

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



NEP aligned Syllabus

for

M.Tech (Design Engineering)

(Effective from AY: 2025-26)



JSPM University Pune

FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF MECHANICAL AND MANUFACTURING SCIENCES

FIRST YEAR MASTER OF TECHNOLOGY
(Design Engineering)

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2025

REVISION NO.

1.0 (NEP)

SEMESTER I (Level 6.5)

COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS										C R E D I T S
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)		T O T A L		
			L	T	P	E L	CONTINUOUS IN SEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATI ON (100 / 50 Marks)	CONTINUO US IN SEMESTE R EVALUATI ON (50 Marks)	END SEMESTER EXAMINATI ON (50 Marks)	CONTINUO US IN SEMESTE R EVALUATI ON (50 Marks)	END SEMESTER EXAMINATI ON (50 Marks)			
							T1 (30 Marks)	T2 (30 Marks)	Assign- ments (40 Marks)								
PSMC	230GMAM02_01	Advanced Numerical Methods	2	1	-	-	30	30	40	100	-	-	-	-	100	3	
PSBC	230GDEM01_01	Computer Simulations of Machines	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
PCC	230GDEM02_01	Theory of Elasticity	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
	230GDEM03_01	Advanced Tribology	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	230GDEM04_01	Numerical Simulations Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
TOTAL			16	1	8	4									750	22	

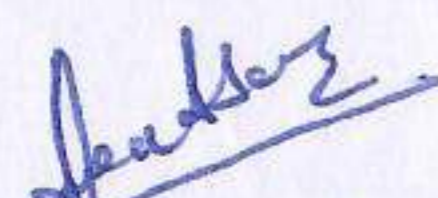



Multidisciplinary Minor Course (MMC)				
I	Course Code	230GRAM24_01	230VOSM59_01	230GCSM28_01
	Course Name	Sensors and Automation	Introduction to Project Management	Introduction to Data Science
II	Course Code	230GETM16_02	230VDMM02_02	230GCSM29_02
	Course Name	IoT Basics and Applications	Customer Relationship Management	Introduction to Artificial Intelligence


Note: A **Postgraduate Diploma** will be awarded if a student exits after first year.

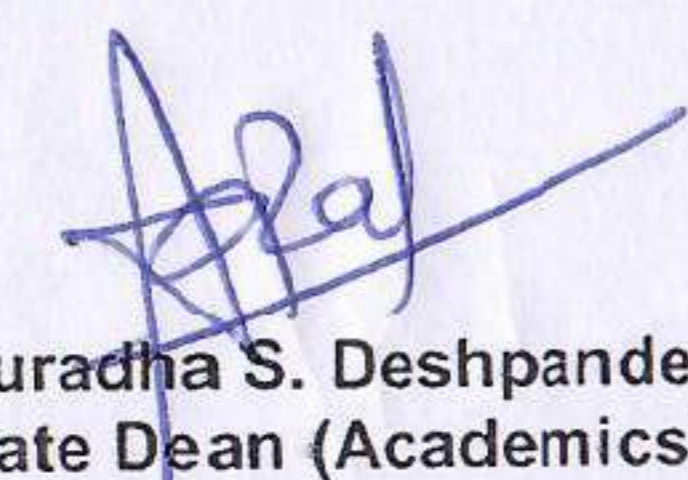
For Exit at the end of first year the student must complete: (Total credits = 8)

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

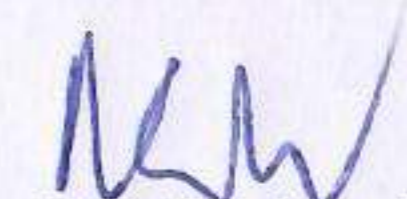

Dr. Sunil S. Waddar
 Programme Coordinator



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)

