

**UTKALMANI GOPABANDHU INSTITUTE OF  
ENGINEERING, ROURKELA**



**LESSON PLAN**

**DEPARTMENT OF CHEMICAL ENGINEERING**

## LESSON PLAN



SUBJECT CODE : TH-1

NAME : EMS

BRANCH : CH

SEMESTER :Diploma-V

CREDIT POINTS : 4

NUMBER OF MODULES : 4

CLASSES REQUIRED : 60

PRE-REQUISITE : To understand Entrepreneurship, Types of Industries and Startups, various schemes of assistance by entrepreneurial support agencies, management Principles and functional areas of management.

## MODULE-I

**ENTREPRENEURSHIP** • Concept /Meaning of Entrepreneurship • Need of Entrepreneurship • Characteristics, Qualities and Types of entrepreneur, Functions • Barriers in entrepreneurship • Entrepreneurs vs. Manager • Forms of Business Ownership: Sole proprietorship, partnership forms and others • Types of Industries, Concept of Start-ups • Entrepreneurial support agencies at National, State, District Level( Sources): DIC, NSIC,OSIC, SIDBI, NABARD, Commercial Banks, KVIC etc. • Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks

### Objectives:

To understand Concept Characteristics, Qualities and Types of entrepreneur, Types of Industries, Concept of Start-ups.

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
1	Concept /Meaning of Entrepreneurship	R1
2	Need of Entrepreneurship	T1
3	Characteristics, Qualities and Types of entrepreneur, Functions	T1
4	Barriers in entrepreneurship	R1
5	Entrepreneurs vs. Manager, Forms of Business Ownership: Sole proprietorship, partnership forms and others	R1
6	Types of Industries, Concept of Start-ups	T1, R1
7	Entrepreneurial support agencies at National, State, District Level ( Sources): DIC, NSIC,OSIC, SIDBI.	R1
8	Entrepreneurial support agencies at National, State, District Level( Sources): NABARD, Commercial Banks, KVIC	T1
9	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks	T1, R1
10	REVISION	R1

## MODULE-II

**MARKET SURVEY AND OPPORTUNITY IDENTIFICATION (BUSINESS PLANNING)** • Business Planning • SSI, Ancillary Units, Tiny Units, Service sector Units • Time schedule Plan, Agencies to be contacted for Project Implementation • Assessment of Demand and supply and Potential areas of Growth • Identifying Business Opportunity • Final Product selection.

### Objectives:

To understand Business Planning, Time schedule Plan, Agencies to be contacted for Project Implementation, Identifying Business Opportunity.

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
11	Business Planning	T1, R1
12	SSI, Ancillary Units, Tiny Units, Service sector Units	R1
13	Time schedule Plan, Agencies to be contacted for Project Implementation	T1
14	Assessment of Demand and Potential areas of Growth	T1, R1
15	Assessment of supply and Potential areas of Growth	R1
16	Identifying Business Opportunity	T1
17	Final Product selection	T1, R1
18	REVISION	R1

### MODULE-III

**PROJECT REPORT PREPARATION** • Preliminary project report • Detailed project report, Techno economic Feasibility • Project Viability

**Objectives:**

To understand Preliminary project report, Detailed project report, Techno economic Feasibility, Project Viability.

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
19	Preliminary project report	T1, R1
20	Detailed project report	T1
21	Techno economic Feasibility of project	T1
22	Project Viability	R1

### MODULE-IV

**MANAGEMENT PRINCIPLES** • Definitions of management • Principles of management • Functions of management (planning, organising, staffing, directing and controlling etc.) • Level of Management in an Organisation

**Objectives:**

To understand definitions of management, principles of management, functions of management.

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
23	Definitions of management	T1
24	Principles of management	T1
25	Functions of management (planning, organising, staffing)	T1
26	Functions of management (directing and controlling etc.)	R1
27	Level of Management in an Organisation	T1

### MODULE-V

**FUNCTIONAL AREAS OF MANAGEMENT** a) Production management • Functions, Activities • Productivity • Quality control • Production Planning and control b) Inventory Management • Need for Inventory management • Models/Techniques of Inventory management c) Financial Management • Functions of Financial management • Management of Working capital • Costing (only concept) • Break even Analysis • Brief idea about Accounting Terminologies: Book Keeping, Journal entry, Petty Cash book, P&L Accounts, Balance Sheets(only Concepts) d) Marketing Management • Concept of Marketing and Marketing Management • Marketing Techniques (only concepts) • Concept of 4P s (Price, Place, Product, Promotion) e) Human Resource Management • Functions of Personnel Management. Manpower Planning, Recruitment, Sources of manpower, Selection process, Method of Testing, Methods of Training & Development, Payment of Wages

**Objectives:**

To understand production management, Inventory Management, Financial Management, Marketing Management, Human Resource Management.

