



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

Master of Computer Application

(Effective from AY: 2023-24)



JSPM University Pune

FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCES

FIRST YEAR MASTER OF COMPUTER APPLICATION
(MCA)

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2023-2024

RELEASE DATE

01/07/2023

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	230GMAM01_01	Advanced Statistics	2	-	-	-	30	30	40	50	-	-	-	-	50	2
PCC	230GCAM01_01	Data Structure and Algorithm	2	1	-	2	30	30	40	100	-	-	-	-	100	3.5
PCC	230GCAM02_01	Foundations of Artificial Intelligence	3	-	-	-	30	30	40	100	-	-	-	-	100	3
PCC	230GCAM03_01	Data Communication and Computer Networking	3	-	-	-	30	30	40	100	-	-	-	-	100	3
SEC	230GCAM15_01	Programming in Java	2	-	2	-	-	-	-	-	50	50	50	50	100	3
VSC	230IDCB01_01	Design Thinking and Creativity	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5
AEC	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	230GCAM17_01	Data Structure and Algorithm Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
LC	230GCAM18_01	Foundations of Artificial Intelligence Lab	-	-	2	-	-	-	-	-	50	50	50	50	100	1
TOTAL			16	1	8	4									750	22

Dr. Arshiya Anjum F.A. Khan
Programme Coordinator, MCA

Dr. Anuradha S. Deshpande
Associate Dean (Academics)

Dr. G. A. Patil
Director, School of Computational Sciences

Dr. R. S. Deshpande
Dean, Faculty of Science and Technology

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



The Chancellor
JSPM University
Pune



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RIVISION NO.

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SEMESTER II (LEVEL – 6.5)

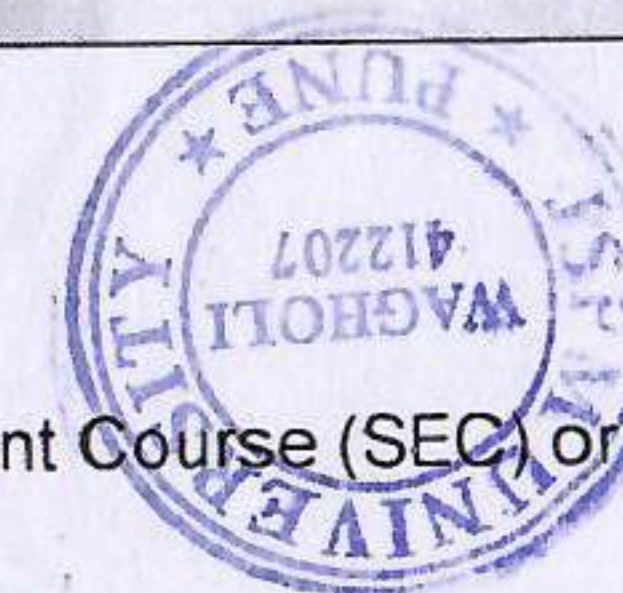
COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS	
TYPE	CODE	COURSE NAME	Hours / Week				THEORY (Equal Weightage for CIE and ESE)			PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)					
			L	T	P	EL	CONTINUOUS INSEMESTER EVALUATION (100 Marks)			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	230GCAM04_02	Advanced Database Management Systems	2	1	-	-	30	30	40	100	-	-	-	-	100	3	
PCC	230GCAM05_02	Foundations of Machine Learning	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
PCC	230GCAM06_02	Software Testing and Quality Assurance	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
MMC	--	Multidisciplinary Minor Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2	
SEC	230GCAM16_02	Data Science with Python	2	-	2	-	-	-	-	-	50	50	50	50	100	3	
VSC	230IINB02_02	Innovation	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
AEC	230UENM02_02	Business Communication	1	-	2	-	30	30	40	50	-	-	-	-	50	2	
RMC	230IRMM03_02	Research Data Analysis	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
LC	230GCAM19_02	Advanced Database Management System Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
IITP/FP/CEP	230GCAM21_02	Internship/Field Project/Community Engagement Program	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
TOTAL			15	1	6	4									750	22	

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 4weeks.

b) Additional one Course of 4 credits (Course offered will be Vocational Skill Course (VSC) or Skill Enhancement Course (SEC) or a mini project).



