



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

BCA (Honours or Honours with Research)

(Effective from AY: 2023-24)



JSPM University Pune

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCE

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2023-2024

RELEASE DATE

01/07/2023

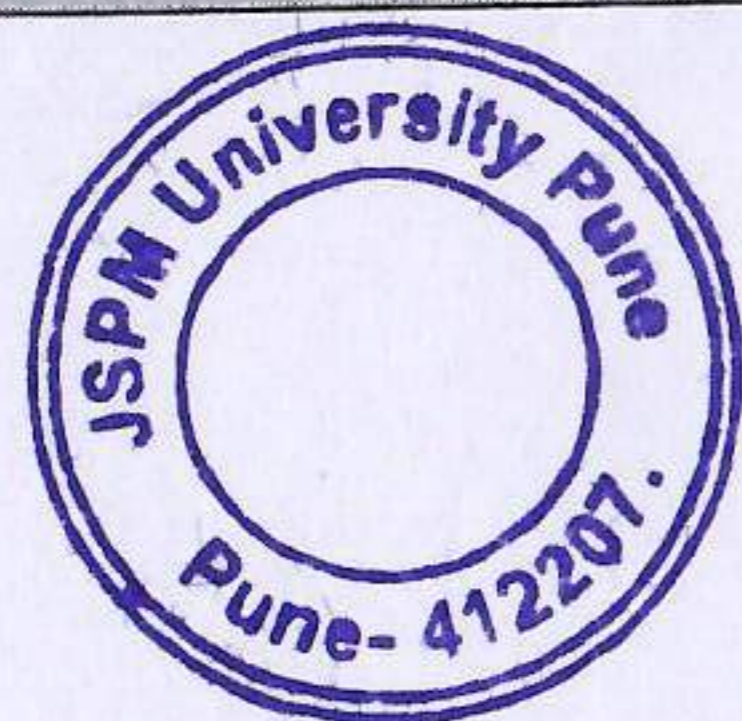
REVISION NO.

0.0 (NEP)

FIRST YEAR BACHELOR OF COMPUTER APPLICATION


SEMESTER I (LEVEL 4.5)


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)							
	230GMAB02_01	Discrete Mathematics	2	1	-	-	30	30	40	100	-	-	-	-	100	3
BSC	230GCAB01_01	Computer Fundamentals	3	-	-	2	30	30	40	100	-	-	-	-	100	3.5
PCC	230GETB02_01	Digital Logic and Computer Organization	3	-	-	-	30	30	40	100	-	-	-	-	100	3
IOC	-	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2
SEC	230GCAB02_01	C Programming	2	-	2	-	-	-	-	-	50	50	50	50	100	3
IKS	230UHIB01_01	States in Ancient India	2	-	-	-	30	30	40	50	-	-	-	-	50	2
VEC/EEC (HSMC)	230GCEB02_01	Environment and Sustainability	2	-	-	-	30	30	40	50	-	-	-	-	50	2
LC	230GCAB03_01	Logic Design and Computer Workshop	-	-	4	-	-	-	-	-	50	50	50	50	100	2
LLC	230UPYB01_01	Yoga and Fitness	-	-	2	2	-	-	-	-	-	-	50	50	50	1.5
TOTAL			16	1	8	4									750	22

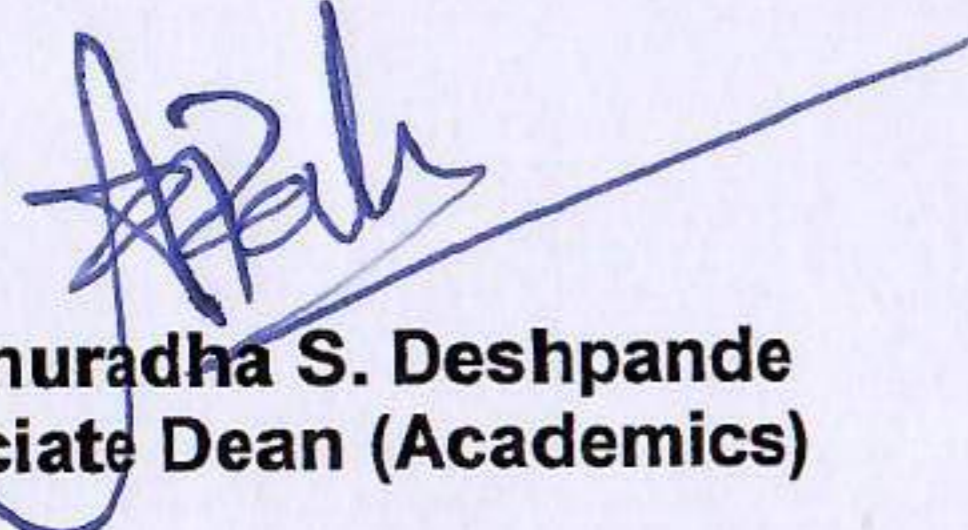


Sem.	Interdisciplinary Open Course (IOC)	
I	Course Code	230UEEB01_01
	Course Name	Economics
III	Course Code	230UPYB34_03
	Course Name	Psychology at Workplace
IV	Course Code	240VBBB06_04
	Course Name	Introduction to Digital Marketing

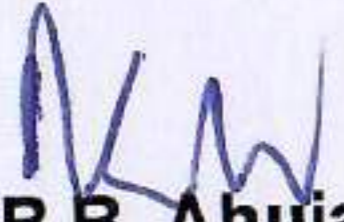

Dr. Santosh Gaikwad
 Programme Coordinator, BCA


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


Dr. 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

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCE

COURSE STRUCTURE .
(NEP 2020 Aligned)

W. E. F

2023-2024

RELEASE DATE

01/07/2023

REVISION NO.

0.0 (NEP)

FIRST YEAR BACHELOR OF COMPUTER APPLICATION

SEMESTER II (LEVEL 4.5)

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)								
BSC	230GMAB03_02	Linear Algebra	2	1	-	-	30	30	40	100	-	-	-	-	100	3	
	230GCAB04_02	Computer Architecture	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
PCC	232GSCB02_02	Database Management System	2	-	-	-	30	30	40	100	-	-	-	-	100	2	
	230GCAB05_02	Operating System	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
MDM	-	Multi-Disciplinary Minor	2	-	-	-	30	30	40	100	-	-	-	-	100	2	
SEC	230GCAB06_02	Programming with C++	2	-	2	-	-	-	-	-	50	50	50	50	100	3	
VSC	230IDCB01_02	Design Thinking and Creativity	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
AEC (HSMC)	230UENB01_02	Effective Communication Skill	1	-	2	-	30	30	40	50	-	-	-	-	50	2	
LC	230GSCB04_02	Database Management System Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
LLC	230UPYB02_02	Mindfulness and Wellbeing	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
IITP/FP/ CEP	230GCAB07_02	Internship/Field Project/Community Engagement Program	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
TOTAL			15	1	6	4									750	22	

Note: A **Certificate** 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.

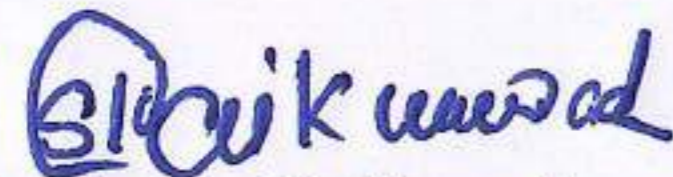
a) An internship / OJT of 8 - 10 weeks (4 credits) over and above semester 2 internship of minimum 4 weeks.

b) Additional one Course of 4 credits (Course offered will be Vocational Skill

I Course (VSC) or Skill Enhancement Course (SEC) or a mini project).

