

**JSPM University Pune**  
**Faculty of Science and Technology**  
**School of Mechanical and Manufacturing**  
**Sciences**



**NEP aligned Syllabus**  
**for**  
**M.Tech (Mechanical Engineering)**

**(Effective from AY: 2025-26)**



# JSPM University Pune

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF MECHANICAL AND MANUFACTURING SCIENCES

## COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2025

REVISION NO.

1.0 (NEP)

FIRST YEAR MASTER OF TECHNOLOGY (MECHANICAL ENGINEERING)

### SEMESTER I (Level 6.5)

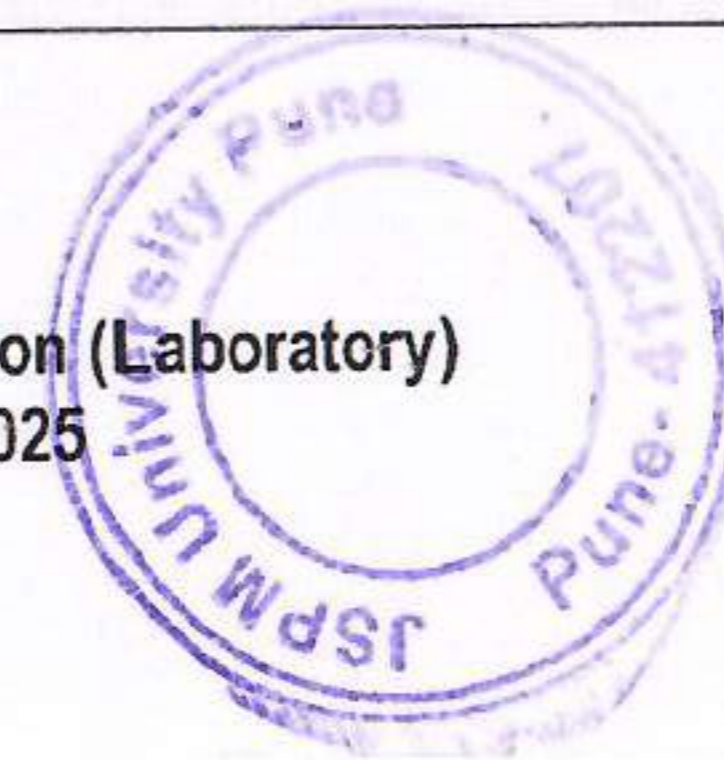
COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS
TYPE	CODE	COURSE NAME	Hours / Week				THEORY (Equal Weightage for CIE and ESE)			PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)				
			L	T	P	EL	CONTINUOUS IN SEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS IN SEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS IN SEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)		
							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)							
PSMC	230GMAM02_01	Advanced Numerical Methods	2	1	-	-	30	30	40	100	-	-	-	-	100	3
PSBC	230GMEM01_01	Advanced Mechanics	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5
PCC	240GMEM02_01	Advanced Thermodynamics	3	-	-	-	30	30	40	100	-	-	-	-	100	3
	231GRAM03_01	Advanced Hydraulics and Pneumatics	2	-	-	-	30	30	40	50	-	-	-	-	50	2
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2
SEC	230GCSM26_01	Python Programming for Engineers	2	-	2	-	-	-	-	-	50	50	50	50	100	3
VSC	230IDCB01_01	Design Thinking and Creativity	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5
AEC	231UENM01_01	Communicative English for Professionals	1	-	2	-	-	-	-	-	50	50	-	-	50	2
RMC	230IRMM01_01	Research Methodology	2	-	-	-	30	30	40	50	-	-	-	-	50	2
LC	230GRAM26_01	Advanced Hydraulics and Pneumatics Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
<b>TOTAL</b>			<b>16</b>	<b>1</b>	<b>8</b>	<b>4</b>									<b>750</b>	<b>22</b>

