

**Vishwakarma University (VU), Pune**

**Master of Computer Applications (MCA)  
2 Years – 4 Semesters Full Time Programme  
Effective from AY 2024 – 2025**

**Programme Structure (NEP)  
Choice Based Credit System (CBCS) and Grading System  
Outcome-Based Education**

**Semester I**

Java Programming	
Data Structures and Algorithms	
Advanced Software Engineering Principles	
Network Technologies	
Research Methodology	
Elective – 1	Data Privacy and Protection
	Applied Statistical Methods
Elective - 2	WordPress
	Linux system administration

**Semester II**

Python Programming	
Advanced DBMS	
Software Project Management	
Optimization Techniques	
Data Warehousing & Data Mining	
Elective - 1	Block Chain Technology
	Design Thinking & Problem Solving
Elective - 2	Green Computing
	Data Analytics

**Semester III**

Mobile Application Development	
Cloud Infrastructure and Services	
AI & ML	
Internet of Things (IoT)	
Project -1	
Elective - 1	AR - VR
	Robotic Process Automation (RPA)
Elective - 2	Tableau + Power BI
	Statistics Using R Programming

**Semester IV**

DevOps	
Big Data Analytics and Applications	
Internship/ Apprenticeship	
Project -2	
Elective - 1	Game Programming
	Android Application Development