Sem.	Multi-Disciplinary Minor (MDM)	
	Specialization	IoT and Application
II	Course Code	230VBBB42_02
	Course Name	Introduction to Human Resource Management
III	Course Code	230GETB58_03
	Course Name	Sensors and Interfacing
	Course Code	230GETB59_03
IV	Course Name	Sensors and Interfacing Lab
	Course Code	230GETB60_04
	Course Name	Foundations of IOT
V	Course Code	230GETB61_04
	Course Name	Foundations of IOT Lab
	Course Code	230GETB62_05
VI	Course Name	Machine Learning for Internet of Things
	Course Code	230GETB63_05
	Course Name	Machine Learning for Internet of Things Lab
VI	Course Code	230GETB64_06
	Course Name	Internet of Things Security

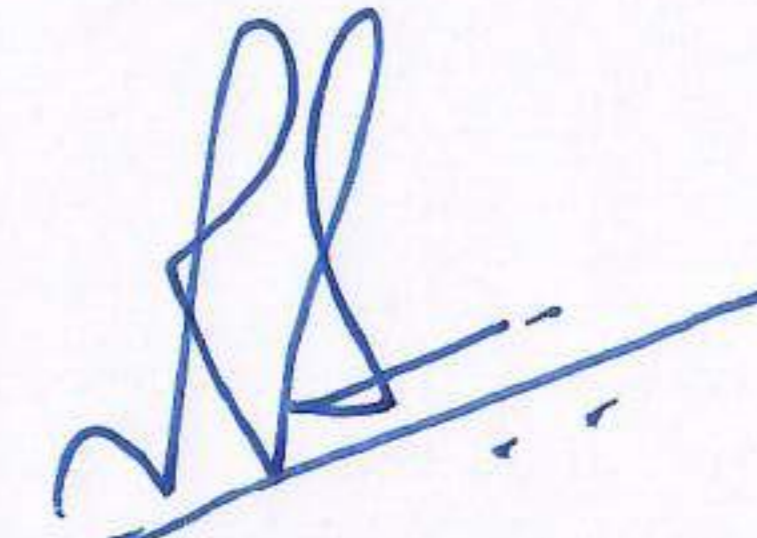
Sem.	Interdisciplinary Open Course (IOC)	
I	Course Code	230UEEEB01_01
	Course Name	Economics
III	Course Code	230UPYB34_03
	Course Name	Psychology at Workplace
IV	Course Code	240VBBB06_04
	Course Name	Introduction to Digital Marketing



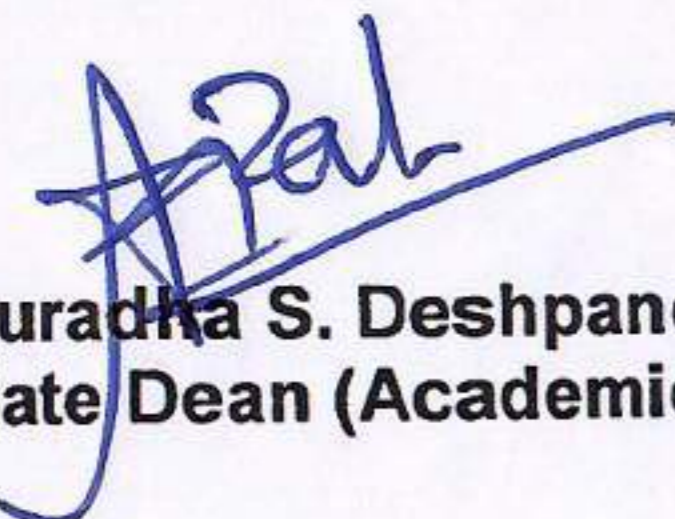
Dr. Santosh Gaikwad
Programme Coordinator, BCA



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



Dr. 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

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCE

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2024

REVISION NO.

0.0 (NEP)

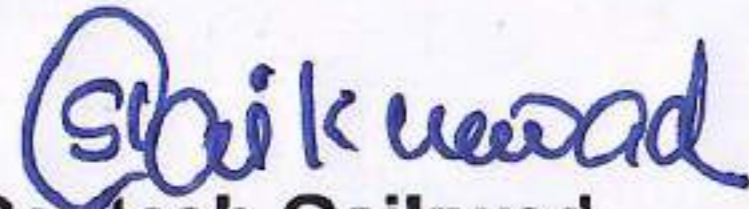
SECOND YEAR BACHELOR OF COMPUTER APPLICATION

SEMESTER III (LEVEL 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	230GMAB10_03	Foundations of Probability and Statistics	2	1	-	-	30	30	40	100	-	-	-	-	100	3
PCC	230GCAB08_03	Introduction to Data Structures and Algorithms	3	-	-	-	30	30	40	100	-	-	-	-	100	3
	230GCAB09_03	Programming with Java	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5
AEC (HSMC)	230UENB02_03	Communicative Proficiency Skills	1	-	2	-	30	30	40	50	-	-	-	-	50	2
MDM	-	Multi-Disciplinary Minor	2	-	-	-	30	30	40	50	-	-	-	-	50	2
IOC	-	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2
LC	230GCAB10_03	Introduction to Data Structures and Algorithms Lab	-	-	4	-	-	-	-	-	50	50	-	-	50	2
	230GCAB11_03	Programming with Java Lab	-	-	4	-	-	-	-	-	50	50	-	-	50	2
	-	Multi-Disciplinary Minor Lab	-	-	2	4	-	-	-	-	50	50	-	-	50	2
LLC	240VBBB02_03	Theater and Performing Arts	-	-	2	2	-	-	-	-	50	-	-	-	50	1.5
TOTAL			12	1	14	8									700	22

Sem.	Multi-Disciplinary Minor (MDM)	
	Specialization	IoT and Application
II	Course Code	230VBBB42_02
	Course Name	Introduction to Human Resource Management
III	Course Code	230GETB58_03
	Course Name	Sensors and Interfacing
	Course Code	230GETB59_03
	Course Name	Sensors and Interfacing Lab
IV	Course Code	230GETB60_04
	Course Name	Foundations of IOT
	Course Code	230GETB61_04
V	Course Name	Foundations of IOT Lab
	Course Code	230GETB62_05
	Course Name	Wireless Technologies for IoT
	Course Code	230GETB63_05
VI	Course Name	Wireless Technologies for IoT Lab
	Course Code	230GETB64_06
	Course Name	Industrial Internet of Things

Sem.	Interdisciplinary Open Course (IOC)	
I	Course Code	230UEEEB01_01
	Course Name	Economics
III	Course Code	230UPYB34_03
	Course Name	Psychology at Workplace
IV	Course Code	240VBBB06_04
	Course Name	Introduction to Digital Marketing



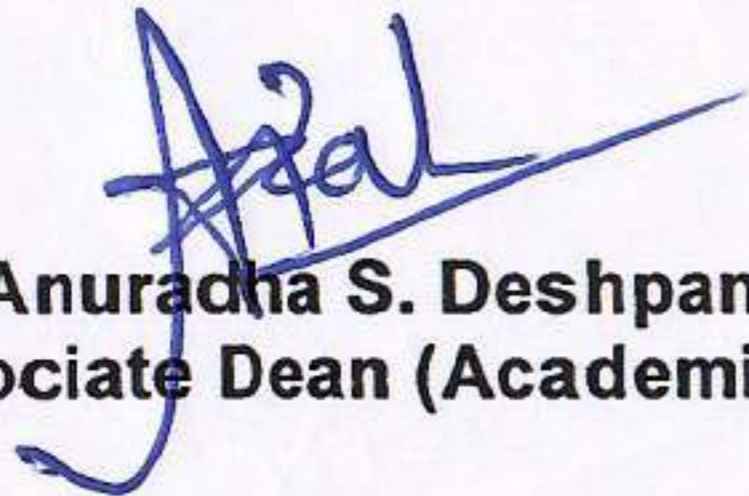
Dr. Santosh Gaikwad
Programme Coordinator, BCA



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



Dr. 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

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCE

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2024

REVISION NO.

