GANESH INSTITUTE OF ENGINEERING AND TECHNOLOGY, POLYTECHNIC							
DEPARTMENT OF MECHANICAL ENGINEERING							
NAME: RANAJIT SAMANTARAY					LESSON PLAN CUM PROGRESS REPORT		
SUBJECT: ADVANCE MANUFACTURING PROCESSES				SEMESTER:6TH	BRANCH:MECHANICAL ENGINEERING		
LECTURE NO.	**CO**	**BTL**	**TOPIC TO BE COVERED**	**WEB REFERENCE IF ANY**	**PLAN DATE**	**ACTION DATE**	**REVIEW BY HOD**
1	CO1	1	**1.0 Modern Machining Processes:** Introduction – comparison with traditional machining.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	22-12-2025		
2	CO1	1	Ultrasonic Machining: principle, Description of equipment, applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	23-12-2025		
3	CO1	1	Ultrasonic Machining: principle, Description of equipment, applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	24-12-2025		
4	CO1	2	Electric Discharge Machining: Principle, Description of equipment, Dielectric fluid, tools (electrodes), Process parameters, Output characteristics, applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	29-12-2025		
5	CO1	2	Electric Discharge Machining: Principle, Description of equipment, Dielectric fluid, tools (electrodes), Process parameters, Output characteristics, applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	30-12-2025		
6	CO1	3	Electric Discharge Machining: Principle, Description of equipment, Dielectric fluid, tools (electrodes), Process parameters, Output characteristics, applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	31-12-2025		
7	CO1	3	Abrasive Jet Machining: principle, description of equipment, Material removal rate, application.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	05-01-2026		
8	CO1	3	Abrasive Jet Machining: principle, description of equipment, Material removal rate, application.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	06-01-2026		
9	CO1	2	Laser Beam Machining: principle, description of equipment, Material removal rate, application.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	07-01-2026		
10	CO1	2	Laser Beam Machining: principle, description of equipment, Material removal rate, application.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	08-01-2026		

11	CO1	1	Laser Beam Machining: principle, description of equipment, Material removal rate, application.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	12-01-2026		
12	CO1	1	Electro Chemical Machining: principle, description of equipment, Material removal rate, application.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	13-01-2026		
13	CO1	1	Electro Chemical Machining: principle, description of equipment, Material removal rate, application.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	15-01-2026		
14	CO1	2	Electro Chemical Machining: principle, description of equipment, Material removal rate, application.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	19-01-2026		
15	CO1	1	Plasma Arc Machining – principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	20-01-2026		
16	CO1	2	Plasma Arc Machining – principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	21-01-2026		
17	CO1	1	Plasma Arc Machining – principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	22-01-2026		
18	CO1	2	Electron Beam Machining - principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	27-01-2026		
19	CO1	1	Electron Beam Machining - principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	28-01-2026		
20	CO2		ASSIGNMENT-1	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	29-01-2026		
21	CO2	1	**2.0 Plastic Processing: Processing of plastics**.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	02-02-2026		
22	CO2	2	Injection moulding	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	03-02-2026		
23	CO2	1	Compression moulding	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	04-02-2026		
24	CO2	2	Transfer moulding	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	05-02-2026		

25	CO2	1	Extruding; Casting	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	09-02-2026		
26	CO2	2	Calendering	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	10-02-2026		
27	CO2	1	Fabrication methods-Sheet forming, Blow moulding	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	11-02-2026		
28	CO2	2	Laminating plastics (sheets, rods & tubes), Reinforcing	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	12-02-2026		
29	CO2	2	Applications of Plastics.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	16-02-2026		
30	CO2		ASSIGNMENT-2	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	17-02-2026		
31	CO3	3	**3.0 Additive Manufacturing Process**: Introduction, Need for Additive Manufacturing	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	18-02-2026		
32	CO3	2	Fundamentals of Additive Manufacturing	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	19-02-2026		
33	CO3	3	AM Process Chain	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	23-02-2026		
34	CO3	3	Advantages and Limitations of AM, Commonly used Terms	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	24-02-2026		
35	CO3	3	Classification of AM process, Fundamental Automated Processes	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	25-02-2026		
36	CO3	3	Distinction between AM and CNC, other related technologies.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	26-02-2026		

37	CO3	1	Application –Application in Design, Aerospace Industry, Automotive Industry, Jewellery Industry, Arts and Architecture.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	26-02-2026		
38	CO3	2	RP Medical and Bioengineering Applications.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	02-03-2026		
39	CO3	3	Web Based Rapid Prototyping Systems.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	03-03-2026		
40	CO3	3	Web Based Rapid Prototyping Systems.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	05-03-2026		
41	CO3	1	Concept of Flexible manufacturing process	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	09-03-2026		
42	CO3	1	Concept of concurrent engineering	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	10-03-2026		
43	CO3	1	Concept of production tools like capstan and turret lathes	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	11-03-2026		
44	CO3	2	Concept of rapid prototyping processes	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	12-03-2026		
45	CO3		ASSIGNMENT-3	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	16-03-2026		
46	CO4	1	**4.0 Special Purpose Machines (SPM):** Concept	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	17-03-2026		
47	CO4	2	General elements of SPM	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	18-03-2026		
48	CO4	2	Productivity improvement by SPM	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	19-03-2026		
49	CO4	2	Productivity improvement by SPM	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	23-03-2026		
50	CO4	1	Principles of SPM design.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	24-03-2026		
51	CO4	2	Principles of SPM design.	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	25-03-2026		

52	**CO4**		ASSIGNMENT-4	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	26-03-2026		
53	**CO5**	**1**	**5.0 Maintenance of Machine Tools**	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	30-03-2026		
54	**CO5**	**2**	Types of maintenance	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	31-03-2026		
55	**CO5**	**2**	Repair cycle analysis	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	02-04-2026		
56	**CO5**	**2**	Repair complexity	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	06-04-2026		
57	**CO5**	**1**	Maintenance manual, Maintenance records, Housekeeping	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	07-04-2026		
58	**CO5**	**1**	Maintenance manual, Maintenance records, Housekeeping	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	08-04-2026		
59	**CO5**	**2**	Introduction to Total Productive Maintenance (TPM).	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	09-04-2026		
60	**CO5**		ASSIGNMENT-5	https://youtube.com/playlist?list=PLQmc-I2-FO2G1QcCnIBBCQAHl83Th0TPG&si=97utx2cLiL_jpcmA	15-04-2025		
61			**REVISION**		16-04-2026		
62			**ASSIGNMENT SUBMISSION**		18-04-2026		

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