

## Trinity Institute of Innovations in Professional Studies

Plot No. 2B/1, Knowledge Park - III, Greater Noida

### SUBJECT LESSON PLAN

<b>Course &amp; Semester:</b>	B.TECH 1ST SEM	<b>Batch</b>	2022-26
<b>Subject Name :</b>	Manufacturing Process	<b>Paper Code</b>	ES-119

UNITS	LECTURE NUMBER	Proposed date	Lecture Content	Actual Date	REMARKS
Unit I	1	24/12/2021	Definition of manufacturing, Importance of manufacturing towards technological and social economic development,	24/12/2021	Completed
	2	29/12/2021	Classification of manufacturing processes,	29/12/2021	
	3	30/12/2021	Properties of materials.	30/12/2021	
	4	31/12/2021	Metal Casting Processes: Sand casting,	31/12/2021	
	5	3/1/2022	Sand moulds, Type of patterns,	3/1/2022	
	6	5/1/2022	Pattern materials, Pattern allowances,	5/1/2022	
	7	6/1/2022	Types of Moulding sand and their Properties,	6/1/2022	
	8	7/1/2022	Core making, Elements of gating system.	7/1/2022	
	9	10/1/2022	Description and operation of cupola casting,	10/1/2022	
	10	12/1/2022	Pressure die casting,	12/1/2022	
	11	13/1/2022	Centrifugal casting. Casting defects.	13/1/2022	
Unit II	1	14/1/2022	Joining Processes: Welding principles,	14/1/2022	Completed
	2	17/1/2022	classification of welding processes, Fusion welding,	19/1/2022	
	3	19/1/2022	Gas welding, Equipments used,	19/1/2022	
	4	20/1/2022	Filler and Flux materials. Electric arc welding,	20/1/2022	
	5	21/1/2022	Gas metal arc welding,	21/1/2022	
	6	24/1/2022	Submerged arc welding,	21/1/2022	
	7	27/1/2022	Electro slag welding,	24/1/2022	
	8	28/1/2022	TIG and MIG welding process,	27/1/2022	
	9	31/1/2022	resistance welding, welding defects.	27/1/2022	
Unit III	1	2/2/2022	Deformation Processes: Hot working and cold working of metals,	28/1/2022	Completed
	2	3/2/2022	Forging processes, Open and closed die forging process.	31/1/2022	
	3	4/2/2022	Typical forging operations, Rolling of metals,	2/2/2022	
	4	7/2/2022	Principle of rod and wire drawing, Tube drawing.	3/2/2022	
	5	9/2/2022	Principle of Extrusion, Types of Extrusion,	4/2/2022	
	6	10/2/2022	Hot and Cold extrusion.	4/2/2022	
	7	11/2/2022	Sheet metal characteristics -Typical shearing operations,	7/2/2022	
	8	14/2/2022	bending and drawing operations,	9/2/2022	
	9	17/2/2022	Stretch forming operations, Metal spinning	10/2/2022	
Unit IV	1	24/2/2022	Powder Metallurgy: Introduction of powder metallurgy process,	11/2/2022	Completed
	2	25/2/2022	Powder Metallurgy: Introduction of powder metallurgy process,	14/2/2022	
	3	28/2/2022	powder production, blending, compaction, sintering	17/2/2022	
	4	2/3/2022	Manufacturing Of Plastic Components: Types of plastics,	24/2/2022	
	5	3/3/2022	Characteristics of the forming and shaping processes,	25/2/2022	
	6	4/3/2022	Moulding of Thermoplastics,		
	7	7/3/2022	Injection moulding,		
	8	14/3/2022	Blow moulding, Rotational moulding, Film blowing, Extrusion,		
	9	16/3/2022	Thermoforming. Moulding of thermosets- Compression moulding,		
	10	21/3/2022	Transfer moulding, Bonding of Thermoplastics		

**Textbooks:**

1. Manufacturing Technology: Foundry, Forming and Welding Volume 1, P. N Rao, , McGrawHill, 5e, 2018.
2. Elements of Workshop Technology Vol. 1 and 2 by Hajra Choudhury, Media Promoters Pvt Ltd.,2008.

**Faculty Name: Dr. Shailendra Kumar**