0.0 (NEP)

SECOND YEAR BACHELOR OF COMPUTER APPLICATION

SEMESTER IV (LEVEL 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	230GCAB12_04	Full Stack Web Development	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
	230GCAB13_04	Computer Network and Internet Protocol	-	-	-	-	25			75	-	-	-	-	100	2.5	
AEC (HSMC)	230UENB03_04	Soft Skill Development	1	-	2	-	30	30	40	50	-	-	-	-	50	2	
VEC	230UPYB03_04	Ethics and Moral Values	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
VSC	230IINB02_04	Innovation	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
MDM	-	Multi-Disciplinary Minor	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
IOC	-	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2	
SEC	230GCAB14_04	Programming with Python	2	-	2	-	-	-	-	-	50	50	50	50	100	3	
LC	230GCAB15_04	Full Stack Web Development Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
	-	Multi-Disciplinary Minor Lab	-	-	2	4	-	-	-	-	50	50	-	-	50	2	
IITP/FP/CEP	230GCAB16_04	Internship/Field Project/Community Engagement Programme	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
TOTAL			12	1	8	6									700	22	
MLC#	---	Audit Course	1	-	-	-	-	-	-	-	-	-	-	50	-	50	1

Note: A Diploma will be awarded if a student exits after second year.

For Exit at the end of second 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))


Sem.	Multi-Disciplinary Minor (MDM)	
	Specialization	IoT and Application
II	Course Code	230VBBB42_02
	Course Name	Introduction to Human Resource Management
III	Course Code	230GETB58_03
	Course Name	Sensors and Interfacing
	Course Code	230GETB59_03
	Course Name	Sensors and Interfacing Lab
IV	Course Code	230GETB60_04
	Course Name	Foundations of IOT
	Course Code	230GETB61_04
V	Course Name	Foundations of IOT Lab
	Course Code	230GETB62_05
	Course Name	Wireless Technologies for IoT
	Course Code	230GETB63_05
VI	Course Name	Wireless Technologies for IoT Lab
	Course Code	230GETB64_06
	Course Name	Industrial Internet of Things

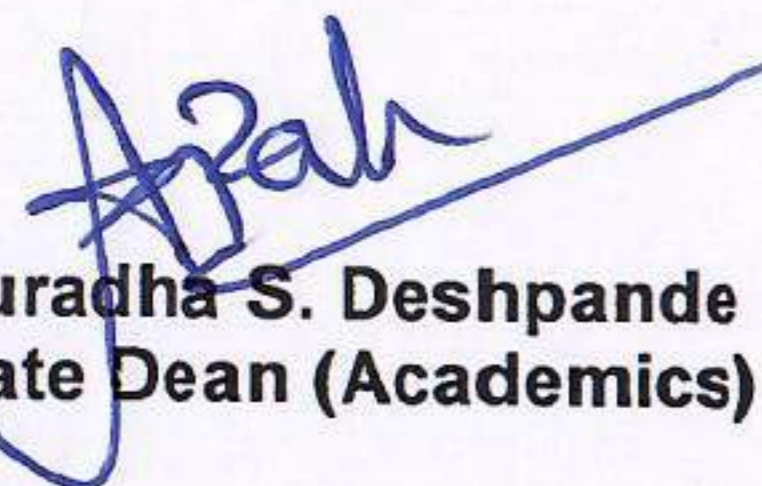
Sem.	Interdisciplinary Open Course (IOC)	
I	Course Code	230UEEEB01_01
	Course Name	Economics
III	Course Code	230UPYB34_03
	Course Name	Psychology at Workplace
IV	Course Code	240VBBB06_04
	Course Name	Introduction to Digital Marketing


Sem.	Mandatory Learning Course (MLC [#]) Audit Course	
IV	Course Code	240GCAB91_04
	Course Name	Project Management using Agile Tool
V	Course Code	240GCAB92_05
	Course Name	German Language
VI	Course Code	230UPOB02_06
	Course Name	Introduction to Indian Constitution
VII	Course Code	240GCAB93_07
	Course Name	Software Testing using Selenium


Dr. Santosh Gaikwad
 Programme Coordinator, BCA


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


Dr. 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

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCE

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2024

SECOND YEAR BACHELOR OF COMPUTER APPLICATION
(TRANSFER CASES)

REVISION NO.

0.0 (NEP)

SEMESTER III (LEVEL 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	230GMAB10_03	Foundations of Probability and Statistics	2	1	-	-	30	30	40	100	-	-	-	-	100	3	
PCC	230GCAB08_03	Introduction to Data Structures and Algorithm	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
	230GCAB09_03	Programming with Java	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
AEG (HSMC)	230UENB02_03	Communicative Proficiency Skills	4	-	2	-	30	30	40	50	-	-	-	-	50	2	
PCC	231GSCB02_03	Database Management System	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
SEC	230GCAB06_03	Programming with C++	2	-	2	-	-	-	-	-	50	50	50	50	100	3	
MDM	-	Multi-Disciplinary Minor	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
IOC	-	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2	
LC	230GCAB10_03	Introduction to Data Structures and Algorithm Lab	-	-	4	-	-	-	-	-	50	50	-	-	50	2	
	230GCAB11_03	Programming with Java Lab	-	-	4	-	-	-	-	-	50	50	-	-	50	2	
	-	Multi-Disciplinary Minor Lab	-	-	2	4	-	-	-	-	50	50	-	-	50	2	
LLC	240VBBB02_03	Theater and Performing Arts	-	-	2	2	-	-	-	-	50	-	-	-	50	1.5	
IITP/FP/CEP	230GCAB07_03	Internship/Field Project/Community Engagement Program	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
TOTAL			15	1	14	8									850	27	

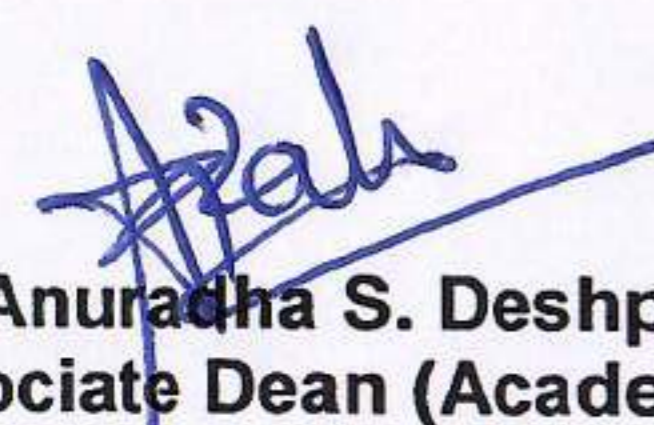
Sem.	Multi-Disciplinary Minor (MDM)	
	Specialization	IoT and Application
II	Course Code	230VBBB42_02
	Course Name	Introduction to Human Resource Management
III	Course Code	230GETB58_03
	Course Name	Sensors and Interfacing
	Course Code	230GETB59_03
	Course Name	Sensors and Interfacing Lab
IV	Course Code	230GETB60_04
	Course Name	Foundations of IOT
	Course Code	230GETB61_04
	Course Name	Foundations of IOT Lab
V	Course Code	230GETB62_05
	Course Name	Wireless Technologies for IoT
	Course Code	230GETB63_05
VI	Course Name	Wireless Technologies for IoT Lab
	Course Code	230GETB64_06
	Course Name	Industrial Internet of Things


Sem.	Interdisciplinary Open Course (IOC)	
I	Course Code	230UEEB01_01
	Course Name	Economics
III	Course Code	230UPYB34_03
	Course Name	Psychology at Workplace
IV	Course Code	240VBBB06_04
	Course Name	Introduction to Digital Marketing


Dr. Santosh Gaikwad
 Programme Coordinator, BCA


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


Dr. 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

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCE

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2024

SECOND YEAR BACHELOR OF COMPUTER APPLICATION
(TRANSFER CASES)

REVISION NO.

