

Vishwakarma University (VU), Pune

B.Tech in Artificial Intelligence & Data Science

4 Years – 8 Semesters Full Time Programme

Effective from AY 2025 – 2026

Programme Structure (NEP)

Choice Based Credit System (CBCS) and Grading System Outcome-Based Education

SEM-I

Engineering Calculus and Applications
Fundamentals of Electronics
Computer Programming Principles
Web Application Development
Applied Science and Engineering Project I
Value Added Career Orientation I
Indian Knowledge System
Induction Training

SEM-II

Linear Algebra and Statistics
Digital Logic Design
Python for Logic Development and Programming
Design Thinking and Sustainable Design
Robotics and Sensor Interfacing Techniques
Applied Science and Engineering Project II
Value Added Career Orientation II (Campus Engagement)
General Proficiency and Soft Skills

SEM-III

Statistical Data Analysis
Statistical Data Analysis Lab
Data Structures
Data Structures Lab
Financial Literacy and Banking
Technical Skill Development Lab-I (Java)
Environmental Science-I
From Campus to Corporate
Minor Track Cloud Computing Course-I
Open Elective (Placement Preparation/Startups & Entrepreneurship/ Robotics and Intelligent Systems) Course -I

SEM-IV

Decision Support System
Decision Support System Lab
Database Management System
Database Management System Lab
Technical Skill development Lab-2 ((Javascript based Web Technologies))
Patent and IPR Essentials-I
Environmental Science-II
Minor Track Cloud Computing Course-II
Open Elective (Placement Preparation/Startups & Entrepreneurship/ Robotics and Intelligent Systems) Course -II

SEM-V

Artificial Intelligence & Data Science
Artificial Intelligence & Data Science Lab
Design and Analysis of Algorithms
Scientific Research Writing Essentials-I
Operating System
Operating System Lab
Compiler Design
Optimization Algorithms and Applications
Computer Networks
MOOC course
Project Management
Minor Track Cloud Computing Course-III
Open Elective (Placement Preparation/Startups & Entrepreneurship/ Robotics and Intelligent Systems) Course -III

SEM-VI

Machine Learning
Machine Learning Lab
Predictive Modelling and Forecasting
Predictive Modelling and Forecasting Lab
Natural Language Processing
Natural Language Processing Lab
DevOps
DevOps Lab
Fuzzy Systems and Pattern Recognition
Fuzzy Systems and Pattern Recognition Lab
Network Security and Cryptography
Seminar
Case Study
Advanced Web Technology
Advanced Web Technology Lab
Patent and IPR Essentials-II
Minor Track Cloud Computing Course-IV

SEM-VII

Research Methodology
Computer Vision and Image Processing
Computer Vision and Image Processing Lab
Bigdata Analytics
Bigdata Analytics Lab
Scientific Research Writing Essentials-II
Project Dissertation
Minor Track Cloud Computing Course-V
Internship

SEM-VIII

Research Methodology
Computer Vision and Image Processing
Computer Vision and Image Processing Lab
Bigdata Analytics
Bigdata Analytics Lab
Internship
Industry Immersion

B.Tech in Artificial Intelligence & Data Science with Honors and Multidisciplinary Minor (Specialization Honors- Blockchain)

Semester -III	Introduction to Cryptocurrency
Semester -IV	Application Security
Semester -V	Full Stack Development
Semester -VI	Blockchain Development
Semester –VII	Blockchain Applications
Semester -VIII	Honors Project

B. Tech in Artificial Intelligence & Data Science with Double Minor (Specialization minor-Cybersecurity)

Semester -III	Cyber Security and Cyber Laws
Semester -IV	Network Security
Semester -V	Digital Forensics
Semester -VI	Cloud and Mobile security
Semester –VII	Security Architecture and Design
Semester -VIII	Network Security

B.Tech in Artificial Intelligence & Data Science with Honors with Research and Multidisciplinary Minor

Semester -III	Introduction to Cryptocurrency
Semester -IV	Application Security
Semester -V	Full Stack Development
Semester -VI	Blockchain Development
Semester –VII	Research Project-I
Semester -VIII	Research Project-II