



ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

Scheme of Examination 2026-27

MASTER OF COMPUTER APPLICATIONS

CREDIT FRAMEWORK STRUCTURE

Semester		I	II	III	IV		Total Credits	
					A	B	A	B
Course Category								
Basics Science Course	BSC/ESC	3	-	-	-	-	3	3
Program Core Course (PCC)	Program Courses	10	14	9	6	14	39	47
Program Elective Course (PEC)		-	4	4	-	3	8	11
Skill Enhancement Courses (SEC)	Skill Courses	8	3	6	-	1	17	18
Projects	Experiential Learning Courses	-	-	2	-	3	2	5
Internships		-	-	-	15	-	15	-
Total Credits		21	21	21	21	21	84	84

		July 2026	NEP 1.0	Applicable for 2026-27
Chairman - BoS	Dean – Academics	Date of Release	Version	



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Semester I												
Sr. No.	Course Category	Course Code	Course Title	L	T	P	Credits	Mid-Sem Exam	Continual Assessment	End-Sem Exam	Total Marks	No. of Hours for ESE
1	SEC	26MCA101T	Problem Solving through Programming	3	-	-	3	20	20	60	100	3
2	SEC	26MCA101P	Problem Solving through Programming Lab	-	-	2	1	-	25	25	50	-
3	PCC	26MCA102T	Digital Logic Fundamentals	3	-	-	3	20	20	60	100	3
4	BSC	26MCA103T	Probability and Statistics	3	-	-	3	20	20	60	100	3
5	PCC	26MCA104T	Operating Systems	3	-	-	3	20	20	60	100	3
6	PCC	26MCA104P	Operating Systems Lab	-	-	2	1	-	25	25	50	-
7	SEC	26MCA105P	Web Programming Lab	-	-	2	1	-	25	25	50	-
8	PCC	26MCA106T	Computer Architecture & Organization	3	-	-	3	20	20	60	100	3
9	SEC	26MCA107P	Software Lab-1 (Python)	-	-	2	1	-	25	25	50	-
10	SEC	26MCA108P	Career Development I	-	-	2	1	-	50	-	50	-
11	SEC	26MCA109P	Technical Skill Development-I	-	-	2	1	-	50	-	50	-
Total				15	0	12	21	100	300	400	800	

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Semester II												
Sr. No.	Course Category	Course Code	Course Title	L	T	P	Credits	Mid-Sem Exam	Continual Assessment	End-Sem Exam	Total Marks	No. of Hours for ESE
1	PCC	26MCA201T	Data Structure & Algorithm	3	-	-	3	20	20	60	100	3
2	PCC	26MCA201P	Data Structure & Algorithm Lab	-	-	2	1	-	25	25	50	-
3	PCC	26MCA202T	Software Engineering & Project Management	3	-	-	3	20	20	60	100	3
4	PCC	26MCA202P	Software Engineering & Project Management Lab	-	-	2	1	-	25	25	50	-
5	PCC	26MCA203T	Computer Networks	3	-	-	3	20	20	60	100	3
6	PCC	26MCA204T	Introduction to Internet of Things	3	-	-	3	20	20	60	100	3
7	PEC	26MCA205T	Professional Elective-I	3	-	-	3	20	20	60	100	3
8	PEC	26MCA205P	Professional Elective-I Lab	-	-	2	1	-	25	25	50	-
9	SEC	26MCA206P	Software Lab-II (Adv. Python)	-	-	2	1	-	25	25	50	-
10	SEC	26MCA207P	Career Development II	-	-	2	1	-	50	-	50	-
11	SEC	26MCA208P	Technical Skill Development-II	-	-	2	1	-	50	-	50	-
Total				15	0	12	21	100	300	400	800	

Professional Elective-I			
Track 1	Artificial Intelligence & Machine Learning	Track 2	Cloud Computing
26MCA205T/P(i)	Introduction to Artificial Intelligence	26MCA205T/P(iii)	Introduction to Cloud Computing
26MCA205T/P(ii)	Natural Language Processing	26MCA205T/P(iv)	Edge & Fog Computing

