

**INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
PROFORMA FOR NEW COURSE**

1.	Title of the Course	Workshop I
2.	Course Number	EA1103
3.	Status of the Course	Core
4.	Structure of Credits	0-0-3-2
5.	Offered To	UG
6.	New Course/Modification to	New
7.	To be Offered by	Department of Mechanical Engineering
8.	To take effect from	July 2018
9.	Prerequisite	Nil
10.	Whether approved by the Department	Yes
11.	Course Objective: At the end of the course, the student shall be able to 1. Explain the constructional details and functions of basic components of Lathe, Milling, Hand and Power tools, Shearing, Bending, Cutting, Foundry, Smithy, Arc Welding. 2. Suggest appropriate tools or apparatus to carryout basic processing operations. 3. Suggest appropriate manufacturing process for a given application.	
12.	Course Content: Machining –Safety, Parts of Turning and Milling Machine, Material selection, Tools identification and Selection, Cutting types, Measurement, Suitable machining operation, Dimensional Analysis. Fitting & Forming: Safety, Handling of Hand tools and Power tools, Selection of Power tools, Cutting Tool Selection, Types of Joints, Types of Sheet Metal, Sheet Metal Operations, Measurement, Dimensional Analysis. Foundry: Safety, Handling of Hand tools, Types of Moulds, Selection of patterns, Selection of Material. Welding: Safety, Welding Simulator, Selection of Material, Deburring, Arc Welding Setup, Handling of Tools, Types of Welding and Welding Quality	
13.	Text book(s): 1. W. A. J. Chapman, <i>Workshop Technology- Part 1</i> , Edward Arnold Ltd, (2001). 2. W. A. J. Chapman, <i>Workshop Technology- Part 2</i> , Edward Arnold Ltd, (2007).	
14.	Reference(s): 1. Serope Kalpakjian , Steven R. Schmid., <i>Manufacturing Engineering and Technology</i> , Pearson Publication, (2016).	