SREE VIDYANIKETHAN ENGINEERING COLLEGE

(Autonomous)
Sree Sainath Nagar, A. Rangampet-517 102

Department of Mechanical Engineering

Lesson Plan

Name of the Subject : **Manufacturing Technology-II (14BT40304)**

Class & Semester : II B.Tech. II-Sem

Name of the faculty Member : Dr.K.C.Varaprasad

S. No.	Topic	No. of periods	Book(s) followed	Topics for self-study
UNIT – I: METAL FORMING PROCESSES				
1	Nature of plastic deformation	1	T1, T2, R1	
2	Rolling, Forging	2	T1,T2, R1	
3	Extrusion, wire drawing, rod and tube drawing	2	T1,T2, R1	
4	Swaging, tube making	2	T1, R1	
5	Explosive forming and thread rolling	2	T1,T2, R1	
	Total periods required:	**09**		
UNIT – II: SHEET METAL OPERATIONS				
6	Press tool operations	1	T1 ,T2	
7	Shearing action, shearing operations	2	T1 ,T2	
8	Drawing, draw die design	2	T1 ,T2	
9	Spinning, bending, stretch forming	2	T1 ,T2	
10	Embossing and coining	2	T1 ,T2	
	Total periods required:	**09**		
UNIT – III: PLASTIC PROCESSING				
11	Introduction, Properties of plastics	1	T1, T2, R2	
12	Additives in plastics	1	T1, T2, R2	
13	Extrusion of Plastics	1	T1, T2, R2	
14	Injection moulding, Blow moulding	1	T1, T2, R2	
15	Thermoforming, Thermosetting Materials	2	T1, T2, R2	
	Total periods required:	**06**		
UNIT –IV: NON-TRADITIONAL MACHINING METHODS				
16	Need for non-traditional machining methods, Classification of modern machining processes	2	T1, T2	
17	Comparative study of different processes, Considerations in process selection, Materials-its applications	2	T1 , T2	
18	Ultrasonic machining process: Mechanics of metal removal, process variables, applications and limitations	2	T1 , T2	
19	Abrasive and Water Jet machining: Types of abrasives, Mechanics of metal removal, process variables, applications and limitations	2	T1 , T2	
	Total periods required:	**08**		

UNIT –V: ELECTRO–CHEMICAL & THERMAL REMOVAL PROCESSES				
20	Fundamentals of Chemical Machining, Electro chemical machining	3	T1,T2	
21	Electro Chemical Grinding: Mechanics of metal removal, process variables, applications and limitations	4	T1,T2	
22	Electro Chemical Honing and Deburring process	2	T1,T2	
23	Electric Discharge Machining	1	T1,T2	
24	Electric Discharge Grinding and Electric Discharge Wire cutting processes	3	T1,T2	
Total periods required:		**13**		
Grand total periods required:		**45**		

TEXT BOOKS:

T1: P.N. Rao, *Manufacturing Technology*, Vol:1, TMH, 4th edition, 2013

T2: Kalpakjian, Serope, *Manufacturing Engineering and Technology*, Pearson education, 7th edition, 2014.

REFERENCE BOOKS:

R1: Pandey, P.C. and Shah H.S., *Modern Machining Process*, TMH, 1980.

R2: V.K. Jain, *Advanced Machining Processes*, Allied publishers, 2009.