L-Lecture  
Format No.: JSPMUni/ACAD/001


T-Tutorial  
Rev. No.:1.0


P-Practical Session (Laboratory)  
Rev. Date:01/07/2025

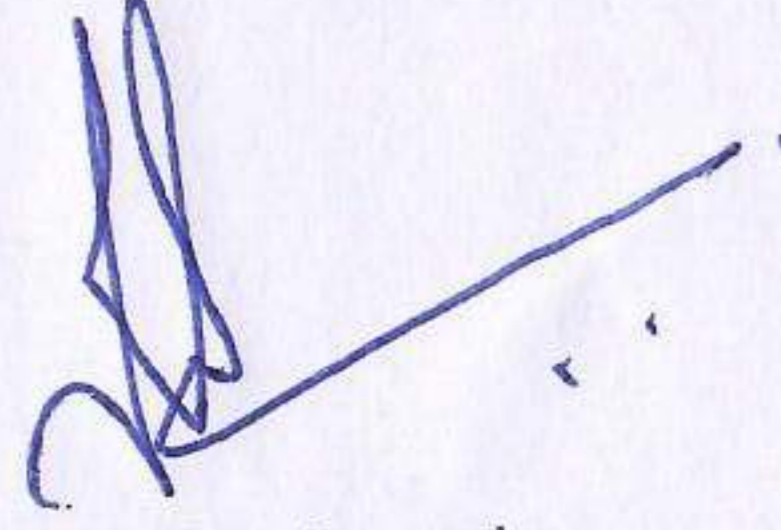
EL-Experiential Learning  
Page 1 of 2

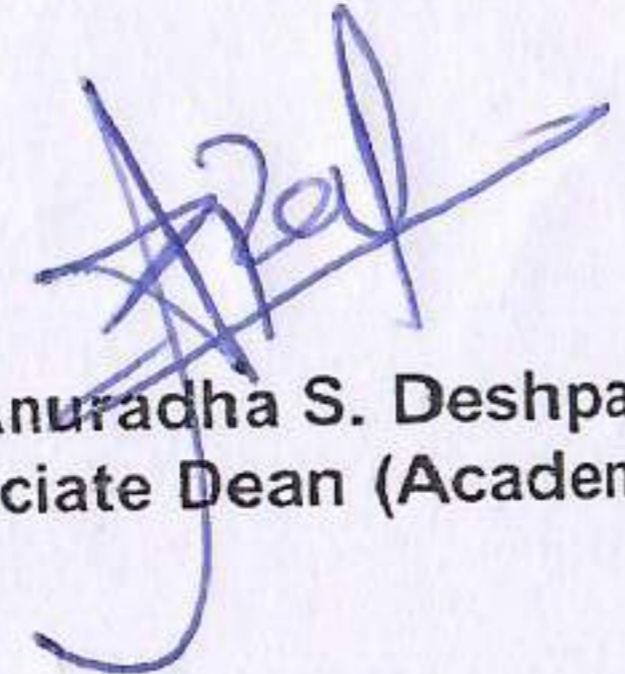


Multidisciplinary Minor Course (MMC)			
I	Course Code	230GRAM24 01	230VOSM59 01
	Course Name	Sensors and Automation	Introduction to Project Management
II	Course Code	230GETM16 02	230VDMM02 02
	Course Name	IoT Basics and Applications	Customer Relationship Management
			230GCSM28 01
			Introduction to Data Science
			230GCSM29 02
			Introduction to Artificial Intelligence

