

Branch Name:	Mechanical Engineering (Production Technology)
Program Code:	ET209
Course Name:	Machining Science - Practical
Course Code:	2ET2090103P
Pre-requisite Course:	Basic Manufacturing Engineering Courses

Course Objectives:

1. To get familiar the students in the art of machining Science as many developments are taking place in manufacturing.
2. The students will thoroughly get a feel of the relevant suitable process while evaluating and deciding.

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								
					Theory (Marks)				Practical (Marks)				Total (Marks)
	SEE		CCA		SEE		CCA						
	L	T	P	Total	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	-	-	2	2	-	-	-	-	10	25	10	25	50

Subject Contents:

Sr. No	Detail of Practicals	Contact Hours
1	Students are required to perform experiments based on parametric study of various conventional manufacturing processes and RP processes.	04
2		02
3		02
4		02
5		02
6		02

List of Reference Books:

1. A. Ghosh, and A. K. Mallik, Manufacturing Science, Affiliated East West Press Ltd, 2014.
2. J. A. McGeough, Advanced Methods of Machining, Chapman and Hall, 2011
3. Winston A. Knight, and Geoffrey Boothroyd, Fundamentals of Metal Machining & Machine Tools, 3rd ed., CRC Press, 2005.
4. Serope Kalpakjian, and Steven R. Schmid, Manufacturing Engineering and Technology, 7th ed., Pearson Education, 2013.

5. C. K. Chua, K.F. Leong and C. S. Lim, Rapid Prototyping: Principles and Applications, 3rd ed., World Scientific, 2008

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Understand the Mechanics of Metal Cutting	1 Remembering 2 Understanding
CLO2	Acquainted with Thermal Aspects in Machining	2 Understanding
CLO3	Learn about the process of micro-machining	2 Understanding
CLO4	Understand various unconventional micro-machining methods	2 Understanding
CLO5	Explore emerging trends in RP and reverse engineering	3 Applying
CLO6	Select of a suitable RP process for a given application	4 Analyze

Mapping of CLOs with POs & PSOs:

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes(PSOs)	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CLO1	M	M											M	
CLO2			M										M	
CLO3				M									M	
CLO4					M					M			M	
CLO5				M							M			M
CLO6				M						M	L			M

H: High, M: Medium, L: Low