

Vishwakarma University (VU), Pune

B.Tech in Artificial Intelligence & Machine Learning

4 Years – 8 Semesters Full Time Programme

Effective from AY 2023 – 2024

Programme Structure (NEP)

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

SEM-I

Applied Mathematics
Fundamental of Electronics
Computer Organization
Introduction to Computer Programming
Fundamental of Electronics Lab
Introduction to Computer Programming Lab
Web Technology Lab
Indian Knowledge System concepts and applications in Engineering
Capstone Project
Induction training

SEM-II

Corporate Communication
Prompt Engineering
Linear Algebra and Statistics
Processor Architecture
Logic Development and Programming
Logic Development and Programming Lab
Processor Architecture Lab
Technical Skill development Lab-1 (OOP using C++)
Computer Hardware Software Knowledge
Capstone Project

SEM-III

Applied Statistical Analysis
Applied Statistical Analysis Lab
Data Structures
Data Structures Lab
Financial Literacy and Banking
Project Based Learning-Python
Environmental Science-I
Discrete Structures
Ubiquitous Computing

SEM-IV

Business Intelligence
Business Intelligence Lab
Database Management System
Database Management System Lab
Technical Skill Development Lab-2 (Java)
Project Management
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
Machine Learning 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

SEM-VI

Neural Networks and Reinforcement Learning
Neural Networks and Reinforcement Learning Lab
Artificial Intelligence
Artificial Intelligence Lab
Natural Language Processing / DevOps
Natural Language Processing Lab / DevOps Lab
Fuzzy Systems and Pattern Recognition
Fuzzy Systems and Pattern Recognition Lab
Advanced Web Technology
Cloud Computing

SEM-VII

Generative AI
Generative AI Lab
Seminar
Case Study
Internship
SWMA

SEM-VIII

Artificial Internet of Things
Artificial Internet of Things Lab
AI in Health Informatics
Bioinformatics
Computer Vision and Image Processing
Augmented Reality and Virtual Reality
Research Methodology
Project
Minor Project Track A

**B.Tech in Artificial Intelligence & Machine Learning 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 Artificial Intelligence & Machine Learning 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 Artificial Intelligence & Machine Learning 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