



National Institute of Technology Meghalaya
An Institute of National Importance

CURRICULUM

Programme	Bachelor of Technology in Mechanical Engineering	Year of Regulation	2018
Department	Mechanical Engineering	Semester	III

Course Code	Course Name	Credit Structure				Marks Distribution	
		L	T	P	C	Continuous Evaluation	Total
ME 253	Advanced Workshop Practice.	0	1	2	2	100	100

Course Objectives	To understand the basic working principles of various manual Machines such as Lathe, Shaper and Milling machines	Course Outcomes	CO1	Explain the fundamental of lathe, shaper, milling, surface grinding machine tools and CNC machine with safety procedure (understanding)
			CO2	Utilize different machining operations in lathe to perform specified jobs. (Application).
			CO3	Utilize machining operation in shaper to perform specified jobs. (Applying)
			CO4	Utilize machining operations in milling machine to perform specified jobs. (Applying).
			CO5	Develop specified jobs using CNC lathe and milling machine (Applying).
	To understand the CNC Lathe and Milling machine and able perform write codes using the CNC coding.			

No.	COs	Mapping with Program Outcomes (POs)												Mapping with PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	CO1	2	2	2	0	2	0	0	0	2	0	0	0	2	1	0
2	CO2	2	2	2	0	2	0	0	0	2	0	0	0	2	1	0
3	CO3	2	2	2	0	2	0	0	0	2	0	0	0	2	1	0
4	CO4	2	2	2	0	2	0	0	0	2	0	0	0	2	1	0
5	CO5	2	2	2	0	2	0	0	0	2	0	0	0	2	1	0
6	CO6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SYLLABUS

No.	Content	Hours	COs
I	Introduction to machine tools; Types of cutting tools, speed, feed rate and operations of various machines	02	CO1
II	Utilize different machining operations in lathe to perform specified jobs. (Application).	04	CO2
III	Utilize machining operation in shaper to perform specified jobs. (Applying)	04	CO3 CO2
IV	Utilize machining operations in milling machine to perform specified jobs. (Applying).	06	CO4
V	Develop specified jobs using CNC lathe and milling machine (Applying).	08	CO5
Total Hours		24	

Essential Readings

1. S.K.H. Choudhury, A.K.H. Choudhary and N. Roy, "Elements of Workshop Technology", Media Promoters and Publishers Pvt. Ltd.

Supplementary Readings

1. W. A. J. Chapman, "Workshop Technology", CBS Publishers.

2. H Gerling, "All About Machine Tools", New Age International.