0.0 (NEP)

SEMESTER IV (LEVEL 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	230GCAB12_04	Full Stack Web Development	2	-	-	-	30	30	40	50	-	-	-	-	50	2
	230GCAB13_04	Computer Network and Internet Protocol	-	-	-	-	25			75	-	-	-	-	100	2.5
	230GCAB05_04	Operating System	2	-	-	-	30	30	40	50	-	-	-	-	50	2
AEC (HSMC)	230UENB03_04	Soft Skill Development	1	-	2	-	30	30	40	50	-	-	-	-	50	2
VEC	230UPYB03_04	Ethics and Moral Values	2	-	-	-	30	30	40	50	-	-	-	-	50	2
VSC	230IINB02_04	Innovation	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5
MDM	-	Multi-Disciplinary Minor	2	-	-	-	30	30	40	50	-	-	-	-	50	2
IOC	-	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2
SEC	230GCAB14_04	Programming with Python	2	-	2	-	-	-	-	-	50	50	50	50	100	3
LC	230GCAB15_04	Full Stack Web Development Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
	-	Multi-Disciplinary Minor Lab	-	-	2	4	-	-	-	-	50	50	-	-	50	2
LLC	231UPYB01_04	Yoga and Fitness	-	-	2	2	-	-	-	-	-	-	50	-	50	1.5
	230IDCB01_04	Design Thinking and Creativity	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5
IITP/FP/CEP	230GCAB16_04	Internship/Field Project/Community Engagement Programme	4 to 6 weeks				-	-	-	-	-	-	50	50	50	2
TOTAL			15	-	10	10									850	27

MLC#	---	Audit Course	1	-	-	-	-	-	-	-	-	50	50	1
------	-----	--------------	---	---	---	---	---	---	---	---	---	----	----	---

Note: A Diploma will be awarded if a student exits after second year.

For Exit at the end of second 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))


Sem.	Multi-Disciplinary Minor (MDM)	
	Specialization	IoT and Application
II	Course Code	230VBBB42_02
	Course Name	Introduction to Human Resource Management
III	Course Code	230GETB58_03
	Course Name	Sensors and Interfacing
	Course Code	230GETB59_03
IV	Course Name	Sensors and Interfacing Lab
	Course Code	230GETB60_04
	Course Name	Foundations of IOT
	Course Code	230GETB61_04
V	Course Name	Foundations of IOT Lab
	Course Code	230GETB62_05
	Course Name	Wireless Technologies for IoT
	Course Code	230GETB63_05
VI	Course Name	Wireless Technologies for IoT Lab
	Course Code	230GETB64_06
	Course Name	Industrial Internet of Things

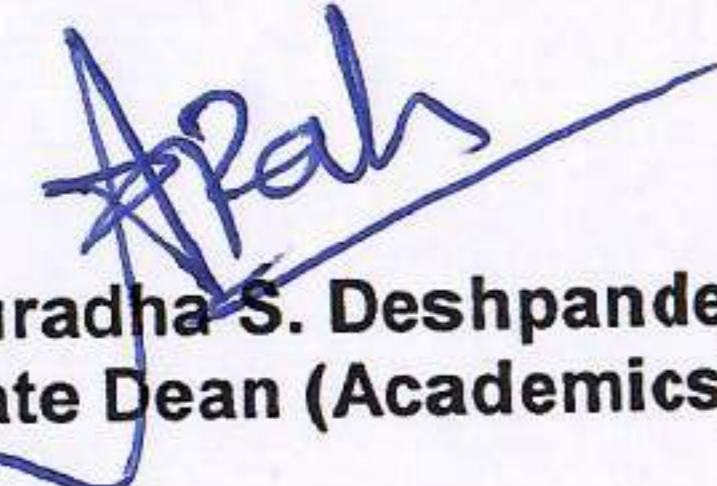
Sem.	Interdisciplinary Open Course (IOC)	
I	Course Code	230UEEB01_01
	Course Name	Economics
III	Course Code	230UPYB34_03
	Course Name	Psychology at Workspace
IV	Course Code	240VBBB06_04
	Course Name	Introduction to Digital Marketing


Sem.	Mandatory Learning Course (MLC [#]) Audit Course	
IV	Course Code	240GCAB91_04
	Course Name	Project Management using Agile Tool
V	Course Code	240GCAB92_05
	Course Name	German Language
VI	Course Code	230UPOB02_06
	Course Name	Introduction to Indian Constitution
VII	Course Code	240GCAB93_07
	Course Name	Software Testing using Selenium


Dr. Santosh Gaikwad
Programme Coordinator, BCA


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


Dr. 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

FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCES

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2025-2026

RELEASE DATE

01/07/2025

THIRD YEAR BACHELOR OF COMPUTER APPLICATION

REVISION NO.

0.0 (NEP)

SEMESTER V (LEVEL 5.5)

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	230GCAB21_05	Foundations of Data Science	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5
	230GCAB22_05	Introduction to Machine Learning	3	-	-	2	30	30	40	100	-	-	-	-	100	3.5
PEC		Program Elective Course-I	3	-	-	-	30	30	40	100	-	-	-	-	100	3
AEC (HSMC)	230UENB04_05	Verbal Aptitude Through Literature	1	-	2	-	30	30	40	50	-	-	-	-	50	2
VSC	230IESB03_05	Entrepreneurship	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5
MDM	-	Multi-Disciplinary Minor	2	-	-	-	30	30	40	50	-	-	-	-	50	2
LC	230GCAB41_05	Foundations of Data Science Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
	230GCAB42_05	Introduction to Machine Learning Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
	-	Multi-Disciplinary Minor Lab	-	-	2	4	-	-	-	-	50	50	-	-	50	2
LLC	230HFSB80_05	Health and Nutrition	1	-	-	2	-	-	-	-	-	-	50	-	50	1.5
TOTAL			13	0	8	12									650	20
MLC#	---	Audit Course	1	-	-	-	-	-	-	50	-	-	-	-	50	1

L-Lecture

Format No.: JSPMUni/ACAD/001

T-Tutorial

Rev. No.:0.0

P-Practical Session (Laboratory)

Rev. Date: 01/07/2025

EL-Experiential Learning

Page 1 of 3

Note: A Bachelor's Degree in BCA will be awarded if a student exits after third year.

For "Exit" at the end of "Third 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).