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Semester III												
Sr. No.	Course Category	Course Code	Course Title	L	T	P	Credits	Mid-Sem Exam	Continual Assessment	End-Sem Exam	Total Marks	No. of Hours for ESE
1	SEC	26MCA301T	Object Oriented Programming	3	-	-	3	20	20	60	100	3
2	SEC	26MCA301P	Object Oriented Programming Lab	-	-	2	1	-	25	25	50	-
3	PCC	26MCA302T	Database Management System	3	-	-	3	20	20	60	100	3
4	PCC	26MCA302P	Database Management System Lab	-	-	2	1	-	25	25	50	-
5	PCC	26MCA303T	Research Methodology	2	-	-	2	10	10	30	50	1.5
6	PCC	26MCA304T	Computer Graphics	3	-	-	3	20	20	60	100	3
7	PEC	26MCA305T	Professional Elective-II	3	-	-	3	20	20	60	100	3
8	PEC	26MCA305P	Professional Elective-II Lab	-	-	2	1	-	25	25	50	-
9	PROJ	26MCA306P	Project Dissertation I	-	-	4	2	-	75	75	150	-
10	SEC	26MCA307P	Career Development III	-	-	2	1	-	50	-	50	-
11	SEC	26MCA308P	Technical Skill Development-III	-	-	2	1	-	50	-	50	-
Total				14	0	14	21	90	340	420	850	

Professional Elective-II			
Track 1	Artificial Intelligence & Machine Learning	Track 2	Cloud Computing
26MCA305T/P(i)	Introduction to Data Analytics	26MCA305T/P(iii)	Virtualization & Containerization
26MCA305T/P(ii)	Fundamentals Machine Learning	26MCA305T/P(iv)	Dockers & Kubernets

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Semester IV (Option-A)												
Sr. No.	Course Category	Course Code	Course Title	L	T	P	Credits	Mid-Sem Exam	Continual Assessment	End-Sem Exam	Total Marks	No. of Hours for ESE
1	PCC	26MCA401T	NPTEL1*	3	-	-	3		40 [#]	60 [§]	100	3
2	PCC	26MCA402T	NPTEL2*	3	-	-	3		40 [#]	60 [§]	100	3
3	PROJ	26MCA403P	Industry Based Internship/Research	-	-	30	15	-	300	300	600	-
Total				6	0	30	21	0	380	420	800	6

*NPTEL Courses as approved by the Head of the Department & Faculty.

[#]Continuous Assessment shall be calculated as average of NPTEL assignment scores obtained from NPTEL

[§]End Semester Exam shall be conducted by the institute.

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Semester IV (Option-B)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Credits	Mid-Sem Exam	Continual Assessment	End-Sem Exam	Total Marks	No. of Hours for ESE
1	PCC	26MCA401T	Cryptography and Network Security	3	-	-	3	20	20	60	100	3
2	PCC	26MCA401P	Cryptography and Network Security Lab	-	-	2	1	-	25	25	50	-
3	PCC	26MCA402T	Mobile Applications	3	-	-	3	20	20	60	100	3
4	PCC	26MCA402P	Mobile Applications Lab	-	-	2	1	-	25	25	50	-
5	PCC	26MCA403T	Block chain Technology	3	-	-	3	20	20	60	100	3
6	PCC	26MCA404T	Data Warehousing & Mining	3	-	-	3	20	20	60	100	3
7	SEC	26MCA405P	Full Stack Development Lab	-	-	2	1	-	25	25	50	-
8	PEC	26MCA406T	Professional Elective-III	3	-	-	3	20	20	60	100	3
9	PROJ	26MCA407P	Project Dissertation II	-	-	6	3	-	75	75	150	
Total				15	0	12	21	100	250	450	800	

Professional Elective-III

Track 1	Artificial Intelligence & Machine Learning	Track 2	Cloud Computing
26MCA406T(i)	Reinforcement Learning	26MCA406T(iii)	Serverless Computing
26MCA406T(ii)	Computer Vision	26MCA406T(iv)	Cloud Security & Compliance

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Qualification Type and Credit Requirements under NEP Guidelines

Qualification title	Credit requirements
Post-Graduate Diploma for those who exit after the successful completion of the first year or two semesters of the two-year Master's degree program. (Program duration: One year or two semesters) [Post-Graduate Diploma in Computer Applications]	42+4
Master's Degree (Program duration: Two years or four semesters after obtaining a Master's degree). [MASTER OF COMPUTER APPLICATIONS]	84

List of Exit Courses for Post-Graduate Diploma in Computer Applications

(Opt any one course from NPTEL online platform (Course Duration 12 Week/ 40Hrs))

1. Data Analytics with python
2. Blockchain Technology
3. Full Stack Development
4. Foundation for Virtual and Augmented Reality Systems
5. Programming in Java
6. Foundations of Cyber Physical Systems
7. Artificial Intelligence: Knowledge Representation and Reasoning
8. Introduction to Large Language Models (LLMs)
9. Cryptography and Network Security
10. GPU Architectures and Programming

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