



**JSPM UNIVERSITY PUNE**

Recognized by UGC u/s 2 (f) of UGC Act 1956 and enacted by the  
State Government of Maharashtra - JSPM University Act, 2022 (Mah.IV of 2023)

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



**NEP aligned Curriculum Structure**  
**for**

**M.Tech (Robotics & Artificial Intelligence)**

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



# JSPM University Pune

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF MECHANICAL AND MANUFACTURING SCIENCES

FIRST YEAR MASTER OF TECHNOLOGY  
(ROBOTICS AND ARTIFICIAL INTELLIGENCE)

COURSE STRUCTURE  
(NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

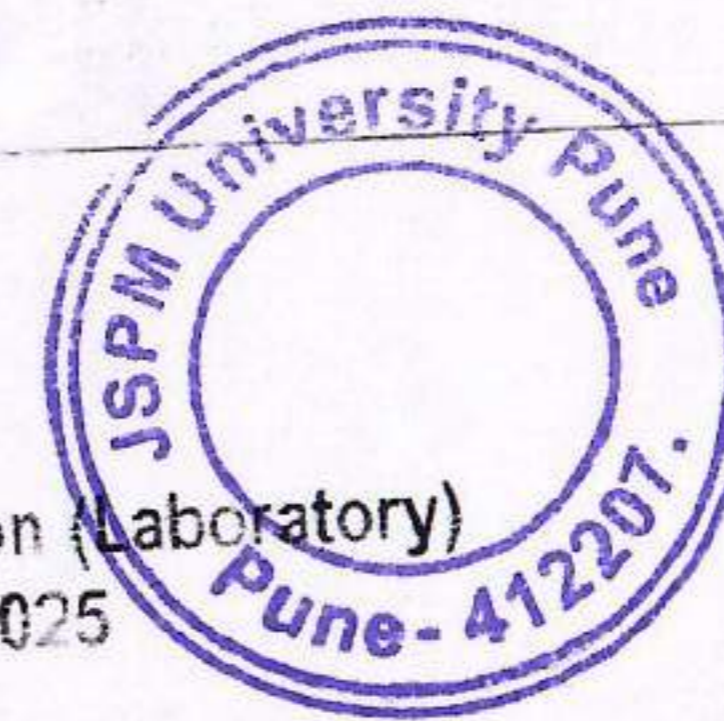
01/07/2025

REVISION NO.

1.0 (NEP)

SEMESTER I (Level 6.5)

TYPE	CODE	COURSE NAME	TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS
			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 INSEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS INSEMESTER 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	230GRAM01_01	Foundation of Design of Machine Elements	2	-	-	2	30	30	40	100	-	-	-	-	100	3
PCC	230GRAM02_01	Foundations of Robotics	3	-	-	-	30	30	40	100	-	-	-	-	50	2
PCC	231GRAM03_01	Advanced Hydraulics and Pneumatics	2	-	-	-	30	30	40	50	-	-	-	-	100	2
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	3
SFC	230GCSM26_01	Python Programming for Engineers	2	-	2	-	-	-	-	-	50	50	50	50	50	1.5
VSC	230IDCB01_01	Design Thinking and Creativity	1	-	-	2	-	-	-	-	50	50	-	-	50	2
AEC	231UENM01_01	Communicative English for Professionals	1	-	2	-	-	-	-	-	-	-	-	-	50	2
RMC	230IRMM01_01	Research Methodology	2	-	-	-	30	30	40	50	-	-	-	-	50	1
LC	230GRAM26_01	Advanced Hydraulics and Pneumatics Laboratory	-	-	2	-	-	-	-	-	50	50	-	-	50	1
TOTAL			16	1	8	4									750	22



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

*[Handwritten Signature]*

**Dr. R. S. Upadhyay**  
Programme Coordinator, MTech- Robotics  
and Artificial Intelligence

*[Handwritten Signature]*

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

*[Handwritten Signature]*

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

*[Handwritten Signature]*

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

*[Handwritten Signature]*

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





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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 INSEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)			
							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)								
PCC	230GRAM04_02	Data Analytics and Machine Learning	2	1	-	-	30	30	40	100	-	-	-	-	100	3	
PCC	230GRAM05_02	Embedded Control Systems	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
PCC	230GRAM06_02	Artificial Intelligence and Neural Networks	3	-	-	-	30	30	40	50	-	-	-	-	100	3	
MMC	----	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2	
SEC	230GRAM25_02	Programming for Robotics and AI	2	-	2	-	-	-	-	-	50	50	50	50	100	1.5	
VSC	230IINB02_02	Innovation	1	-	-	2	-	-	-	-	50	50	-	-	50	2	
AEC	231UENM02_02	Business Communication	1	-	2	-	-	-	-	-	50	50	-	-	50	2	
RMC	230IRMM02_02	Research Design and Techniques	2	-	-	-	30	30	40	50	-	-	-	-	50	1	
LC	230GRAM28_02	Embedded Control Systems Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	2	
IITP/FP/CEP	230GRAM29_02	Internship/Field Project/Community Engagement Programme	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
<b>TOTAL</b>			<b>14</b>	<b>1</b>	<b>8</b>	<b>4</b>									<b>750</b>	<b>22</b>	



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

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

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



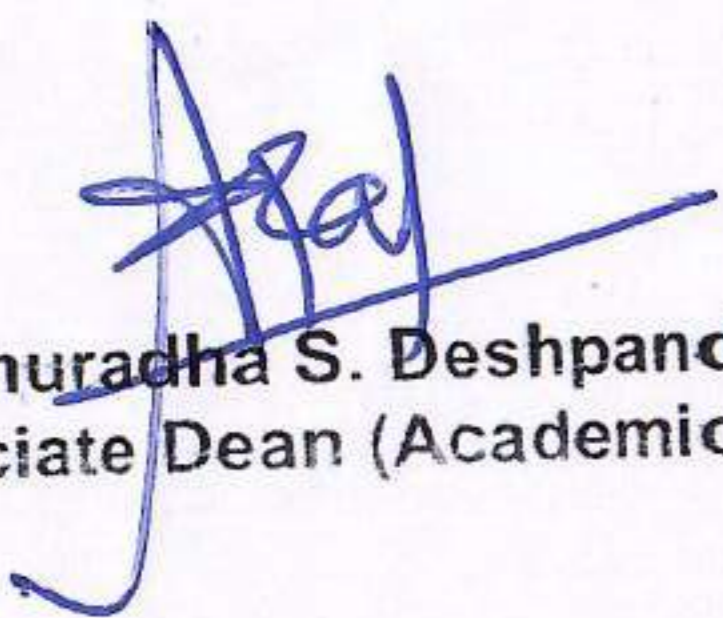
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