

**GANAPATI INSTITUTE OF ENGINEERING & TECHNOLOGY(Polytechnic),JAGATPUR,CUTTACK**  
**DEPARTMENT OF MECHANICAL ENGINEERING.**

**LESSON PLAN-2025 WINTER**

Discipline: <b>Mechanical Engg</b>	Semester : <b>5th</b> (Common to All Branches)	Name of the Teaching Faculty: <b>Rashmi Ranjan Lenka</b>	
Subject: <b>E &amp; M &amp; ST (Th-1)</b>	No. Of Days/per Week Class Allotted: <b>04</b>	Semester From date: <b>14.07.2025</b>	To Date: <b>15.11.2025</b>
		No of weeks- <b>15</b>	
Week	Class Day	Theory Topics	
<b>1<sup>st</sup></b>	<b>1<sup>st</sup></b>	<b>1. Entrepreneurship</b> Introduction to the Subject, Entrepreneur, Definition of Entrepreneur Concept /Meaning of Entrepreneurship	
	<b>2<sup>nd</sup></b>	Need of Entrepreneurship	
	<b>3<sup>rd</sup></b>	Characteristics, Qualities and Types of Entrepreneur, Functions	
	<b>4<sup>th</sup></b>	Barriers in Entrepreneurship	
<b>2<sup>nd</sup></b>	<b>1<sup>st</sup></b>	Entrepreneurs Vs. Manager	
	<b>2<sup>nd</sup></b>	Forms of Business Ownership: Sole proprietorship, Partnership forms and others forms of Business Organisation	
	<b>3<sup>rd</sup></b>	Types of Industries, Concept of Start-ups	
	<b>4<sup>th</sup></b>	Entrepreneurial support agencies at National, State, District Level(Sources): DIC, NSIC,OSIC, SIDBI, NABARD, Commercial Banks, KVIC etc.	
<b>3<sup>rd</sup></b>	<b>1<sup>st</sup></b>	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks	
	<b>2<sup>nd</sup></b>	Developing MSME Enterprises, generating national wealth, creating wage & Self-Employment	
	<b>3<sup>rd</sup></b>	<b>2. Market Survey and Opportunity Identification (Business Planning)</b> Business Planning	
	<b>4<sup>th</sup></b>	SSI, Ancillary Units, Tiny Units, Service Sector Units	
<b>4<sup>th</sup></b>	<b>1<sup>st</sup></b>	Time schedule Plan	
	<b>2<sup>nd</sup></b>	Agencies to be contacted for Project Implementation	
	<b>3<sup>rd</sup></b>	Assessment of Demand and Supply and Potential areas of Growth	
	<b>4<sup>th</sup></b>	criteria for selection of Small Enterprise	
<b>5<sup>th</sup></b>	<b>1<sup>st</sup></b>	Identifying Business Opportunity	
	<b>2<sup>nd</sup></b>	Major criteria for final selection Business Opportunity, Q & A Discussion as per SCTE & VT Exam Pattern , Monthly Class Test-1	
	<b>3<sup>rd</sup></b>	<b>3. Project report Preparation</b> Preliminary Project Report	
	<b>4<sup>th</sup></b>	Detailed Project Report, Techno Economic Feasibility	
<b>6<sup>th</sup></b>	<b>1<sup>st</sup></b>	Project Viability	
	<b>2<sup>nd</sup></b>	Sample of a Preliminary Project Report and Detailed Project Report(DPR)	
	<b>3<sup>rd</sup></b>	<b>4. Management Principles</b> Definitions of Management, Meaning of Management	
	<b>4<sup>th</sup></b>	Importance of Management, Difference between Management & Administration	
<b>7<sup>th</sup></b>	<b>1<sup>st</sup></b>	Principles of Management, Principle of Scientific Management	
	<b>2<sup>nd</sup></b>	Functions of Management (Planning, Organising, Staffing, Directing and Controlling etc.)	
	<b>3<sup>rd</sup></b>	Levels of Management in an Organisation	
	<b>4<sup>th</sup></b>	<b>5. Functional Areas of Management</b> a) Production management Functions, Activities, Productivity	
<b>8<sup>th</sup></b>	<b>1<sup>st</sup></b>	Quality control, Production Planning and Control	
	<b>2<sup>nd</sup></b>	b) Inventory Management Need for Inventory management	
	<b>3<sup>rd</sup></b>	Models/Techniques of Inventory management	
	<b>4<sup>th</sup></b>	c) Financial Management Functions of Financial management, Management of Working capital, Costing (Only Concept)	
	<b>1<sup>st</sup></b>	Break even Analysis, Brief idea about Accounting Terminologies: Book Keeping, Journal entrv. Pettv Cash book	