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
28	Production management, Functions, Activities	T1, R1

29	Productivity, Quality control	T1, R1
30	Production Planning and control, Inventory Management, Need for Inventory management	T1, R1
31	Functions of Financial management	T1
32	Management of Working capital	R1
33	Brief idea about Accounting Terminologies	T1
34	Marketing Management	R1
35	Concept of 4P s (Price, Place, Product, Promotion)	T1, R1
36	Human Resource Management	T1
37	Functions of Personnel Management. Manpower Planning, Recruitment, Sources of manpower	R1

## MODULE-VI

**LEADERSHIP AND MOTIVATION** a) Leadership • Definition and Need/Importance • Qualities and functions of a leader • Manager Vs Leader • Style of Leadership (Autocratic, Democratic, Participative) b) Motivation • Definition and characteristics • Importance of motivation • Factors affecting motivation • Theories of motivation (Maslow) • Methods of Improving Motivation • Importance of Communication in Business • Types and Barriers of Communication

### Objectives:

To understand definition, need/importance, qualities, functions of a leader, Factors affecting motivation, Theories of motivation, Importance, Types, Barriers of of Communication in Business.

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
38	Definition, Need/Importance, Qualities, functions of a leader	T1, R1
39	Manager Vs Leader, Style of Leadership	T1
40	Definition and characteristics ,Importance of motivation	T1, R1
41	Factors affecting motivation, Theories of motivation (Maslow)	T1
42	Methods of Improving Motivation	R1
43	Importance, Types, Barriers of of Communication in Business	T1

## MODULE-VII

**WORK CULTURE, TQM & SAFETY** • Human relationship and Performance in Organization • Relations with Peers, Superiors and Subordinates • TQM concepts: Quality Policy, Quality Management, Quality system • Accidents and Safety, Cause, preventive measures, General Safety Rules, Personal Protection Equipment (PPE)

### Objectives:

To understand Human relationship and Performance in Organization, TQM concepts, Accidents and Safety, Cause, preventive measures.

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
44	Human relationship and Performance in Organization	T1, R1
45	Relations with Peers, Superiors and Subordinates	T1, R1
46	TQM concepts: Quality Policy, Quality Management, Quality system	T1, R1
47	Accidents and Safety, Cause, preventive measures	T1
48	General Safety Rules, Personal Protection Equipment (PPE)	R1

## MODULE-VIII

**LEGISLATION** a) Intellectual Property Rights(IPR), Patents, Trademarks, Copyrights b) Features of Factories Act 1948 with Amendment (only salient points) c) Features of Payment of Wages Act 1936 (only salient points)

### Objectives:

To understand Intellectual Property Rights (IPR), Patents, Trademarks, Copyrights, Features of Factories Act 1948, Payment of Wages Act 1936 with Amendment (only salient points).

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
49	Intellectual Property Rights(IPR), Patents	T1
50	Trademarks, Copyrights	R1
51	Features of Factories Act 1948 (only salient points)	T1, R1
52	Features of Factories Act 1948 with Amendment (only salient points)	T1
53	Features of Payment of Wages Act 1936 (only salient points)	R1
54	REVISION	T1

## MODULE-IX

**SMART TECHNOLOGY** • Concept of IOT, How IOT works • Components of IOT, Characteristics of IOT, Categories of IOT • Applications of IOT- Smart Cities, Smart Transportation, Smart Home, Smart Healthcare, Smart Industry, Smart Agriculture, Smart Energy Management etc.

### Objectives:

To understand Concept of IOT, Components of IOT, Characteristics of IOT, Applications of IOT.

Lecture no	Topics to be covered	PRIMARY REFERENCE (BOOKS/NOTES)
55	Concept of IOT	T1, R1
56	Components of IOT, Characteristics of IOT	T1
57	Categories of IOT	T1, R1
58	Applications of IOT- Smart Cities, Smart Transportation	T1
59	Applications of IOT- Smart Home, Smart Healthcare	R1
60	Smart Industry, Smart Agriculture, Smart Energy Management	T1

## Course Delivery Plan

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## **BOOKS FOR REFERENCE:**

### **TEXT BOOKS**

T1: Industrial Entrepreneurship Management by B.Badhai, Dhanpat Rai & Co Publication.

### **REFERENCE**

R1: Entrepreneurship Development and Management by R.K Singhal, Katson Books., New Delhi

	<b>Prepared by</b>	<b>Approved by</b>
<b>Signature</b>		
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