# ACHARYA

# ACHARYA INSTITUTE OF TECHNOLOGY

#### Affiliated to VTU



- Accredited, industry-aligned programs with expert faculty.
- Access to LinkedIn and high-performance laptops for seamless learning.
- In-demand certifications in EV, Cyber Security, and more for career advantage.
- Global exposure through partnerships and a diverse student body.
- Cutting-edge labs and a digital library for comprehensive resources.
- Collaborations with top corporations offering internships and projects.
- Vibrant clubs and activities focused on holistic development.
- Robust placement support with 550+ recruiting companies annually.

# B.E COMPUTER SCIENCE & ENGINEERING

Specialization in Cyber Seurity powered by **EC-Council** 

## About

Computer Science Engineering involves the study of computer systems, algorithms, programming languages, software development, and the design and analysis of computer hardware. Our extensive course equips students with problem-solving skills, adaptability, and a mastery of coding, making them ready to play a crucial role in shaping today's technology-driven world. Additionally, our partnership with the EC Council enriches their understanding of cybersecurity challenges, providing an opportunity for certification by the company.

#### **Career Scope**

**High Demand**: Computer Science Engineering graduates are high in demand as the field is rapidly evolving. There's a wide range of lucrative career opportunities for them in the tech industry.

**Versatile Jobs**: Graduates have job opportunities in diverse fields, including finance, healthcare, entertainment, and more.

**Global Opportunities**: The skills gained from a Computer Science Engineering degree are in demand globally. Students can work for leading tech companies, startups, research institutions, or pursue entrepreneurship.

## Eligibility

Pass in 10+2 / Higher Secondary (HS) / Pre University (PUC) / 'A' Level (with 12 years of schooling) or its equivalent with English as one of the languages. Shall have secured a minimum of 45% marks in aggregate in Physics, Mathematics and any one of the following:

Chemistry, Biology, Computer Science, Electronics. AIT admits students as per prevailing rules and regulations of VTU.

Candidate must have completed 17 years by June - for the year of admission.

**Duration** years

# **COURSE CONTENT**

#### Semester 1

- Mathematics I for CSE Stream ٠
- Applied Physics for CSE stream ٠
- Principles of Programming Using C •
- Engineering Science Course I ٠
- Emerging Technology Course I ٠
- Programming Languages Course I ٠
- Communicative English •
- Professional Writing Skills in English ō
- Samskrutika Kannada / Balake Kannada ٠
- Indian Constitution ٠
- Innovation and Design Thinking •
- Scientific Foundations of Health •

#### Semester 3

- Mathematics for Computer Science •
- Digital Design & Computer Organization ٠
- **Operating Systems** ٠
- Data Structures and Applications •
- Data Structures Lab •
- ESC/ETC/PLC •
- Object Oriented Programming with Java
- Object Oriented Programming with C++
- Social Connect and Responsibility
- Ability Enhancement Course/Skill Enhancement Course - III
- Data analytics with Excel
- R Programming
- Project Management with Git
- Data Visualization with Python
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)

#### Semester 2

- Mathematics-II forCSE Stream
- Applied Chemistry for CSE Stream
- Computer-Aided Engineering Drawing
- Engineering Science Course II
- Programming Language Course II
- Emerging Technology Course II
- Professional Writing Skills in English
- Communicative English
- Indian Constitution
- Samskrutika Kannada / Balake Kannada
- Scientific Foundations of Health
- Innovation and Design Thinking

#### Semester 4

- Analysis & Design of Algorithms
- **Microcontrollers**
- Database Management Systems
- Analysis & Design of Algorithms Lab
- ESC/ETC/PLC
  - **Discrete Mathematical Structures**
  - Graph Theory
  - Optimization Technique
  - Linear Algebra
- Ability Enhancement Course / Skill Enhancement Course- IV
  - Green IT and Sustainability
  - Capacity Planning for IT
  - UI/UX (Lab)
  - Technical writing using LATEX (Lab)
- Biology For Engineers
- Universal human values course
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoqa

- Yoqa

#### Semester 5

Software Engineering & Project Management

- Computer Networks
- Theory of Computation
- Web Technology Lab •
- Professional Elective Course
- **Computer Graphics**
- Unix System Programming
- Artificial Intelligence
- Distributed Systems
- Mini Project •
- Research Methodology and IPR ٠
- **Environmental Studies** •
- National Service Scheme (NSS) ۲
- Physical Education (PE) (Sports and Athletics) ٠
- Yoga •

#### Semester 7

- Internet of Things
- Parallel Computing •
- Cryptography & Network Security Professional Elective Course ٠
- ٠
- Deep Learning •
- Natural Language Processing ٠
- Enterprise Data Warehousing ٠
- Big Data Analytics ٠
- **Open Elective Course** ۲ Introduction to DBMS Introduction to Algorithms Software Engineering
- Major Project Phase-II

#### Semester 6

- Cloud Computing (Open Stack /Google)
- Machine Learning
- Professional Elective Course
- Blockchain Technology
- **Computer Vision**
- Compiler Design
- Advanced Java
- **Open Elective Course** Introduction to Data Structures
  - Fundamentals of Operating Systems Mobile Application Development
- Introduction to AI
- Project Phase I
- Machine Learning lab
- Ability Enhancement Course/Skill Development Course - V
  - Progressive App Development
    - Agile
  - Tosca Automated Software Testing
  - Devops
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

#### Semester 8

Professional Elective (Online Courses) Only through NPTEL

- Open Elective (Online Courses) Only through NPTEL
- Internship (Industry/Research) (14 20 weeks)



## Acharya Legacy

11 Institutions

**15** Research Centers

**10PP**rogrammes

754 Nationalities

1200P+ Students

**100P**+Eminent Faculties

12PAcres State-of-the-Art Campus

Founded in 1990, Acharya aims to revolutionize education. With over 12,000 students and 100+ academic programs annually, it stands among the global education elite. Located in India's technical hub, Bangalore, Acharya prioritizes innovation and knowledge. The institution fosters experiential and collaborative learning, shaping well-rounded individuals, evident in its diverse student population from 75+ countries.

**B Premnath Reddy** Founder Chairman Acharya Group

# Acharya Offerings - click on each to know more ... »

Academic Studio



Clubs

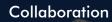


Research



Habba







**Digital Library** 



#### Sports



PROGRAMS OFFERED





Laboratories



Hostels



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