L-Lecture

Format No.: JSPMUni/ACAD/001

T-Tutorial

Rev. No.:0.0

P-Practical Session (Laboratory)

Rev. Date:01/07/2023

EL-Experiential Learning

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Sem.	Multidisciplinary Minor Course (MMC)			
II	Course Code	230GMAM05_02	230UEEB02_02	230GRAB51_02
	Course Name	Fundamental of Mathematical Computing	Public Economics	Robot Modeling
III	Course Code	230GETB34_03	230VDMM02_03	230GRAB52_03
	Course Name	Internet of Things and Applications	Customer Relationship Management	Autonomous Mobile Robot



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FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCES

SECOND YEAR MASTER OF COMPUTER APPLICATION
(MCA)

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2024

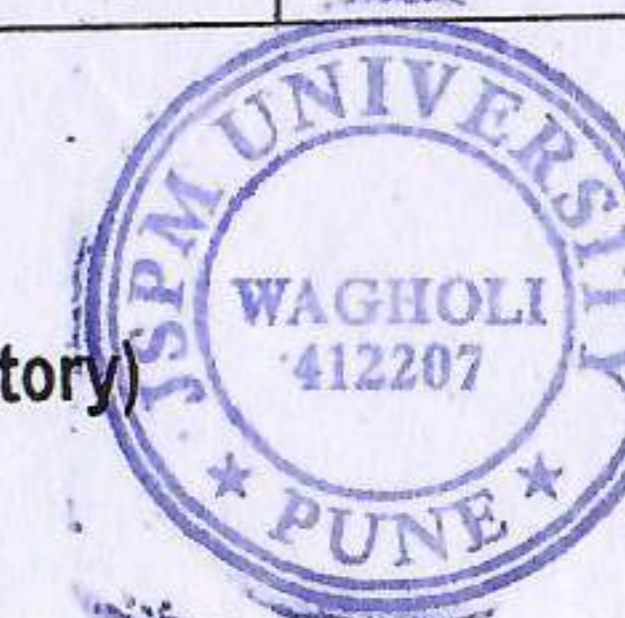
RIVISION NO.

0.0 (NEP)

SEMESTER III (LEVEL - 7.0)

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)	Assign-ments (40 Marks)								
PCC	230GCAM07_03	Full Stack Development	2	1	-	-	30	30	40	100	-	-	-	-	100	3
PEC	---	Programme Elective Course -I	3	-	-	-	30	30	40	100	-	-	-	-	100	3
PEC	---	Programme Elective Course -II	3	-	-	-	30	30	40	100	-	-	-	-	100	3
MMC	---	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2
IOC	---	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2
VEC	230USYB01_03	Behavioral Science and Ethics	2	-	-	-	30	30	40	50	-	-	-	-	50	2
LC	230GCAM23_03	Full Stack Development Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
IITP/FP/CEP	230GCAM24_03	Internship/Field Project/Community Engagement Program	-	-	8	-	-	-	-	-	-	-	100	100	100	4
TOTAL			13	1	12	0								700	20	

Sem.	Interdisciplinary Open Course (IOC)			
III	Course Code	230VMSM11_03	230GETB37_03	230GMTB62_03
	Course Name	Fundamentals of Financial Management	Principles of Communication System	Fundamental of Mechatronics



Sem.	Multidisciplinary Minor Course (MMC)			
II	Course Code	230GMAM11_02	230UEEB02_02	230GRAB51_02
	Course Name	Fundamentals of Mathematical Computing	Public Economics	Robot Modeling
III	Course Code	230GETB34_03	230VDMM02_03	230GRAB52_03
	Course Name	Internet of Things and Applications	Customer Relationship Management	Autonomous Mobile Robot

Semester	Specialization	Programme Elective Course (PEC)			
		AI and ML	Data Science	Information Security	Computer Networks and Communication
III (PEC-I)	Course Code	230GCAM08_03	230GDIM01_03	230GCYM13_03	230GCAM12_03
	Course Name	Fundamentals of Soft Computing	Distributed Database and Cloud Computing	Foundations of Cyber Security	Distributed Networks and Blockchain Technology
III (PEC-II)	Course Code	230GCAM09_03	230GDIM02_03	230GCYM14_03	230GCAM13_03
	Course Name	Introduction to Deep Learning	Foundations of Big Data Analytics	Network security and Cryptography Fundamentals	Wireless Mobile Communications
IV (PEC-III)	Course Code	230GCAM10_04	230GDIM03_04	230GCYM08_04	240GCAM46_04
	Course Name	Fundamentals of Natural Language Processing	Data Warehousing and Data Analytics	Introduction of Ethical Hacking	Parallel Computer Architecture
IV (PEC-IV)	Course Code	230GCAM11_04	230GDIM04_04	230GCYM15_04	240GCAM47_04
	Course Name	Foundations of Brain Computer Interface	Advanced Data Visualization and Analytics	AI & ML Techniques in Cyber Security	Blockchain and its Applications



