



**S. B. JAIN INSTITUTE OF  
TECHNOLOGY, MANAGEMENT  
& RESEARCH, NAGPUR**

(An Autonomous Institute, Affiliated to RTMNU,  
Nagpur)

**DEPARTMENT  
OF COMPUTER APPLICATIONS**

**BOARD  
OF  
STUDIES**



**S. B. JAIN INSTITUTE OF TECHNOLOGY, MANAGEMENT & RESEARCH, NAGPUR**

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**DEPARTMENT OF COMPUTER APPLICATIONS**

Vision: Develop creative, competent, and socially responsible computing professionals empowered with a strong foundation in computer applications, driven by innovation, ethics, and real-world problem solving.



**MASTER OF COMPUTER APPLICATIONS (MCA)**

W.E.F. Batch admitted in Academic Year 2025-26 & Onwards  
(NEP COMPLIANT)

**1<sup>st</sup> Year  
Semester - I**

**Scheme of Teaching & Examination of I Semester Master of Computer Applications (MCA)**

Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE
			L	T	P		Continuous Evaluation	End Sem Exam	Total	Duration (Hrs.)
1	PCCMC101T	Python Programming	3	0	0	3	40	60	100	3
2	PCCMC101P	Python Programming Lab	0	0	2	1	50	-	50	-
3	PCCMC102T	Operating Systems	3	0	0	3	40	60	100	3
4	PCCMC102P	Operating Systems Lab	0	0	2	1	50	-	50	-
5	PCCMC103T	Object Oriented Programming	3	0	0	3	40	60	100	3
6	PCCMC103P	Object Oriented Programming Lab	0	0	2	1	50	-	50	-
7	PCCMC104T	Concepts in Software Engineering	2	0	0	2	20	30	50	2
8	PCCMC104P	Concepts in Software Engineering Lab	0	0	2	1	50	-	50	-
9	PEC-1	Program Elective-1	2	0	0	2	20	30	50	2
10	RMMC101T	Research Methodology	3	0	0	3	40	60	100	3
<b>TOTAL</b>			<b>16</b>	<b>0</b>	<b>8</b>	<b>20</b>	<b>400</b>	<b>300</b>	<b>700</b>	

**PROGRAM ELECTIVE-1**

Sr. No.	Course Code	Course Name
1	PECMC101T	Cyber Security
2	PECMC102T	Design Patterns
3	PECMC103T	Enterprise Resource Planning

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Revision	BoS Meeting	Date	W. E. F.
-	1 <sup>st</sup>	18-07-2025	2025-26

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## 1<sup>st</sup> Year Semester - II

### Scheme of Teaching & Examination of II Semester Master of Computer Applications (MCA)

Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE Duration (Hrs.)
			L	T	P		Continuous Evaluation	End Sem Exam	Total	
1	PCCMC201T	Database Management System	3	0	0	3	40	60	100	3
2	PCCMC201P	Database Management System Lab	0	0	2	1	50	-	50	-
3	PCCMC202T	Design and Analysis of Algorithms	3	1	0	4	40	60	100	3
4	PCCMC202P	Design and Analysis of Algorithms Lab	0	0	2	1	50	-	50	-
5	PCCMC203T	Data Communication and Computer Networks	3	0	0	3	40	60	100	3
6	PCCMC203P	Data Communication and Computer Networks Lab	0	0	2	1	50	-	50	-
7	PCCMC204T	Professional Skills and Ethics	2	0	0	2	20	30	50	2
8	PCCMC205T	Software Documentation	2	0	0	2	20	30	50	2
9	PCCMC206P	Web Technology Lab	0	0	4	2	50	-	50	-
10	PEC-2	Program Elective-2	3	0	0	3	40	60	100	3
<b>TOTAL</b>			<b>16</b>	<b>1</b>	<b>10</b>	<b>22</b>	<b>400</b>	<b>300</b>	<b>700</b>	

**PROGRAM ELECTIVE-2**

Sr. No.	Course Code	Course Name
1	PECMC201T	Distributed Operating Systems
2	PECMC202T	User Interface Design
3	PECMC203T	Introduction to Data Science

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Revision	BoS Meeting	Date	W. E. F.
-	1 <sup>st</sup>	18-07-2025	2025-26

**MASTER OF COMPUTER APPLICATIONS (MCA)**  
 W.E.F. Batch admitted in Academic Year 2025-26 & Onwards  
**(NEP COMPLIANT)**

**2<sup>nd</sup> Year**  
**Semester - III**

**Scheme of Teaching & Examination of III Semester Master of Computer Applications (MCA)**

Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE
			L	T	P		Continuous Evaluation	End Sem Exam	Total	Duration (Hrs.)
1	PCCMC301T	Artificial Intelligence	3	1	0	4	40	60	100	3
2	PCCMC301P	Artificial Intelligence Lab	0	0	2	1	50	-	50	-
3	PCCMC302T	Data Structures and Algorithm	3	1	0	4	40	60	100	3
4	PCCMC302P	Data Structures and Algorithm Lab	0	0	2	1	50	-	50	-
5	PCCMC303T	Cloud Computing	3	0	0	3	40	60	100	3
6	PCCMC303P	Cloud Computing Lab	0	0	2	1	50	-	50	-
7	PCCMC304T	Network Security	3	0	0	3	40	60	100	3
8	PEC-3	Program Elective-3	3	0	0	3	40	60	100	3
<b>TOTAL</b>			<b>15</b>	<b>2</b>	<b>6</b>	<b>20</b>	<b>350</b>	<b>300</b>	<b>650</b>	

**PROGRAM ELECTIVE-3**

Sr. No.	Course Code	Course Name
1	PECMC301T	Block Chain Technology
2	PECMC302T	Software Testing
3	PECMC303T	Natural Language Processing

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Revision	BoS Meeting	Date	W. E. F.
-	1 <sup>st</sup>	18-07-2025	2025-26

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## 2<sup>nd</sup> Year Semester - IV

### Scheme of Teaching & Examination of IV Semester Master of Computer Applications (MCA)

Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE Duration (Hrs.)
			L	T	P		Continuous Evaluation	End Sem Exam	Total	
1	PEC-4	Program Elective-4	3	0	0	3	40	60	100	3
2	PEC-4	Program Elective-4 Lab	0	0	2	1	50	-	50	-
3	PEC-5	Program Elective-5	3	0	0	3	40	60	100	3
4	PEC-6	Program Elective-6	3	0	0	3	40	60	100	3
5	ELCMC401	Capstone Project	0	0	20	10	150	150	300	
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>22</b>	<b>20</b>	<b>320</b>	<b>330</b>	<b>650</b>	

#### PROGRAM ELECTIVE-4

Sr. No.	Course Code	Course Name
1	PECMC401T	Introduction to Internet of Things
	PECMC401P	Introduction to Internet of Things Lab
2	PECMC402T	Computer Graphics and its Applications
	PECMC402P	Computer Graphics and its Applications Lab
3	PECMC403T	Compiler Construction
	PECMC403P	Compiler Construction Lab

#### PROGRAM ELECTIVE-5

Sr. No.	Course Code	Course Name
1	PECMC404T	Big Data Analytics
2	PECMC405T	Mobile Application Development
3	PECMC406T	Introduction to Deep Learning

#### PROGRAM ELECTIVE-6

Sr. No.	Course Code	Course Name
1	PECMC407T	Wireless and Mobile Network
2	PECMC408T	Soft Computing
3	PECMC409T	Social Networks

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Revision	BoS Meeting	Date	W. E. F.
-	1 <sup>st</sup>	18-07-2025	2025-26