



**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 Computational Sciences**



**NEP aligned Curriculum Structure**

**for**

**M. Tech (Computer Science and Engineering)**

**(Effective from AY: 2024-25)**



## JSPM UNIVERSITY PUNE

### Post Graduation Programmes COURSE DISTRIBUTION: SEMESTER WISE (wef 2024-25)

CREDIT DISTRIBUTION: SEMESTER WISE							
1 Lecture hour = 1 Credit, 2 Lab Hours = 1 Credit, 1 Tutorial Hour = 1 Credit, 4 Experiential hours = 1 Credit							
Sr No	Type of Course	Abbreviations	No. of Credits/Semester				Total Credits
			1	2	3	4	
	Programme Specific Mathematics Course/ Programme Specific Bridge Course	PSMC/ PSBC	3 (100)	3 (100)	-	-	6
2.	Programme Core Courses/	PCC	8.5 (300)	6.5 (250) [9.5] [350]	-	-	15 [18]
3.	Programme Elective Courses	PEC	-	-	3+3 (200)	3+3 (200)	12
4.	Ability Enhancement Course	AEC	2 (50)	2 (50)	-	-	4
5.	Value Education Course	VEC	-	-	2 (50)		2
6.	Multidisciplinary Minor Course	MMC	2 (100)	2 (100)	-	-	4
7.	Interdisciplinary Open Course	IOC	-	-	2+2 (200)		4
8.	Skill Enhancement Course	SEC	3 (100)	3 (100) [0]	-	-	6 [3]
9.	Vocational Skill Course	VSC	1.5 (50)	1.5 (50)	-	-	3
10.	Research Methodology Course	RMC	2 (50)	2 (50)	-	-	4
11.	Field Project	PROJ	-	-	4 (100)	-	4
12.	Project/ Internship with Project	PROJ	-	-	-	12 (300)	12
13.	Internship / Field Project / Community Engagement Programme	IITP/ FP/ CEP	-	2 (50)	-	-	2
14.	Self Learning Course	SLC			2 (50)		2
<b>TOTAL CREDITS</b>			<b>22</b>	<b>22</b>	<b>18</b>	<b>18</b>	<b>80</b>
<b>TOTAL MARKS</b>			<b>750</b>	<b>750</b>	<b>600</b>	<b>500</b>	<b>2600</b>



# JSPM University Pune

FACULTY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF COMPUTATIONAL SCIENCES

FIRST YEAR MASTER OF TECHNOLOGY  
(COMPUTER SCIENCE AND ENGINEERING)

COURSE STRUCTURE  
(NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2024

REVISION NO.

0.0 (NEP)

## 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 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	240GCSM01_01	Foundations of Computational Mathematics	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
PCC	240GCSM02_01	Advanced Algorithms	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
PCC	240GCSM03_01	Distributed and Cloud Computing	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
PCC	240GCSM04_01	Soft Computing and Optimization Techniques	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
MMC	---	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2	
SEC	240GCSM05_01	Advanced Python Programming	2	-	2	-	-	-	-	-	50	50	50	50	100	3	
VSC	230IDCB01_01	Design Thinking and Creativity	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
AEC (HSMC)	230UENM01_01	Communicative English for Professionals	1	-	2	-	30	30	40	50	-	-	-	-	50	2	
RMC	230IRMM01_01	Research Methodology	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
LC	240GCSM06_01	Advanced Algorithms Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
<b>TOTAL</b>			<b>16</b>	<b>-</b>	<b>8</b>	<b>4</b>										<b>750</b>	<b>22</b>



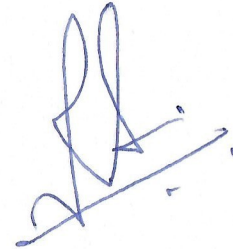
Multidisciplinary Minor Course (MMC)		
Course Code	230GRAM24_01	230GETM17_01
Course Name	Sensors and Automation	Embedded System
Course Code	230GETM16_01	230VOSM26_01
Course Name	IoT Basics and Applications	Project Management



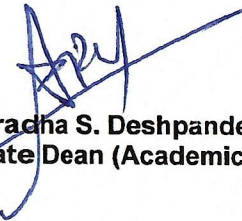
**Dr. Rahul R. Chakre**  
Programme Coordinator, MTech-CSE



**Prof. G. A. Patil**  
Director, School of Computational 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

**Vice Chancellor**  
**JSPM University**  
**Pune**



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FACULTY OF SCIENCE & TECHNOLOGY  
SCHOOL OF COMPUTATIONAL SCIENCES

FIRST YEAR MASTER OF TECHNOLOGY  
(COMPUTER SCIENCE AND ENGINEERING)

## COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

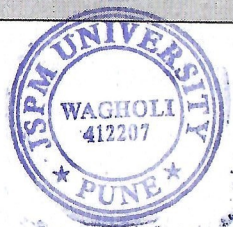
01/07/2024

REVISION NO.

