

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
Project Based Learning - Python
Environmental Science-I
Discrete Structures
Ubiquitous Computing
Patent and IPR Essentials-I

SEM-IV

Decision Support System
Decision Support System Lab
Database Management System
Database Management System Lab
Technical Skill development Lab-2 (Java)
Project Management
Scientific Research Writing Essentials-I
From Campus to Corporate – I
Environmental Science-II
Theory of Computation
Fundamentals of Data warehousing

SEM-V

Design and Analysis of Algorithms
Operating System
Operating System Lab
Machine Learning for Data Science
Machine Learning for Data Science Lab
Computer Networks / Optimization Algorithms and Applications
Computer Networks Lab / Optimization Algorithms and Applications Lab
MOOC Course
Software Project Management
Intelligent System in Digital Forensics
Patent and IPR Essentials-II

SEM-VI

Predictive Modelling and Forecasting
Predictive Modelling and Forecasting Lab
Artificial Intelligence
Artificial Intelligence Lab
Natural Language Processing / DevOps
Natural Language Processing Lab / DevOps Lab
Fuzzy Systems and Pattern Recognition / Network Security and Cryptography
Fuzzy Systems and Pattern Recognition Lab / Network Security and Cryptography Lab
Advanced Web Technology
Advanced Web Technology Lab
Cloud Computing
Seminar/ Case Study
Scientific Research Writing Essentials-II

SEM-VII

Research Methodology
Bigdata Analytics
Bigdata Analytics Lab
Computer Vision and Image Processing
Computer Vision and Image Processing Lab
Minor Project A
Project Dissertation
Internship

SEM-VIII

Research Methodology
Bigdata Analytics
Bigdata Analytics Lab
Computer Vision and Image Processing
Computer Vision and Image Processing Lab
Minor Project A
Project Dissertation
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