

## **BCA AI Program Structure:**

**Vishwakarma University (VU), Pune**  
**Bachelor of Computer Applications – AI**  
**04Years – 8 Semesters Full Time Programme Effective from AY 2025 – 2026**  
**Programme Structure (NEP)**  
**Choice Based Credit System (CBCS) and Grading System**  
**Outcome-Based Education**

<b>SEM I</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Fundamentals of Mathematics
2	Programming in C
3	Programming in C-lab
4	Database Management System
5	Database Management System-lab
6	Fundamentals of Computers/ Introduction of new edge technology
7	VU Level Minor
8	Communicative English
9	Happiness & Positivity

<b>SEM II</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Statistical Methods
2	Introduction to Python
3	Introduction to Python Lab
4	Principles of Management
5	VU Level Minor
6	Technical writing Communication
7	Environmental Science Fundamentals

<b>SEM III</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Data Structures & Algorithm
2	Data Structures & Algorithm Lab
3	Software Engineering
4	Web Technology
5	Web Technology Lab
6	Organizational Behaviour
7	VU Level Minor
8	Critical Thinking
9	Computer Networks

<b>SEM IV</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Indian Knowledge System
2	Advanced Web Technology
3	Advanced Web Technology Lab
4	Digital Marketing
5	Big Data Analytics
6	Big Data Analytics Lab
7	Java Programming
8	Java Programming Lab
9	VU Level Minor

<b>SEM V</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Software Project Management
2	Data Modelling & Visualization
3	Research Methodology
4	VU Level Minor
5	Introduction to AI
6	Data Modelling & Visualization Lab
7	Data Analytics & Data warehousing

<b>SEM VI</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Object Oriented Software Engineering OR Software Testing
2	Operating System
3	VU Level Minor(Project)
4	Machine Learning algorithms
5	Machine Learning algorithms Lab
6	Major Project
7	Aptitude Development Programming

<b>SEM VII H</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Neural Networks & Deep Learning OR Cloud Computing and Visualization
2	Natural Language Processing (NLP)
3	AI for Sustainability & Ethics
4	Robotics and AI Automation
5	Robotics and AI Automation Lab
6	Natural Language Processing (NLP) Lab
7	Personality Development & Technical Skill
8	Mini Project

<b>SEM VII R</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Technical Writing
2	Survey of Literature
3	Research Tools
4	Data Collection Techniques / Web Scraping & Automated Data Collection
5	Research Design & Planning
6	Research Ethics

<b>SEM VIII H</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	Software Deployment and Maintenance/Agile Development
2	Mobile and Web App development
3	Major Project/ Internship
4	Mobile and Web App development-Lab
5	AI in Gaming and simulation
6	AI in Gaming and simulation-Lab

<b>SEM VIII R</b>	
<b>Sr.No</b>	<b>Subject Name</b>
1	IPR
2	Patent Designing and Filling
3	Research Proposal Development /AI Experimental Research
4	Report Writing and Thesis Preparation
5	Research Paper Writting
6	Research Paper Presentation Skills

<b>COURSE CODE</b>	<b>MINOR TRACK DATA ANALYTICS</b>
MT25CA01A	Introduction to Data Science & Analytics
MT25CA02A	Programming for Data Analytics
MT25CA03A	Data Wrangling & Preprocessing
MT25CA04A	Predictive Analytics & Time Series Forecasting
MT25CA05A	Web and Social Media Analytics
MT25CA06A	Data Analytics Capstone Project