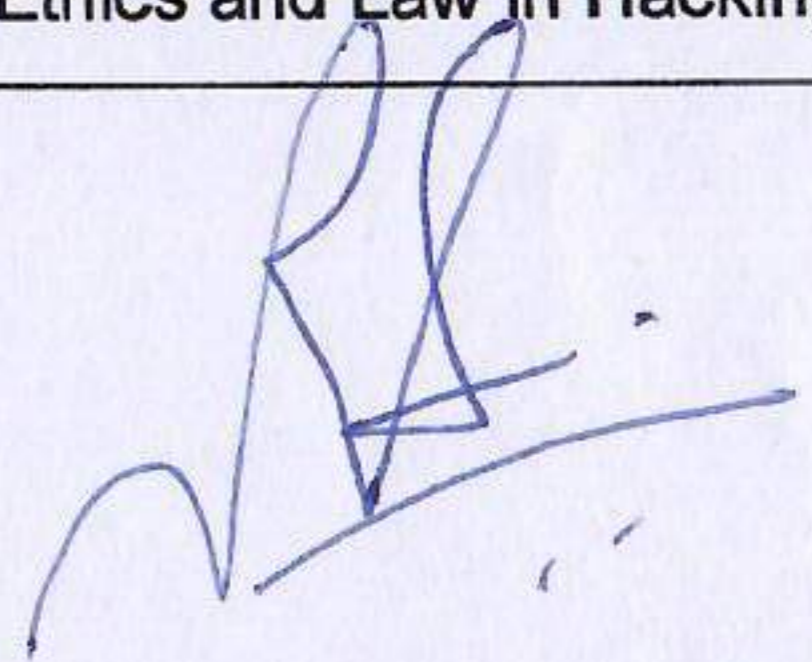
Sem.	Multi-Disciplinary Minor (MDM)	
	Specialization	IoT and Application
II	Course Code	230VBBB42_02
	Course Name	Introduction to Human Resource Management
III	Course Code	230GETB58_03
	Course Name	Sensors and Interfacing
	Course Code	230GETB59_03
	Course Name	Sensors and Interfacing Lab
IV	Course Code	230GETB60_04
	Course Name	Foundations of IOT
	Course Code	230GETB61_04
	Course Name	Foundations of IOT Lab
V	Course Code	230GETB62_05
	Course Name	Wireless Technologies for IoT
	Course Code	230GETB63_05
	Course Name	Wireless Technologies for IoT Lab
VI	Course Code	230GETB64_06
	Course Name	Industrial Internet of Things

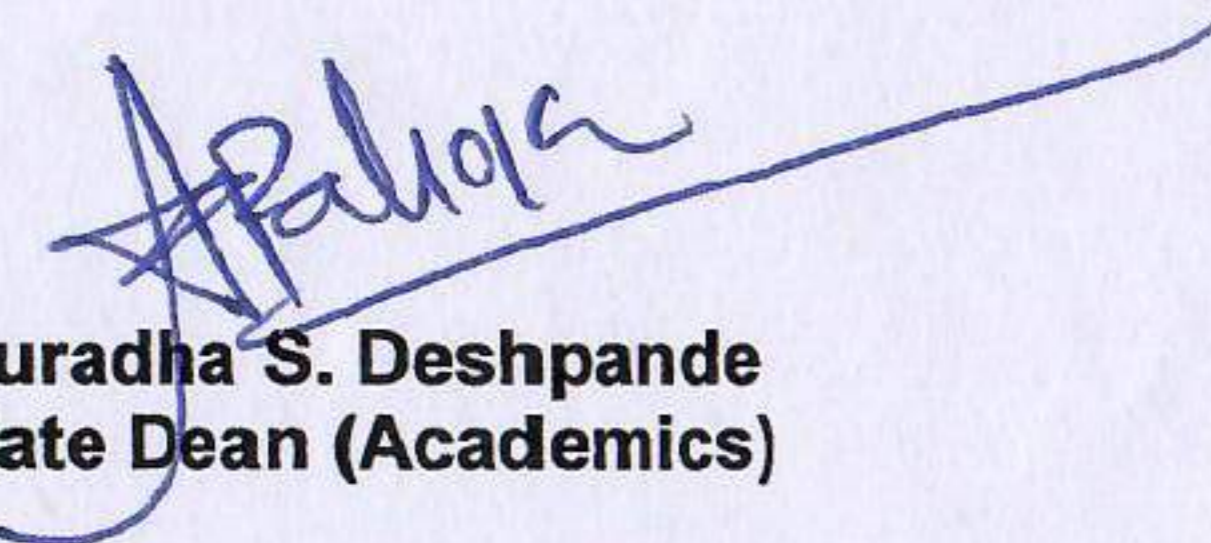
Sem	Mandatory Learning Course (MLC [#])	Audit Course
IV	Course Code	240GCAB91_04
	Course Name	Project Management using Agile Tools
V	Course Code	240GCAB131_05
	Course Name	German Language
VI	Course Code	230UPOB02_06
	Course Name	Introduction to Indian Constitution
VII	Course Code	240GCAB132_07
	Course Name	Software Testing using Selenium

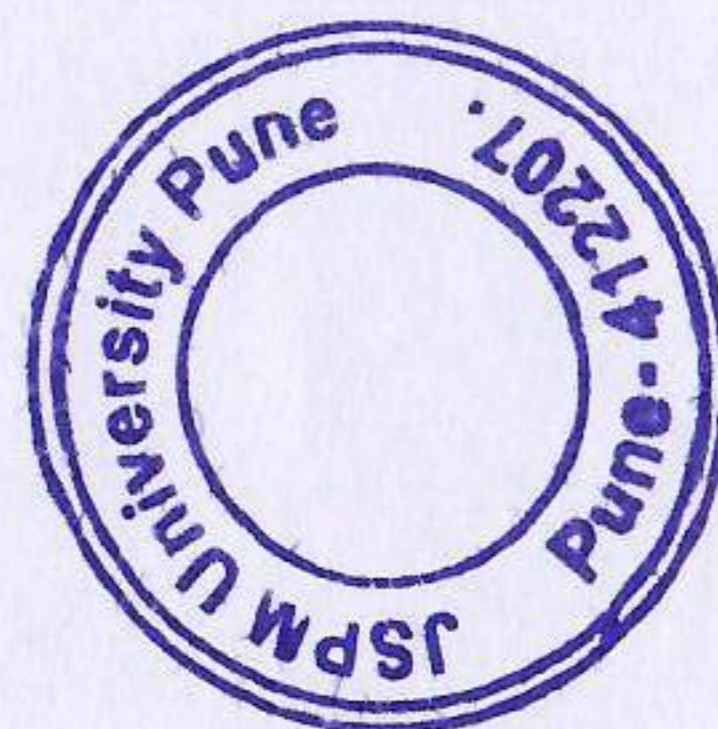
Sem.	Program Elective Course (PEC)				
	Specialization	Block Chain	Data Analytics	Natural Language Processing	Ethical Hacking
V	Course Code	230GCAB23_05	230GCAB24_05	230GCAB25_05	230GCAB26_05
	Course Name	Soft Computing	Data Mining	Natural Language Processing	Ethical Issues in Computing
VI	Course Code	230GCAB27_06	230GCAB28_06	230GCAB29_06	230GCAB30_06
	Course Name	Block Chain Technology	Big Data Analytics	Computer Vision	Ethical Hacking
VII	Course Code	230GCAB31_07	230GCAB32_07	230GCAB33_07	230GCAB34_07
	Course Name	DevOps Framework	Big Data and AI	Computational Linguistics	Tools for Hacking
VIII	Course Code	230GCAB35_08	230GCAB36_08	230GCAB37_08	230GCAB38_08
	Course Name	Full Stack Framework	Scalable Data Science	Foundations of Pattern Recognition	Ethics and Law in Hacking

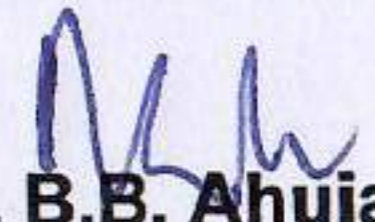

Dr. Santosh Gaikwad
 Programme Coordinator, BCA


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


Dr. 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

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCE

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2025-2026

RELEASE DATE

01/07/2025

THIRD YEAR BACHELOR OF COMPUTER APPLICATION

REVISION NO.

