

**INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI**  
**PROFORMA FOR MINOR MODIFICATION OF EXISTING COURSE**

1.	Title of the Course	Manufacturing Technology
2.	Course Number	ME2280
3.	Status of the Course	Core
4.	Structure of Credits	3-1-0-4
5.	Offered to	UG
6.	New Course/ Modification to	Minor modification to existing course
7.	To be offered by	Department of Mechanical Engineering
8.	To take effect from	January 2018
9.	Prerequisite	Nil
10.	Whether approved by the Program	Yes
11.	<p><u>Course Objective:</u>  Aim of this course is to develop in-depth understanding on manufacturing processes namely casting, welding, forming, and non-traditional manufacturing processes. Further, various non-destructive examination methods to detect the defects in the manufactured component are introduced.</p>	
12.	<p><u>Course Content:</u>  <b>Methods of manufacture</b> – metal casting, metal forming and metal joining; basic principles, processes, equipment, process variables; non-destructive examination of manufactured components.  <b>Non-Traditional manufacturing processes</b> – basic principles, features of equipment, process variables – mechanical, thermo-mechanical, thermo-electrical, chemical, thermo-chemical and hybrid processes.</p>	
13.	<p>Text Book:</p> <ol style="list-style-type: none"> <li>1. M. P. Groover, Fundamentals of Modern Manufacturing, 4<sup>th</sup> edition, John Wiley and Sons (2010).</li> <li>2. S. Kalpakjian, and S. R. Schmid, Manufacturing Engineering and Technology, 6<sup>th</sup> edition, Pearson Education (2009).</li> <li>3. P. N. Rao, Manufacturing Technology, Volume 1 (4e), Tata McGraw Hill (2013).</li> </ol>	
14.	<p>References:</p> <ol style="list-style-type: none"> <li>1. R. L. O'Brien, Welding processes, volume 2, eighth edition, Welding hand book (American Welding Society) (1995).</li> <li>2. R. S. Parmar, Welding processes and technology, 3<sup>rd</sup> edition, Khanna publications (2003).</li> </ol>	