

**Vishwakarma University (VU), Pune**  
**Bachelor of Computer Engineering (B.Tech CE)**  
**4 Years – 8 Semesters Full Time Programme**  
**Effective from AY 2022 – 2023**  
**Programme Structure (NEP)**  
**Choice Based Credit System (CBCS) and Grading System Outcome-Based Education**

**SEMESTER I**

Communication skills
Applied Mathematics
Fundamental of Electronics
Computer Organization and Architecture
Introduction to Computer Programming
Fundamental of Electronics Lab
Introduction to Computer Programming Lab
Web Technology Lab
Capstone Project
Induction training

**SEMESTER II**

Mobile Application Development
Linear Algebra and Statistics
Processor Architecture
Logic Development and Programming
Logic Development and Programming Lab
Mobile Application Development Lab
Processor Architecture Lab
Technical Skill development Lab-1 (OOP using C++)
Environmental Studies
Hardware and Software Workshop
Capstone Project

**SEMESTER III**

Discrete Mathematics
Data Structures
Applied Statistical Analysis
Data Structures - Lab
Applied Statistical Analysis Lab

Technology Skill Dev.-2 (Python)
Information Security Fundamentals
Open Elective 1 - Finance & Accounting
Open Elective 1 - Organization Behaviour

## **SEMESTER IV**

Theory of Computation
Computer Graphics and Gaming
Database Management Systems
Computer Graphics and Gaming Lab
Database Management Systems Lab
Technology Skill Dev.-3 (Java)
Advance Web Technology Lab
Application Security
Application Security Lab
Open Elective 2 - Yoga
Open Elective 2 - Indian Constitution

## **SEMESTER V**

Design and Analysis of Algorithms
Operating Systems
Computer Networks
System Programming
Operating Systems - Lab
Computer Networks - Lab
System Programming Lab
Data Warehouse and Data Mining
Data Warehouse and Data Mining Lab
Humanities Elective - Economics
Humanities Elective -Project Management
Aptitude Development-1

## **SEMESTER VI**

Software Engineering
Artificial Intelligence
Compiler Design
Software Engineering Lab
Artificial Intelligence Lab
Compiler Design Lab
Business Intelligence

Business Intelligence Lab
Network and cloud security
Network and cloud security
Project Stage 1
Aptitude Development-2

## SEMESTER VII

Project Stage 2
<b>Academic</b>
Big Data Analytics
Big Data Analytics Lab
Ethical Hacking and Cyber Laws
Ethical Hacking and Cyber Laws Lab
Machine Learning/ Internet of Things
Machine Learning Lab/ Internet of Things Lab
<b>OR</b>
<b>SAP Technical Programme Courses</b>
Intermediate ABAP Programming
Basic ABAP Programming
Back-End Developer - ABAP Cloud
Fiori Foundation
<b>OR</b>
Internship

## SEMESTER VIII

<b>Academic</b>
Big Data Analytics
Big Data Analytics Lab
Ethical Hacking and Cyber Laws
Ethical Hacking and Cyber Laws Lab
Machine Learning/ Internet of Things
Machine Learning Lab/ Internet of Things Lab
<b>OR</b>
Internship
<b>OR</b>
Industry Immersion