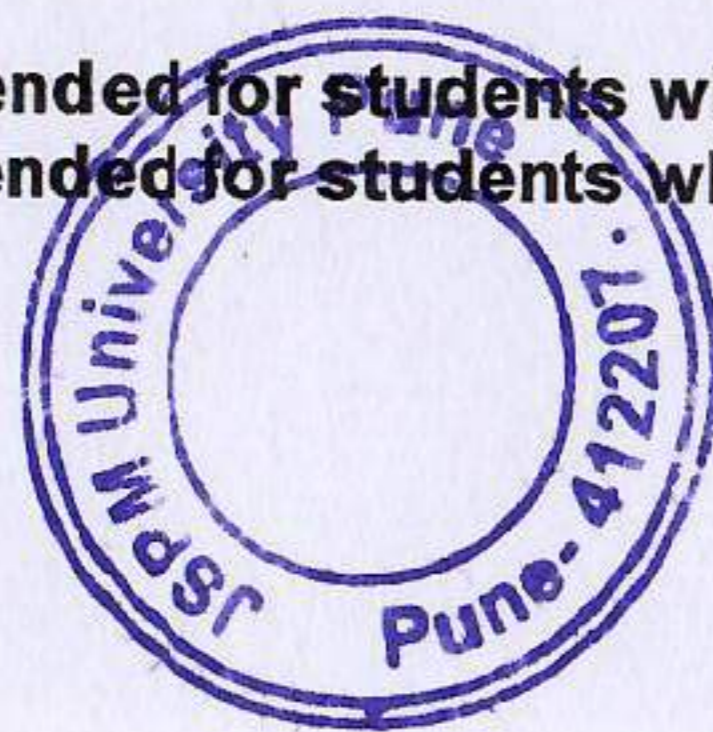
0.0 (NEP)

SEMESTER VI (LEVEL 5.5) (Scheme-A)

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	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	230GCAB43_06	Introduction to Cyber Security	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
	230GCAB44_06	Foundations of Artificial Intelligence	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
PEC		Program Elective Course-II	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
MDM	-	Multi-Disciplinary Minor	3	-	-	4	30	30	40	100	-	-	-	-	100	4	
LC	230GCAB45_06	Introduction to Cyber Security Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
	230GCAB46_06	Foundations of Artificial Intelligence Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
PROJ	230GCAB47_06	Project	-	-	4	8	-	-	-	-	50	50	50	50	100	4	
IITP/FP/CEP	230GCAB48_06	Internship/Field Project/Community Engagement Program	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
TOTAL			10	0	8	16									650	20	
MLC#	---	Audit Course	1	-	-	-	-	-	-	50	-	-	-	-	50	1	

Note: Scheme A is intended for students who will continue into the fourth year to pursue Honours or Honours with Research.
Scheme B is intended for students who plan to exit the programme after the sixth semester

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



T-Tutorial
Rev. No.:0.0

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

EL-Experiential Learning
Page 1 of 3

Note: A Bachelor's Degree in BCA will be awarded if a student exits after third year.

For "Exit" at the end of "Third 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).

Sem.	Multi-Disciplinary Minor (MDM)	
	Specialization	IoT and Application
II	Course Code	230VBBB42_02
	Course Name	Introduction to Human Resource Management
III	Course Code	230GETB58_03
	Course Name	Sensors and Interfacing
	Course Code	230GETB59_03
	Course Name	Sensors and Interfacing Lab
IV	Course Code	230GETB60_04
	Course Name	Foundations of IOT
	Course Code	230GETB61_04
	Course Name	Foundations of IOT Lab
V	Course Code	230GETB62_05
	Course Name	Wireless Technologies for IoT
	Course Code	230GETB63_05
	Course Name	Wireless Technologies for IoT Lab
VI	Course Code	230GETB64_06
	Course Name	Industrial Internet of Things

Sem	Mandatory Learning Course (MLC [#]) Audit Course	
IV	Course Code	240GCAB91_04
	Course Name	Project Management using Agile Tools
V	Course Code	240GCAB131_05
	Course Name	German Language
VI	Course Code	230UPOB02_06
	Course Name	Introduction to Indian Constitution
VII	Course Code	240GCAB132_07
	Course Name	Software Testing using Selenium

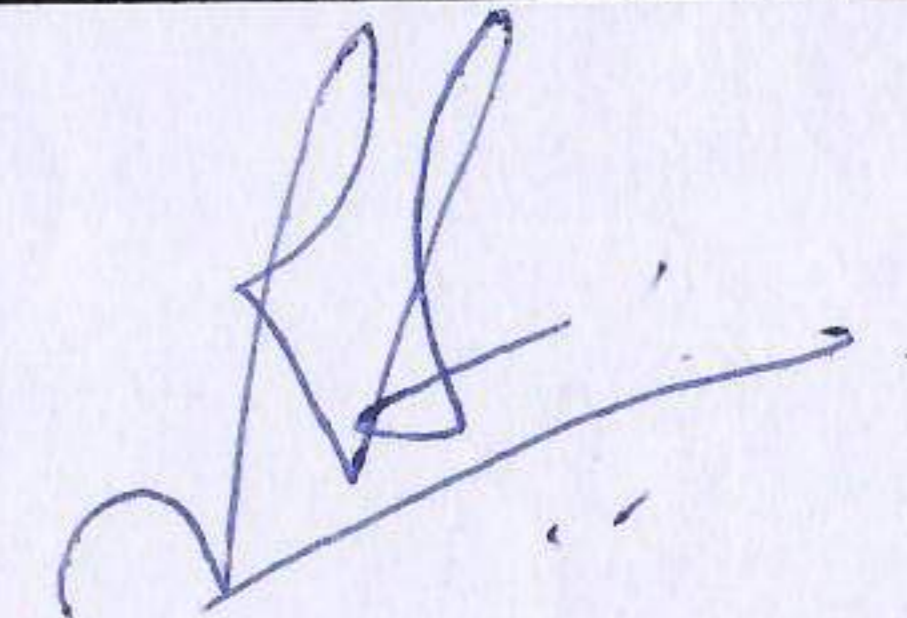
Program Elective Course (PEC)					
Sem.	Specialization	Block Chain	Data Analytics	Natural Language Processing	Ethical Hacking
V	Course Code	230GCAB23_05	230GCAB24_05	230GCAB25_05	230GCAB26_05
	Course Name	Soft Computing	Data Mining	Natural Language Processing	Ethical Issues in Computing
VI	Course Code	230GCAB27_06	230GCAB28_06	230GCAB29_06	230GCAB30_06
	Course Name	Block Chain Technology	Big Data Analytics	Computer Vision	Ethical Hacking
VII	Course Code	230GCAB31_07	230GCAB32_07	230GCAB33_07	230GCAB34_07
	Course Name	DevOps Framework	Big Data and AI	Computational Linguistics	Tools for Hacking
VIII	Course Code	230GCAB35_08	230GCAB36_08	230GCAB37_08	230GCAB38_08
	Course Name	Full Stack Framework	Scalable Data Science	Foundations of Pattern Recognition	Ethics and Law in Hacking