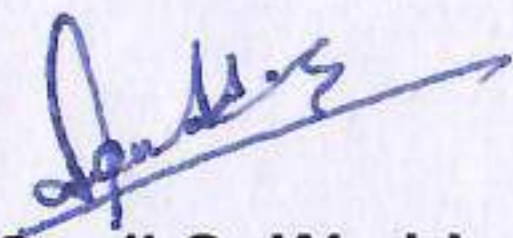




Prof. B.B. Ahuja
 Vice Chancellor, JSPM University Pune

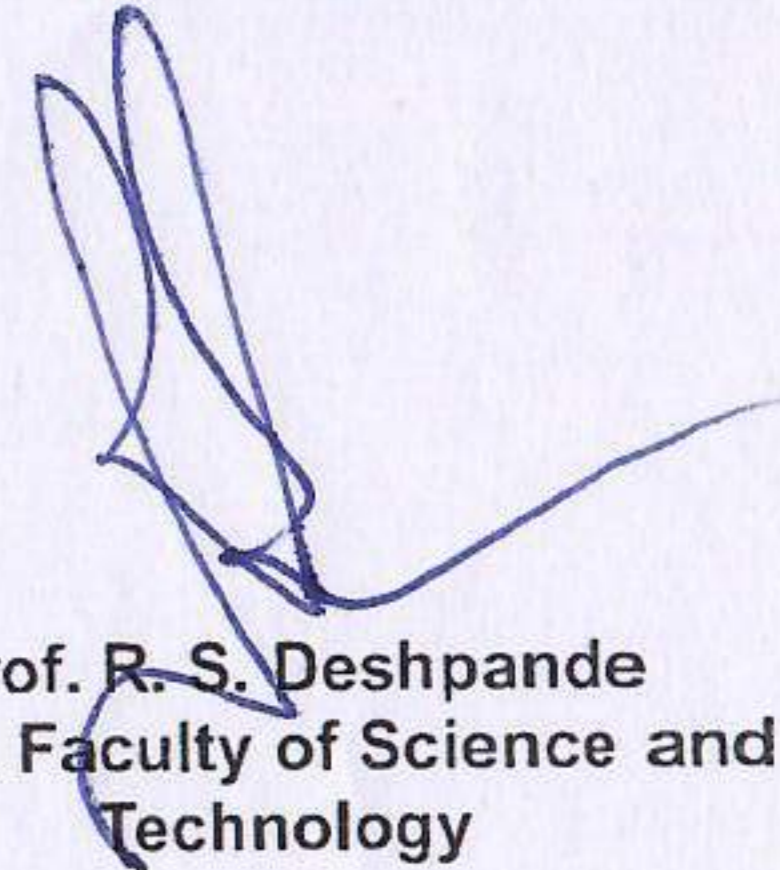
		JSPM University Pune				COURSE STRUCTURE (NEP 2020 Aligned)												
		FACULTY OF SCIENCE & TECHNOLOGY				W. E. F		2024-2025										
		SCHOOL OF MECHANICAL AND MANUFACTURING SCIENCES				RELEASE DATE		01/07/2025										
FIRST YEAR MASTER OF TECHNOLOGY (Design Engineering)				REVISION NO.		1.0 (NEP)												
SEMESTER II (Level 6.5)																		
COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS										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)		TOTAL			
			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	230GMEM05_02	Vibration and Condition Monitoring	2	1	-	-	30	30	40	100	-	-	-	-	100	3		
	230GMEM06_02	Fracture Mechanics	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5		
	230GMEM07_02	Theory of Plasticity	3	-	-	-	30	30	40	100	-	-	-	-	100	3		
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2		
SEC	230GMEM08_02	Advanced Finite Element 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	230GDEM09_02	Advanced Dynamics Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1		
IITP/FP/CEP	230GDEM10_02	Internship/Field Project/Community Engagement Programme	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2	
TOTAL			14	1	8	4									750	22		

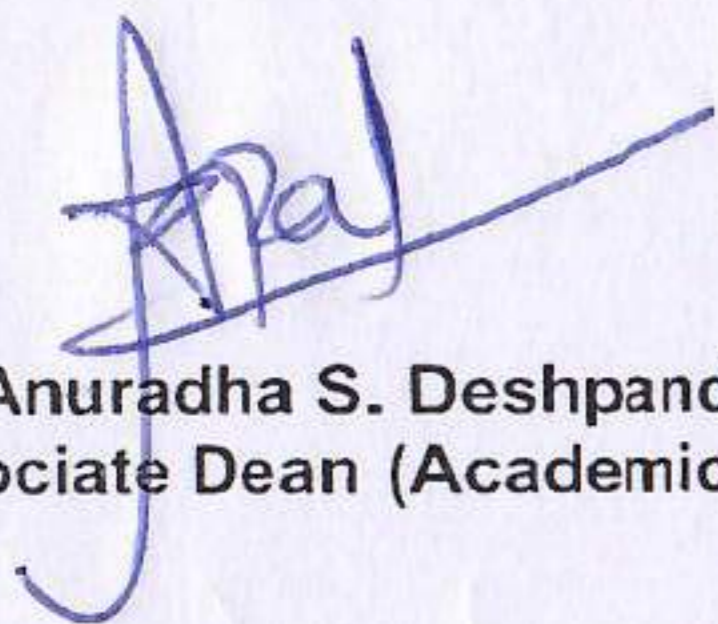


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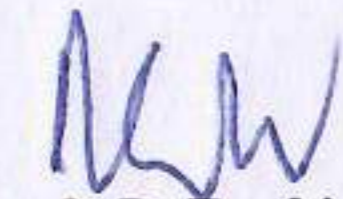

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