

GOVT. POLYTECHNIC, NAYAGARH

5th SEMESTER MECHANICAL ENGINEERING (2023-26)

SUBJECT- ENTREPRENEURSHIP AND MANAGEMENT & SMART TECHNOLOGY

TOTAL PERIOD- 60P


NAME OF FACULTY: SANTOSH KUMAR PATRA, LECTURER STAGE-I (MECHANICAL)

THEORY-4P/WEEK

Semester from :14/07/2025 to 15/11/2025

Sl No.	week	Day	Topics to be covered
1	1 st	1 st day	Concept /Meaning of Entrepreneurship
		2 nd day	Need of Entrepreneurship, Characteristics, Qualities and Types of entrepreneur with functions
		3 rd day	Barriers in Entrepreneurship
		4 th day	Entrepreneurs vs Manager
Sl No.	week	Day	Topics to be covered
2	2 th	1 st day	Forms of Business Ownership: Sole proprietorship, partnership forms and others
		2 nd day	Types of Industries, Concept of Start-ups
		3 rd day	Entrepreneurial support agencies at National, State, District Level Sources: DIC, NSIC, OSIC, SIDBI, NABARD, Commercial Banks, KVIC
		4 th day	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks
Sl No.	week	Day	Topics to be covered
3	3 rd	1 st day	Market Survey and Opportunity Identification (Business Planning)
		2 nd day	SSI, Ancillary Units, Tiny Units, Service sector Units
		3 rd day	Time schedule Plan, Agencies to be contacted for Project Implementation
		4 th day	Assessment of Demand and supply and Potential areas of Growth
Sl No.	week	Day	Topics to be covered
4	4 th	1 st day	Identifying Business Opportunity & Final Product selection
		2 nd day	Preliminary project report preparation
		3 rd day	Detailed project report, Techno economic Feasibility & Project Viability
		4 th day	Definitions of management & Principles of management
Sl No.	week	Day	Topics to be covered
5	5 th	1 st day	Functions of management (planning, organizing, staffing, directing and controlling
		2 nd day	Level of Management in an Organization
		3 rd day	Production management Functions & Activities
		4 th day	Productivity Quality control, Production Planning and control
Sl No.	week	Day	Topics to be covered
6	6 th	1 st day	Need for Inventory management
		2 nd day	Models/Techniques of Inventory management
		3 rd day	Functions of Financial management and Management of Working capital
		4 th day	Break even Analysis
Sl No.	week	Day	Topics to be covered
7	7 th	1 st day	Brief idea about Accounting Terminologies: Book Keeping, Journal entry, Petty Cash book, P&L Accounts, Balance Sheets(only Concepts)
		2 nd day	Concept of Marketing and Marketing Management
		3 rd day	Concept of 4P s (Price, Place, Product, Promotion)
		4 th day	Human Resource Management and Functions of Personnel Management
Sl No.	week	Day	Topics to be covered
8	8 th	1 st day	Manpower Planning, Recruitment, Sources of manpower, Selection process and Method of Testing
			Leadership Definition and Need/Importance
			Qualities and functions of a leader Manager Vs Leader
			Style of Leadership (Autocratic, Democratic, Participative)

Sl No.	week	Day	Topics to be covered
9	9 th	1 st day	Definition and Characteristics of Motivation
		2 nd day	Importance of motivation and Factors affecting motivation
		3 rd day	Theories of motivation (Maslow) and Methods of Improving Motivation
		4 th day	Importance of Communication in Business Types and Barriers of Communication
Sl No.	week	Day	Topics to be covered
10	10 th	1 st day	Introduction to Work Culture, TQM & Safety
		2 nd day	Relations with Peers, Superiors and Subordinates
		3 rd day	TQM concepts: Quality Policy, Quality Management, Quality system
		4 th day	Accidents and Safety, Cause, preventive measures, General Safety Rules, Personal Protection Equipment(PPE)
Sl No.	week	Day	Topics to be covered
11	11 th	1 st day	Human relationship and Performance in Organization
		2 nd day	Methods of Training & Development in human resource Management
		3 rd day	Payment of Wages in human resource management
		4 th day	Introduction to Legislation
Sl No.	week	Day	Topics to be covered
12	12 th	1 st day	Intellectual Property Rights(IPR), Patents, Trademarks, Copyrights of Legislation
		2 nd day	Features of Factories Act 1948 with Amendment (only salient points)
		3 rd day	Features of Payment of Wages Act 1936 (only salient points)
		4 th day	Doubt clearance and Revision
Sl No.	week	Day	Topics to be covered
13	13 th	1 st day	Introduction to Smart Technology
		2 nd day	Concept of IOT(Internet of Thing)
		3 rd day	How IOT works
		4 th day	Doubt clearance and Revision
14	14 th	1 st day	Characteristics of IOT
		2 nd day	Categories of IOT
		3 rd day	Applications of IOT- Smart Cities and Smart Transportation
		4 th day	Applications of IOT -Smart Home, Smart Healthcare and Smart Industry
15	15 th	1 st day	Applications of IOT -Smart Agriculture and Smart Energy Management
		2 nd day	Doubt clearance and Revision
		3 rd day	Doubt clearance and Revision
		4 th day	Doubt clearance and Revision


 29/07/20
 Lec 1 under Stage-1
 Mechanical Dept.