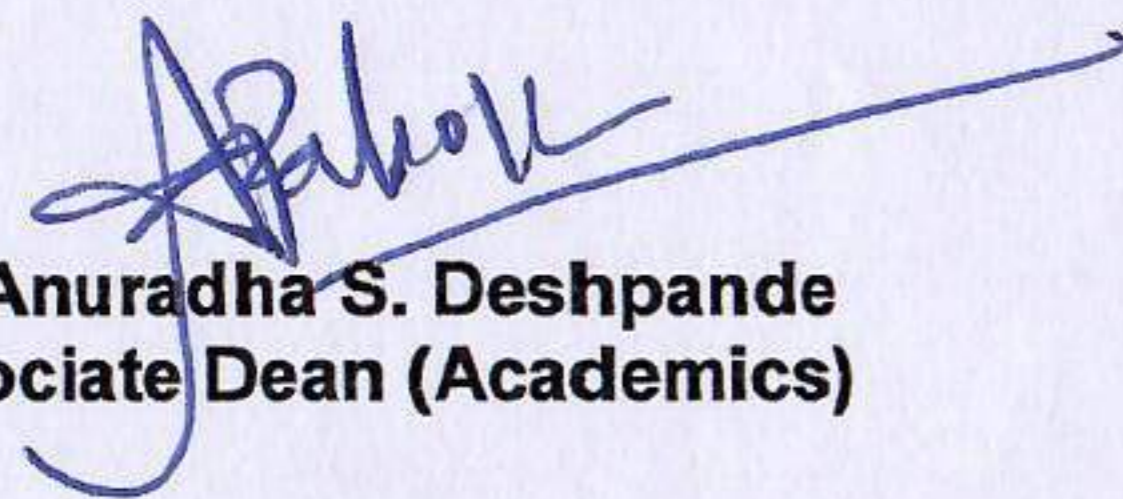
Dr. Santosh Gaikwad
Programme Coordinator, BCA



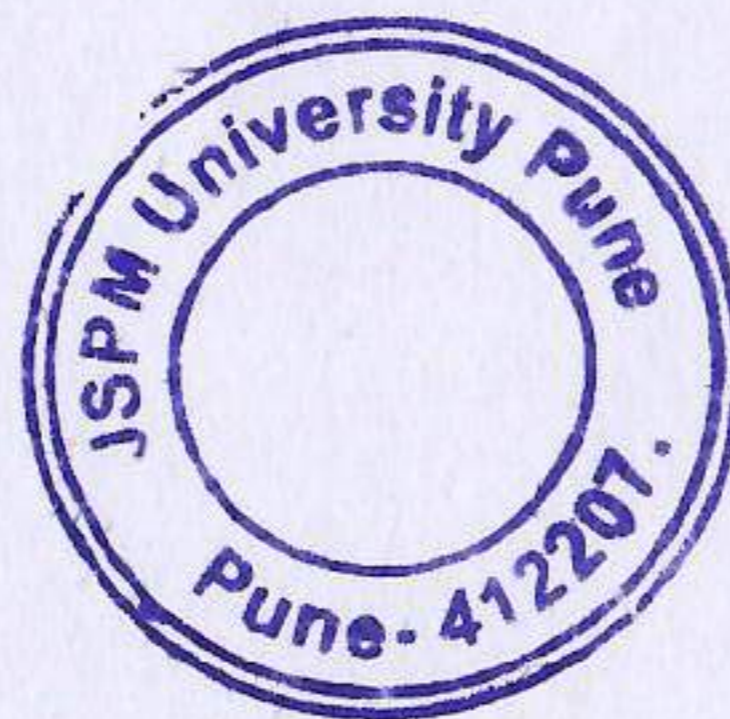
Dr. G. A. Patil
Director, School of Computational Science



Dr. 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

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF COMPUTATIONAL SCIENCE

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2025-2026

RELEASE DATE

01/07/2025

THIRD YEAR BACHELOR OF COMPUTER APPLICATION

REVISION NO.

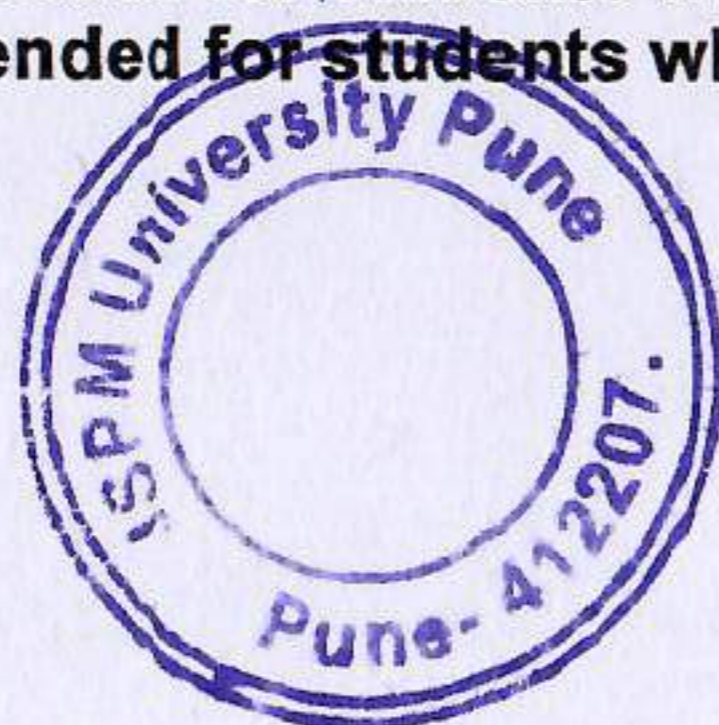
0.0 (NEP)

SEMESTER VI (LEVEL 5.5) (Scheme-B)

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	230GCAB43_06	Introduction to Cyber Security	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5
	230GCAB44_06	Foundations of Artificial Intelligence	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5
PEC		Program Elective Course-II	3	-	-	-	30	30	40	100	-	-	-	-	100	3
MDM	-	Multi-Disciplinary Minor	3	-	-	4	30	30	40	100	-	-	-	-	100	4
LC	230GCAB45_06	Introduction to Cyber Security Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
	230GCAB46_06	Foundations of Artificial Intelligence Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
PROJ	230GCAB49_06	Project	-	-	6	12	-	-	-	-	100	100	50	50	150	6
TOTAL			10	0	10	20									650	20
MLC#	---	Audit Course	1	-	-	-	-	-	-	50	-	-	-	-	50	1

Note: Scheme A is intended for students who will continue into the fourth year to pursue Honours or Honours with Research.
Scheme B is intended for students who plan to exit the programme after the sixth semester

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



T-Tutorial
Rev. No.:0.0

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

EL-Experiential Learning
Page 1 of 3

Note: A Bachelor's Degree in BCA will be awarded if a student exits after third year.

For "Exit" at the end of "Third Year" the student must complete a total of 8 additional credits.

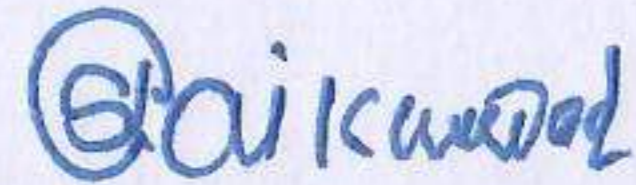
a) An internship / OJT of 8 - 10 weeks (4 credits) over and above semester 6 internship of minimum 4 weeks.

