

MME211 (L): Manufacturing Technology 1 Lab

Programme: B. Tech. (MME)
Course: Core

Year: 2nd
Credits: 2

Semester: 3rd
Hours: 3

Course Context and Overview (100 words):

The course is designed based upon the theory courses on Manufacturing Technology. The objective of this lab is to expose the students with practical aspects of the concepts taught in the courses mentioned above through demonstration on models or experimental set-ups.

Prerequisite Courses: NIL

Course Outcomes (COs):

On completion of this course, the students will have the ability to:
CO1: Student will be aware of safety and health hazard associate with manufacturing.
CO2: Student will be able to use various tools.
CO3: Student will be able to operate various machine tools.
CO4: Student will be able to perform various manufacturing operations.
CO5: Student will be able to learn production practices.

Course Topics:

Proposed List of Experiments:

S. No.	Experiment/Activity	Hours
1	Occupational health hazard and Safety associated with Engineering workshop	3
2	Demonstration of metallographic setup and practices	3
3	Demonstration of casting process and practices.	3
4	Single point cutting tool signature, multipoint cutting tools grinding wheel demonstration, significance and application.	3

5	Demonstration of various lathe and different machining operation practices.	3
6	Demonstration of milling machine, surface grinder, bench grinder, shaper and its operations.	3
7	Demonstration and practice on SMAW Process including arc characteristics and defects.	3
8	Demonstration and practice on GMAW Process with different gases including arc characteristics and defects.	3
9	Effect of process parameter on bead geometry and shape relationship with SAW process.	3
10	Fitting shop demonstration and lab practice.	3
11	Sheet metal shop operations and practices.	3

Textbook references (IEEE format):

Text Book: Same as for the theory courses.

Reference books:

Additional Resources (NPTEL, MIT Video Lectures, Web resources etc.):

Evaluation Methods:

Item	Weightage (%)
Report	20
Mini Project	30
End Term Examination	50

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Last Update: 6/5/2017