	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	**VI**

Course Code	Course Name	Credit Structure				Marks Distribution	
		L	T	P	C	Continuous Evaluation	Total
ME 354	**Advanced Manufacturing Lab**	**0**	**1**	**2**	**2**	**100**	**100**

Course Objectives	To develop the student's ability to measure and analyse the cutting forces during machining of mild steel.	Course Outcomes	CO1: Analyze the cutting forces generated during machining of mild steel. (Analyze)
	To develop the student's ability to understand the effect of various parameters during injection moulding of plastic.		CO2: Analyze the effect of various process parameters during injection molding of plastic. (Analyze)
	To develop student ability to perform 3D printing, scanning of object etc.		CO3: Development of the model and perform 3D printing.
			CO4: Scanning of an object and perform 3D printing.
	To develop student ability to analysis factory automation		CO5: Analysis of the factory automation for modern manufacturing.

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	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**
2	CO2	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**
3	CO3	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**
4	CO4	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**
5	CO5	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	**3**	**0**

SYLLABUS

No.	Content	Hours	COs
1	To measure and analyse the cutting forces generate during machining of mild steel using a single point cuttingtool.	**4**	**CO1**
2	To fabricate the test specimen and investigate the effect of various process parameters during injectionmoulding of plastic.	**4**	**CO2**
3	Development of the model in modeling software and performance of 3D printing.	**4**	**CO3**
4	Scanning of an object and print through 3D Pinter.	**4**	**CO4**
5	Factory automation performance analysis.	**4**	**CO5**
	Total Hours	**20**	

Supplementary Readings

1. A. Ghosh and A.K. Mallik, "Manufacturing Science", Wiley Eastern
2. S.K. Mazumdar, "Composites Manufacturing: Materials, Product, and Process Engineering", CRC Press