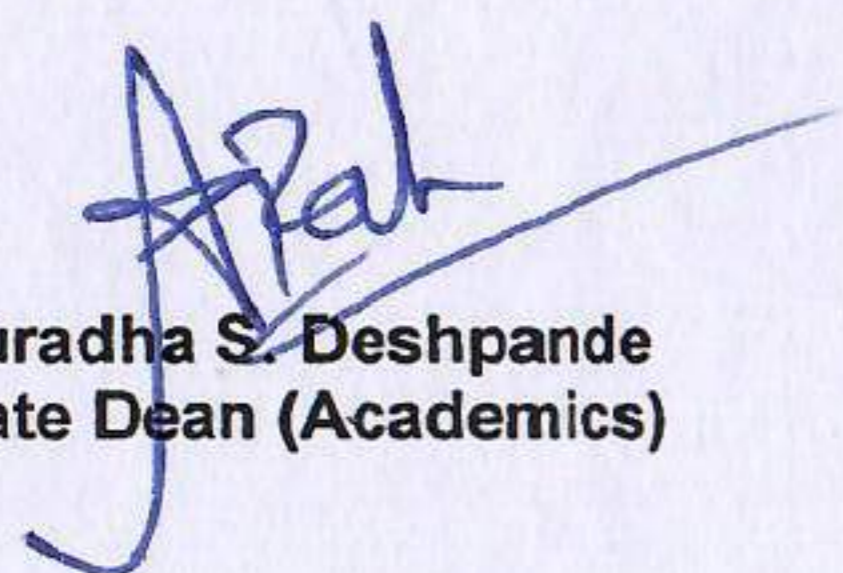
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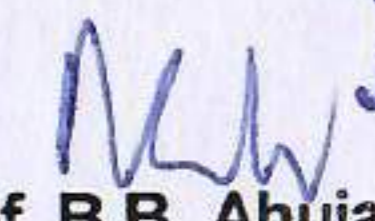
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2023-24

		JSPM University Pune				COURSE STRUCTURE (NEP 2020 Aligned)										
		FACULTY OF SCIENCE & TECHNOLOGY				W. E. F			2024-2025							
		SCHOOL OF COMPUTATIONAL SCIENCES				RELEASE DATE			01/07/2024							
SECOND YEAR MASTER OF COMPUTER APPLICATION (MCA)						RIVISION NO.			0.0 (NEP)							
SEMESTER IV (LEVEL – 7.0)																
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
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							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)							
PEC	---	Programme Elective Course-III /MOOC	3	-	-	-	25			75	-	-	-	-	100	3
PEC	---	Programme Elective Course -IV/ MOOC	3	-	-	-	25			75	-	-	-	-	100	3
PROJ	230GCAM25_04	Project/Internship with Project	-	-	12	24	-	-	-	-	-	-	200	200	200	12
TOTAL			6	0	12	24									400	18
MLC#	230UPOB02_04	Introduction to Indian Constitution Audit Course-I	1	-	-	-	-	-	-	50	-	-	-	-	50	1




Sem.	Programme Elective Course (PEC)				
	Specialization	AI and ML	Data Science	Information Security	Computer Networks and Communication
III (PEC-I)	Course Code	230GCAM08_03	230GDIM01_03	230GCYM13_03	230GCAM12_03
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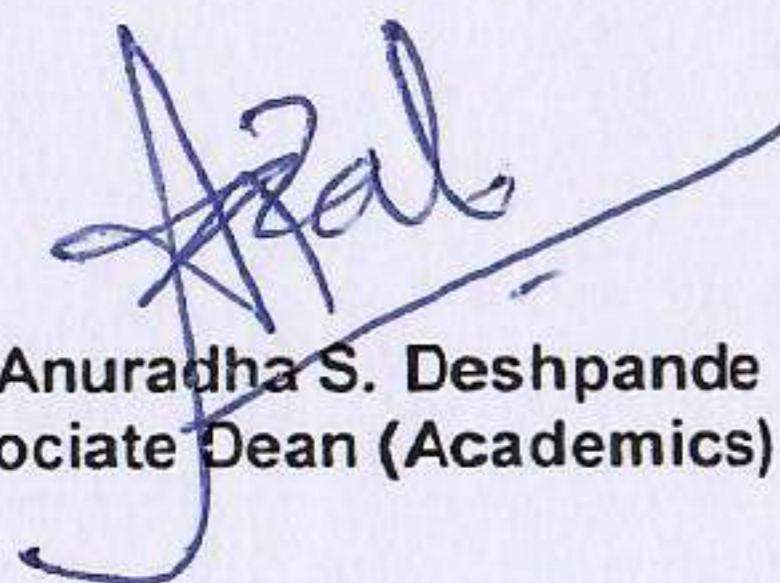
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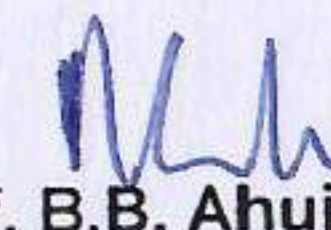
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