

Vishwakarma University (VU), Pune
Bachelor of Computer Science (BTech CS)
4 Years – 8 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

Applied Mathematics
Fundamental of Electronics
Computer Organization
Introduction to Computer Programming
Fundamental of Electronics Lab
Introduction to Computer Programming Lab
Web Technology Lab
Capstone Project-I
Induction Training
Indian Knowledge System Concepts and Applications in Engineering

SEMESTER II

Prompt Engineering
Linear Algebra and Statistics
Processor Architecture
Logic Development and Programming
Logic Development and Programming Lab
Processor Architecture Lab
Introduction to Microcontroller programming Lab
Technical Skill development Lab-1(OOP using C++)
Capstone Project-II
Corporate Communication

SEMESTER III

Data Structures
Data Structures Lab
Fundamental of Data Science
Fundamental of Data Science Lab
Financial Literacy and Banking
Project Based Learning -Python

Environmental Science - I
Discrete Mathematics
Mobile Computing
Honors - Cyber Security and Cyber Laws

SEMESTER IV

Computer Graphics and Gaming
Computer Graphics and Gaming Lab
Database Management Systems
Database Management Systems Lab
Technical Skill development Lab - Java
Project Management
From Campus to Corporate - 1
Environmental Science - II
Multidisciplinary Course - Computational Theory
Open Elective - Information and Application Security
Honors - Application Security

SEMESTER V

Operating Systems
Operating Systems Lab
Computer Networks
Computer Networks Lab
Design and Analysis of Algorithms
Compiler Design/Embedded System Design
Compiler Design Lab /Embedded System Design Lab
Data Warehouse and Data Mining
Data Warehouse and Data Mining Lab
Software Engineering
Software Project Management
MOOC Course
Honors - Cloud and Mobile Security

SEMESTER VI

Artificial Intelligence
Artificial Intelligence Lab
Statistical Data Analysis and Visualization
Statistical Data Analysis and Visualization Lab
Machine Learning/Bioinformatics
Machine Learning Lab / Bioinformatics Lab

Ethical Hacking and Penetration Testing /Real Time Operating System
Ethical Hacking and Penetration Testing Lab / /Real Time Operating System Lab
Advance Web and Server Technology
Seminar or Case Study
Cloud Computing

SEMESTER VII

Project
Academic
Big Data Analytics
Big Data Analytics Lab
Ethical Hacking and Cyber Laws
Ethical Hacking and Cyber Laws Lab
Internet of Things
Internet of Things Lab
Project
OR
Internship

SEMESTER VIII

Academic
Big Data Analytics
Big Data Analytics Lab
Ethical Hacking and Cyber Laws
Ethical Hacking and Cyber Laws Lab
Internet of Things
Internet of Things Lab
OR
Internship
OR
Industry Immersion