

## MSE-881 Manufacturing Processes – 3 CHs

Prerequisite - Nil

Category: Elective Course

Existing Course Contents	Proposed Changes
<p><b>Course contents:</b></p> <ul style="list-style-type: none"> <li>• Material Properties and product attributes, Solidification Processes, Metal Casting,</li> <li>• Glass working, Shaping processes for plastics, Rubber processing,</li> <li>• Shaping processes for composites, Particulate processing of metals and ceramics,</li> <li>• Powder metallurgy, Metal forming and Sheet metal working,</li> <li>• Bulk Deformation Processes, Metal Machining and Cutting,</li> <li>• Grinding and other abrasive processes, Non-traditional machining, Surface processing,</li> <li>• Coating and deposition processes, Joining and assembly, Rapid Prototyping,</li> <li>• Micro fabrication, Manufacturing systems, Numerical control and industrial robotics.</li> </ul>	<p><b>Course contents:</b></p> <ul style="list-style-type: none"> <li>• Material Properties and product attributes, Solidification Processes, Metal Casting,</li> <li>• Glass working, Shaping processes for plastics, Rubber processing,</li> <li>• Shaping processes for composites &amp; Polymers, Particulate processing of metals and ceramics,</li> <li>• Powder metallurgy, Metal forming and Sheet metal working,</li> <li>• Bulk Deformation Processes, Metal Machining, Joining and Cutting,</li> <li>• Grinding and other abrasive processes, Non-traditional machining, Surface processing,</li> <li>• Coating and deposition processes, Joining and assembly, Rapid Prototyping,</li> <li>• Micro fabrication, Manufacturing systems, Numerical control and industrial robotics.</li> <li>• 3D printing technologies, Microwave processing of materials and other advanced manufacturing processes.</li> </ul>

### Proposed Weekly Plan for the Concerned Faculty

Week /Lecture	Topic
1	Material Properties and product attributes, Solidification Processes, Metal Casting,
2,3	Glass working, Shaping processes for plastics, Rubber processing,
4,5	Shaping processes for composites & Polymers, Particulate processing of metals and ceramics,
6-8	Powder metallurgy, Metal forming and Sheet metal working,
9,10	Bulk Deformation Processes, Metal Machining, Joining and Cutting,
11,12	Grinding and other abrasive processes, Non-traditional machining, Surface processing,
13,14	Coating and deposition processes, Joining and assembly, Rapid Prototyping,
15,16	Micro fabrication, Manufacturing systems, Numerical control and industrial robotics.
16,17	3D printing technologies, Microwave processing of materials and other advanced manufacturing processes.