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

Sem.	Multi-Disciplinary Minor (MDM)	
	Specialization	IoT and Application
II	Course Code	230VBBB42_02
	Course Name	Introduction to Human Resource Management
III	Course Code	230GETB58_03
	Course Name	Sensors and Interfacing
	Course Code	230GETB59_03
	Course Name	Sensors and Interfacing Lab
IV	Course Code	230GETB60_04
	Course Name	Foundations of IOT
	Course Code	230GETB61_04
	Course Name	Foundations of IOT Lab
V	Course Code	230GETB62_05
	Course Name	Wireless Technologies for IoT
	Course Code	230GETB63_05
	Course Name	Wireless Technologies for IoT Lab
VI	Course Code	230GETB64_06
	Course Name	Industrial Internet of Things

Sem	Mandatory Learning Course (MLC [#])	Audit Course
IV	Course Code	240GCAB91_04
	Course Name	Project Management using Agile Tools
V	Course Code	240GCAB131_05
	Course Name	German Language
VI	Course Code	230UPOB02_06
	Course Name	Introduction to Indian Constitution
VII	Course Code	240GCAB132_07
	Course Name	Software Testing using Selenium

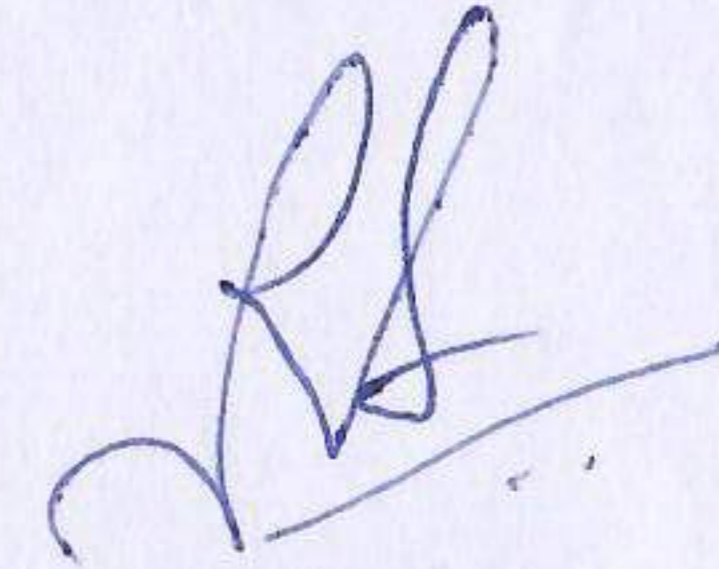
Sem.	Professional Elective Course (PEC)				
	Specialization	Block Chain	Data Analytics	Natural Language Processing	Ethical Hacking
V	Course Code	230GCAB23_05	230GCAB24_05	230GCAB25_05	230GCAB26_05
	Course Name	Soft Computing	Data Mining	Natural Language Processing	Ethical Issues in Computing
VI	Course Code	230GCAB27_06	230GCAB28_06	230GCAB29_06	230GCAB30_06
	Course Name	Block Chain Technology	Big Data Analytics	Computer Vision	Ethical Hacking
VII	Course Code	230GCAB31_07	230GCAB32_07	230GCAB33_07	230GCAB34_07
	Course Name	DevOps Framework	Big Data and AI	Computational Linguistics	Tools for Hacking
VIII	Course Code	230GCAB35_08	230GCAB36_08	230GCAB37_08	230GCAB38_08
	Course Name	Full Stack Framework	Scalable Data Science	Foundations of Pattern Recognition	Ethics and Law in Hacking



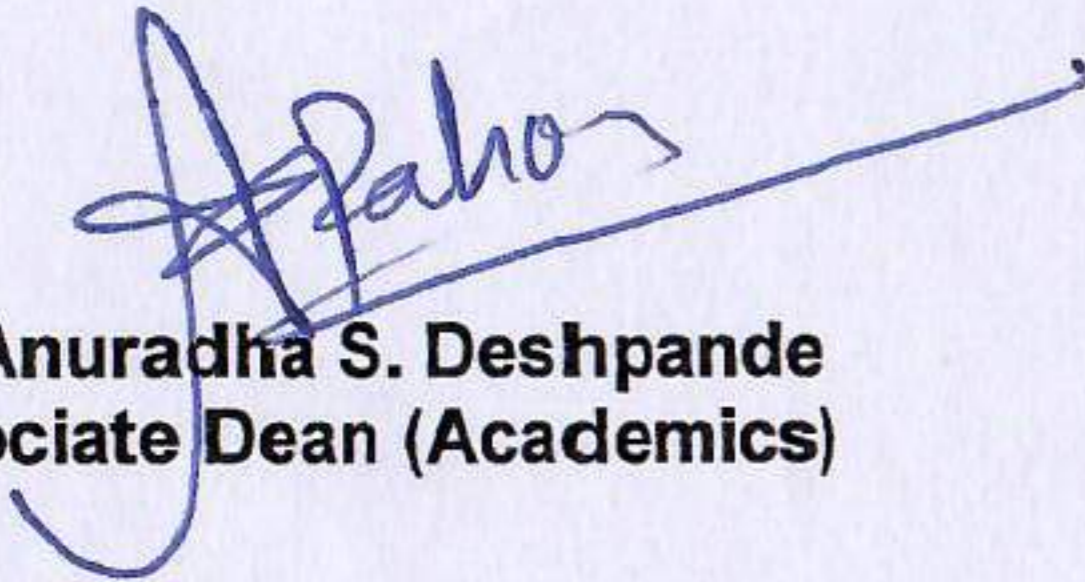
Dr. Santosh Gaikwad
Programme Coordinator, BCA



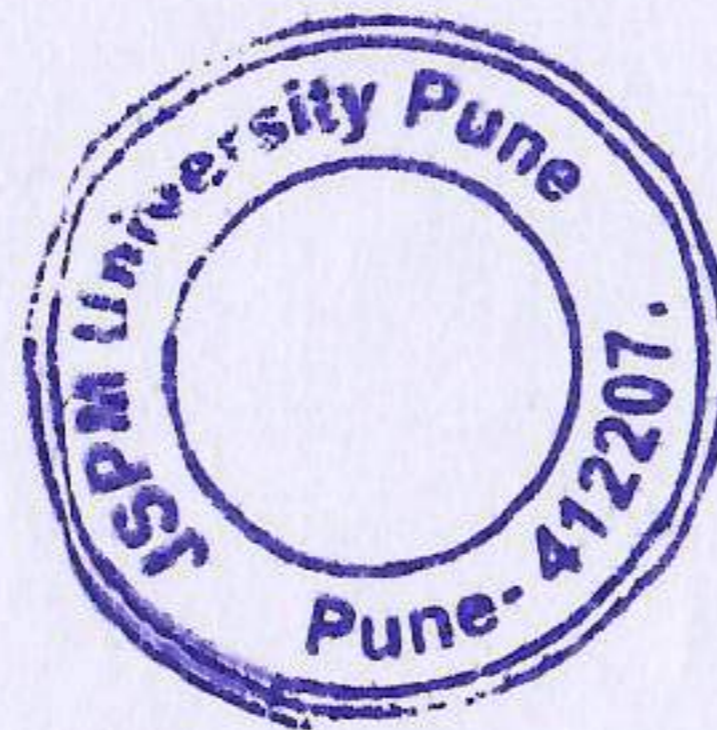
Dr. G. A. Patil
Director, School of Computational Science



Dr. 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