0.0 (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 INSEMESTER EVALUATION (100 / 25 Marks)			END SEMESTER EXAMINATION (100 / 75 / 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	240GCSM07_02	Probability and Statistics (MOOC)	3	-	-	-	25			75	-	-	-	-	100	3	
PCC	230GCSM13_02	High Performance Computing	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
PCC	240GCSM09_02	Cloud Security and Risk Management	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
PCC	240GCSM10_02	Big Data Analytics	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
MMC	---	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2	
VSC	230IINB02_02	Innovation	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
AEC (HSMC)	230UENM02_02	Business Communication	1	-	2	-	30	30	40	50	-	-	-	-	50	2	
RMC	230IRMM02_02	Research Design and Techniques	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
LC	240GCSM11_02	High Performance Computing Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
LC	240GCSM12_02	Big Data Analytics Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
IITP/FP/CEP	230GCSM22_02	Internship/Field Project/Community Engagement Programme	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
TOTAL			15	-	8	4									750	22	



Multidisciplinary Minor Course (MMC)		
Course Code	230GRAM24_01	230GETM17_02
Course Name	Sensors and Automation	Embedded System
Course Code	230GETM28_02	230VOSM26_02
Course Name	IoT and Embedded Systems	Project Management

**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 a total of 8 additional credits.

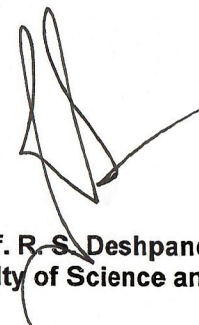
- a) An internship / OJT of 8 - 10 weeks (4 credits) over and above semester 6 internship of minimum 4 weeks.
- b) Additional one Course of 4 credits (Course offered will be Vocational Skill Course (VSC) or Skill Enhancement Course (SEC) or a mini project).



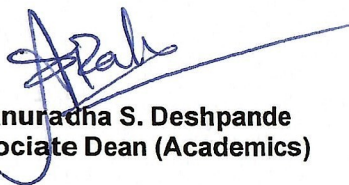
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Programme Coordinator, MTech-CSE



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Director, School of Computational Sciences



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**Prof. B. B. Anuja**  
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**Pune**



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FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCES

SECOND YEAR MASTER OF TECHNOLOGY  
(COMPUTER SCIENCE AND ENGINEERING)

COURSE STRUCTURE  
(NEP 2020 Aligned)

W. E. F

2025-2026

RELEASE DATE

01/07/2025

REVISION NO.

0.0 (NEP)

## SEMESTER III (LEVEL 7)

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)							
PEC	---	Programme Elective Course - I	3	-	-	-	30	30	40	100	-	-	-	-	100	3
	---	Programme Elective Course - II	3	-	-	-	30	30	40	100	-	-	-	-	100	3
VEC (HSMC)	230USYB01_03	Behavioral Science and Ethics	2	-	-	-	30	30	40	50	-	-	-	-	50	2
IOC	---	Interdisciplinary Open Course - I	2	-	-	-	30	30	40	100	-	-	-	-	100	2
	---	Interdisciplinary Open Course - II	2	-	-	-	30	30	40	100	-	-	-	-	100	2
PROJ	240GCSM14_03	Field Project	-	-	4	8	-	-	-	-	-	-	100	100	100	4
SLC	231GCSM23_03	Seminar	-	-	-	8	-	-	-	-	-	-	50	50	50	2
<b>TOTAL</b>			<b>12</b>	<b>-</b>	<b>4</b>	<b>16</b>									<b>600</b>	<b>18</b>
MLC#	240GCSM15_03	Audit Course 1	1	-	-	-	-	-	-	50	-	-	-	-	50	1