9 <sup>th</sup>	2 <sup>nd</sup>	P & L Accounts, Balance Sheets(Only Concepts)
	3 <sup>rd</sup>	d) Marketing Management Concept of Marketing and Marketing Management, Marketing Techniques (Only Concepts), Concept of 4P's (Price, Place, Product, Promotion)
	4 <sup>th</sup>	e) Human Resource Management Functions of Personnel Management, Manpower Planning, Recruitment, Sources of Manpower
10 <sup>th</sup>	1 <sup>st</sup>	Selection process, Method of Testing, Methods of Training & Development, Payment of Wages, Q & A Discussion as per SCTE & VT Exam Pattern, Monthly Class Test-2
	2 <sup>nd</sup>	<b>6. Leadership and Motivation</b> a) Leadership, Definition and Need/Importance
	3 <sup>rd</sup>	Qualities and functions of a Leader
	4 <sup>th</sup>	Manager Vs Leader, Style of Leadership (Autocratic, Democratic, Participative)
11 <sup>th</sup>	1 <sup>st</sup>	b) Motivation Definition and Characteristics, Importance of Motivation
	2 <sup>nd</sup>	Factors affecting Motivation, Theories of Motivation (Maslow), Methods of Improving Motivation
	3 <sup>rd</sup>	Importance of Communication in Business, Types and Barriers of Communication, Q & A Discussion as per SCTE & VT Exam Pattern
	4 <sup>th</sup>	<b>7. Work Culture, TQM &amp; Safety</b> Human relationship and Performance in Organization
12 <sup>th</sup>	1 <sup>st</sup>	Relations with Peers, Superiors and Subordinates
	2 <sup>nd</sup>	TQM concepts: Quality Policy, Quality Management, Quality System
	3 <sup>rd</sup>	Accidents and Safety, Cause, Preventive measures
	4 <sup>th</sup>	General Safety Rules, Personal Protection Equipment(PPE)
13 <sup>th</sup>	1 <sup>st</sup>	<b>8. Legislation</b> Introduction
	2 <sup>nd</sup>	a) Intellectual Property Rights (IPR), Patents
	3 <sup>rd</sup>	Trademarks, Copyrights, Examples
	4 <sup>th</sup>	b) Features of Factories Act 1948 with Amendment (Only Salient Points)
14 <sup>th</sup>	1 <sup>st</sup>	Major Provisions of Factories Act relating to Health & Welfare
	2 <sup>nd</sup>	Duties and Power of Factory Inspector
	3 <sup>rd</sup>	<b>9. Smart Technology</b> What is Smart Technology, Introduction to Smart Technology
	4 <sup>th</sup>	Concept of IOT, How IOT works, Components of IOT
15 <sup>th</sup>	1 <sup>st</sup>	Characteristics of IOT, Categories of IOT
	2 <sup>nd</sup>	Applications of IOT- Smart Cities, Smart Transportation, Smart Home
	3 <sup>rd</sup>	Smart Healthcare, Smart Industry, Smart Agriculture, Smart Energy Management etc.
	4 <sup>th</sup>	Advantages of Smart Technology, Q & A Discussion as per SCTE & VT Exam pattern, Monthly Class Test-3, Revision of previous Chapter Taught

### RECOMMENDED BOOKS

1. Entrepreneurship Development and Management by R.K Singhal, Katson Books., New Delhi
2. Entrepreneurship Development and Management by U Saroj and V Mahendiratta, Abhishek Publications, Chandigarh
3. Entrepreneurship Development and Management by Vasant Desai, Himalaya Pub. House
4. Industrial Engineering and Management by O.P Khanna , Dhanpat Rai and Sons
5. Industrial Engineering and Management by Banga and Sharma, Khanna Publications
6. Internet of Things by Jeeva Jose, Khanna Publications, New Delhi
7. Online Resource on Startups and other concepts
8. <https://www.fundable.com/learn/resources/guides/startup>

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