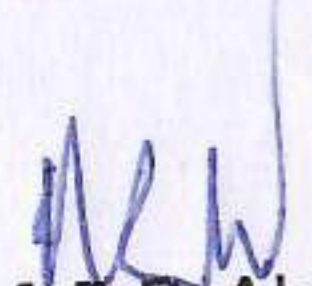
  
**Dr. Sunil S Waddar**  
 Programme Coordinator

  
**Prof. P. M. Ambad**  
 Director, School of Mechanical and Manufacturing  
 Sciences

  
**Prof. R. S. Deshpande**  
 Dean, Faculty of Science and  
 Technology

  
**Dr. Anuradha S. Deshpande**  
 Associate Dean (Academics)



  
**Prof. B.B. Ahuja**  
 Vice Chancellor, JSPM University Pune



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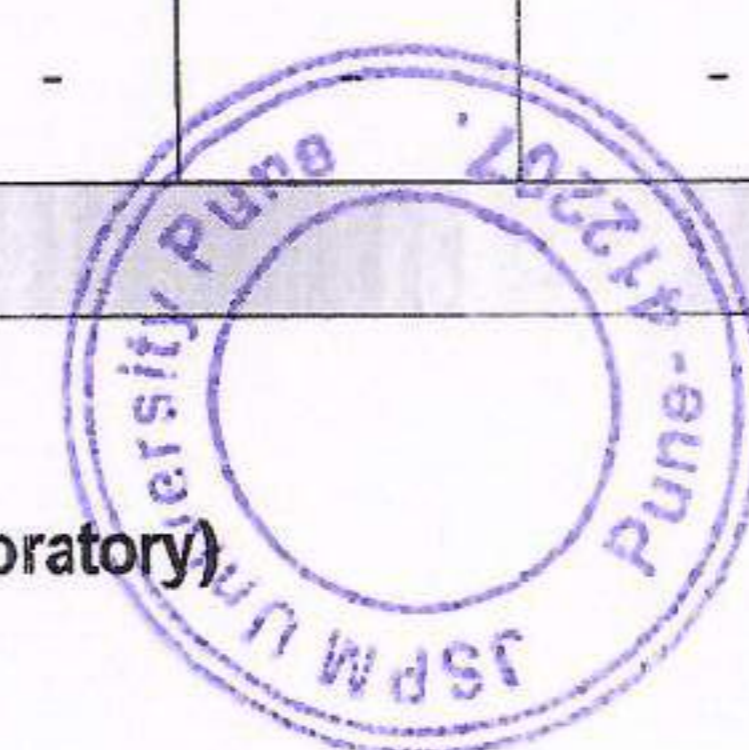
FIRST YEAR MASTER OF TECHNOLOGY (MECHANICAL ENGINEERING)

REVISION NO.

1.0 (NEP)

## SEMESTER II (Level 6.5)


COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS	
TYPE	CODE	COURSE NAME	Hours / Week				THEORY (Equal Weightage for CIE and ESE)			PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)					
			L	T	P	EL	CONTINUOUS IN SEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS IN SEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS IN SEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)			
							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)								
PCC	240GMEM05_02	Advanced Fluid Mechanics and Heat Transfer	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
	240GMEM06_02	Smart Manufacturing	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
	240GMEM07_02	Mechanical System Design	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2	
SEC	230GATM09_02	Computer Aided Analysis	2	-	2	-	-	-	-	-	50	50	50	50	100	3	
VSC	230IINB02_02	Innovation	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
AEC	231UENM02_02	Business Communication	1	-	2	-	-	-	-	-	50	50	-	-	50	2	
RMC	230IRMM02_02	Research Design and Techniques	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
LC	240GMEM08_02	Mechanical System Design Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
IITP/ FP/ CEP	230GMEM10_02	Internship/Field Project/Community Engagement Program	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
<b>TOTAL</b>			<b>15</b>	<b>0</b>	<b>8</b>	<b>4</b>									<b>750</b>	<b>22</b>	





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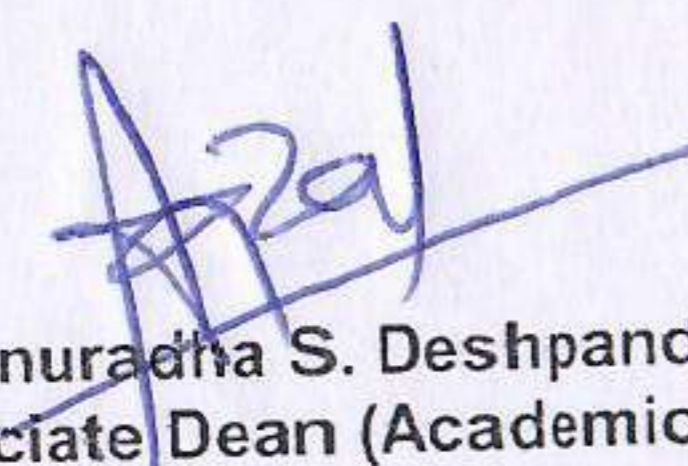
Note: A **Postgraduate Diploma** will be awarded if a student exits after first year.  
For Exit at the end of first year the student must complete: (Total credits = 8)

- An internship / OJT of 8- 10 weeks (4 credits)
- Additional Course 1 (4 credits) (Vocational Skill Course (VSC) / Skill Enhancement Course (SEC))


  
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