Program Elective Course (PEC)					
Sem.	Specialization	Computer Science and Engineering	Data Science and Artificial Intelligence	Information Security	Cloud Computing
III (PEC-I)	Course Code	230GCSM09_03	230GCSM18_03	230GCSM14_03	230GCSM40_03
	Course Name	Network Management	Pattern Recognition	Blockchain Technology and Applications	Edge Computing
III (PEC-II)	Course Code	Real Time Operating Systems	240GDSM03_03	230GISM10_03	230GCSM41_03
	Course Name	240GCSM13_03	Natural Language Processing	Security Standards and Frameworks	Fog Computing

Interdisciplinary Open Course (IOC)				
Sem.	Course Code	Course Name	Course Code	Course Name
III (IOC-I)	230HFGM25_03	Intellectual Property	230VMSM05_03	Fundamentals of Financial Management
				E-Waste Management
III (IOC-II)	230GRAM51_03	Industrial Robotics and Automation	230VBCB14_03	E-Commerce
				Smart Transportation System



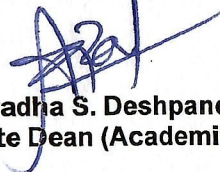
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Date: 14/07/2025

To,  
The Honorable Vice Chancellor,  
JSPM University Pune.

Subject: Details of NPTEL courses offered in Odd semester of AY 2025-26.

Respected Sir,

In alignment with the National Education Policy 2020 and to enhance flexible learning, we propose to replace the following course(s) in the current curriculum structure with equivalent MOOC / NPTEL online certification course(s) for the academic year 2025-26.

Name of Programme: SY MTech CSE

Semester: III

Sr. No.	Existing Course in the Curriculum Structure			Suggested equivalent MOOC Course			
	Course Code	Course Name	Credits	Course Code	Course Name	Credits	MOOC duration in weeks
1	24OGCSM13_03	Real Time Operating Systems	3	24OGCSM16_04	Real-Time Systems (MOOC)	3	12



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COURSE STRUCTURE  
(NEP 2020 Aligned)

W. E. F

2025-2026

RELEASE DATE

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REVISION NO.

0.0 (NEP)

## SEMESTER IV (LEVEL 7)

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 / 25 Marks)			END SEMESTER EXAMINATION (100 / 75 / 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)								
PEC	---	Programme Elective Course - III	3	-	-	-	25			75	-	-	-	-	100	3	
PEC	---	Programme Elective Course - IV	3	-	-	-	25			75	-	-	-	-	100	3	
PROJ	231GCSM25_04	Project / Internship with Project	-	-	12	24	-	-	-	-	-	-	-	300	300	300	12
<b>TOTAL</b>			<b>6</b>	<b>-</b>	<b>12</b>	<b>24</b>	-	-	-	-	-	-	-	<b>300</b>	<b>300</b>	<b>300</b>	<b>12</b>
MLC#	230UPOB02_04	Introduction to Indian Constitution	1	-	-	-	-	-	-	50	-	-	-	-	-	50	1

Sem.	Specialization	Program Elective Course (PEC)			
IV (PEC-III)	Computer Science and Engineering	Data Science and Artificial Intelligence	Information Security	Cloud Computing	
	Course Code	230GCSM08_04	230GAIB26_04	230GCSB99_04	230GISM11_04
IV (PEC-IV)	Computer Science and Engineering	Data Science and Artificial Intelligence	Information Security	Cloud Computing	
	Course Code	230GCSB56_04	230GDSM15_04	230GISM07_04	230GCSM43_04
	Course Name	Parallel Computer Architecture (NPTEL MOOC)	Reinforcement Learning (NPTEL MOOC)	Cryptography and Network Security	Cloud Computing (NPTEL MOOC)
	Course Name	Business Intelligence & Analytics (NPTEL MOOC)	Introduction to Large Language Models (LLMs) (NPTEL MOOC)	Foundations of Cryptography (NPTEL MOOC)	Secure Computation: Part I (NPTEL MOOC)

*[Signature]*  
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Programme Coordinator, MTech-CSE

*[Signature]*  
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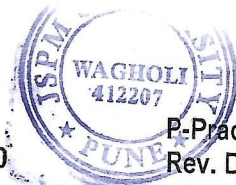
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L-Lecture  
Format No.: JSPMUni/ACAD/001

T-Tutorial  
Rev. No.:1.0



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

JSPM University  
Vice-Chancellor  
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