leadership (6 hours)

6.1 Concepts and types of motivation
6.2 Content theories
  6.2.1 Maslow's hierarchy of needs
  6.2.2 Herzberg's two-factor theory
  6.2.3 McClelland's theory of needs
  6.2.4 Alderfer's ERG theory
6.3 Process theories
  6.3.1 Vroom's expectancy theory
  6.3.2 Adams' equity theory
  6.3.3 Porter and Lawler's model
  6.3.4 Skinner's reinforcement theory
6.4 Motivational tools and techniques
6.5 Leadership skills and qualities
6.6 Functions of leadership
6.7 Leadership styles
  6.7.1 Autocratic leadership
  6.7.2 Democratic/Participative leadership
  6.7.3 Laissez-faire leadership
  6.7.4 Bureaucratic leadership
6.8 Blakes and Mouton's managerial grid
6.9 Leadership theories
  6.9.1 Trait Theory
  6.9.2 Behavioral Theories
  6.9.3 Contingency Theories
  6.9.4 Modern Approaches
6.10 Conflict management in engineering workplaces

7 Management Information System (4 hours)

7.1 Concepts and definition
7.2 Evolution of MIS
7.3 Components of MIS
7.4 Types of MIS
  7.4.1 Transaction processing systems
  7.4.2 Management information systems
  7.4.3 Decision support systems
  7.4.4 Executive information systems
  7.4.5 Knowledge management systems
  7.4.6 Enterprise systems
7.5 Functions of MIS
7.6 MIS in decision-making

8 Organizational Change and Contemporary Issues (4 hours)

8.1 Nature and drivers of organizational change
8.2 Resistance to change and overcoming strategies
8.3 Organizational development interventions
8.4 Management of innovation and technology in industries
8.5 Globalization and its impact on organizations
8.6 Corporate social responsibility
8.7 Sustainability in engineering management
8.8 Digital transformation and industry 4.0

Tutorial (15 hours)

1. Numerical problems on wages and incentives
2. Case studies of nearby real-life industries
3. Group presentation of the case study report

Final Exam

The questions will cover all the chapters in the syllabus. The evaluation scheme will be as indicated in the table below:

Chapter	Hours	Marks distribution*
1	8	10
2	8	10
3	6	8
4	4	6
5	5	6
6	6	8
7	4	6
8	4	6
Total	**45**	**60**

* There may be minor deviation in marks distribution.

References

1. Mahajan, M. S. (2019). Industrial organization and management. Nirali Prakashan.
2. Mahajan, M. (2015). Industrial engineering and production management. Dhanpat Rai & Co.
3. Verma, A. P. (2010). Industrial engineering and management. S. K. Kataria & Sons.
4. Buffa, E.S., Sarin, R.K. (1987). Modern production/operations management (Latest Edition). Wiley.
5. Sadagopan, S. (1997). Management information system. Prentice Hall of India.
6. Scott, J. T. (2017). The entrepreneur's guide to building a successful business. EFMD.