

1.	Title of the course	Manufacturing Technology
2.	Course number	ME206M
3.	Structure of credits	3-0-2-4
4.	Offered to	UG
5.	New course/modification to	Modification To ME2204/8
6.	To be offered by	Department of Mechanical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	Course Objective(s): To develop in-depth understanding on manufacturing processes namely casting, welding, forming and powder metallurgy. Further, various nondestructive examination methods to detect the defects in the manufactured components are introduced.	
10.	Course Content: Methods of manufacturing – metal casting, metal forming, metal joining and powder metallurgy: basic principles, classification, equipment, process variables, defects in manufactured components, and applications; Basic methods of manufacturing of plastics, ceramics, and composite parts; 3D printing; Nondestructive examination of manufactured components. Lab component: Measurement of moulding sand properties, gas tungsten arc welding and gas metal arc welding processes, non-destructive testing evaluation of cast and welded products, metal forming, powder metallurgy, and 3D Printing.	
11.	Textbook(s): 1. Groover M P, Fundamentals of Modern Manufacturing, 4th Edition, John Wiley and Sons (2010). 2. Rao P N , <i>Manufacturing Technology</i> , 4th Edition, Tata McGraw Hill (2013).	
12.	Reference(s): 1. Kalpakjian S and Schmid S R, <i>Manufacturing Engineering and Technology</i> , 6th Edition, Manufacturing Engineering and Technology (2009). 2. O'Brien R L, <i>Welding processes, Volume 2</i> , 8th Edition, American Welding Society (1995). 3. Parmar R S, <i>Welding processes and technology</i> , 3rd Edition, Khanna publications (2003).	