



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
(DATA SCIENCE)**

Specialization in Cyber
Security powered by
EC-Council

About

Our intensive skill-oriented program provides students with practical training in constructing business models for analytics. The curriculum's interdisciplinary nature integrates elements from computer science, statistics, mathematics, and domain-specific areas where data science is applied. Moreover, our partnership with the EC Council enhances students' comprehension of cybersecurity challenges, presenting an opportunity for certification by the company.

Career Scope

Fulfilling Career: Pursuing a course in Computer Engineering and Data Science provides a solid foundation for a dynamic and impactful career in technology, offering a combination of technical expertise, problem-solving skills, and the ability to navigate the ever-evolving landscape of information technology and data-driven decision-making.

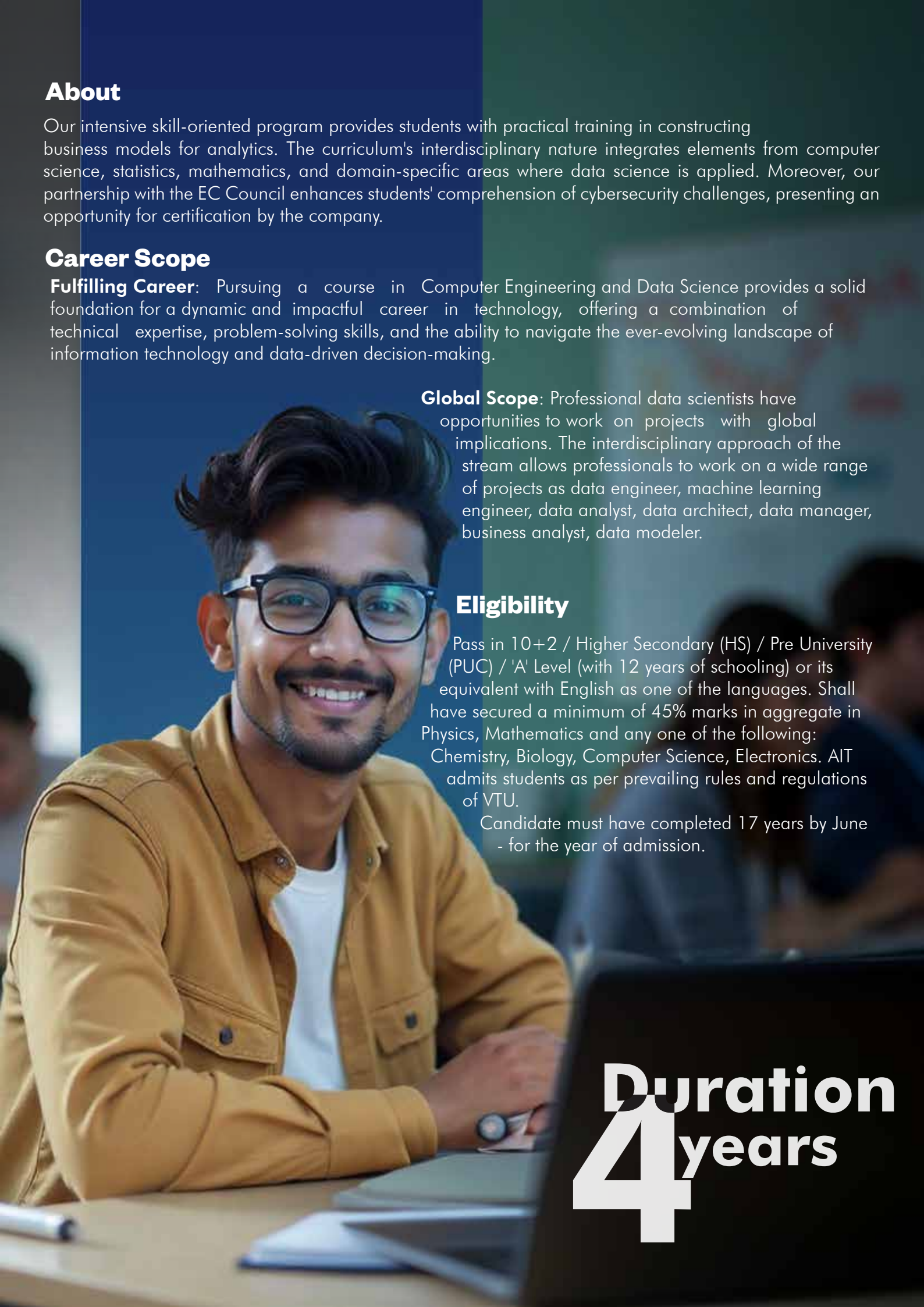
Global Scope: Professional data scientists have opportunities to work on projects with global implications. The interdisciplinary approach of the stream allows professionals to work on a wide range of projects as data engineer, machine learning engineer, data analyst, data architect, data manager, business analyst, data modeler.

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
4 years



COURSE CONTENT

Semester 1

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

Semester 3

- Mathematics for Computer Science
- Digital Design & Computer Organization
- Operating Systems
- Data Structures and Applications
- Data Structures and Applications
- Data Structures Lab
- ESC/ETC/PLC
 - Object Oriented Programming with Java
 - Python Programming for Data Science
 - Data Analytics with R
- Social Connect and Responsibility
- Ability Enhancement Course/Skill Enhancement Course - III
 - Data Analytics with Excel
 - Ethics and Public Policy for AI
 - Project Management with Git
 - PHP Programming
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 2

- Mathematics-II for CSE 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 Kannad
- Scientific Foundations of Health

Semester 4

- Analysis & Design of Algorithms
- Microcontrollers
- Database Management Systems
- Analysis & Design of Algorithms Lab
- ESC/ETC/PLC
 - Scala
 - MongoDB
 - MERN
 - Julia
- Ability Enhancement Course/Skill Enhancement Course- IV
 - Discrete Mathematical Structures
 - Metric Spaces
 - Optimization for Machine Learning
 - Algorithmic Game Theory
- Biology For Engineers
- Universal human values course
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga



Semester 5

- Software Engineering & Project Management
- Computer Networks (NS-2/3)
- Theory of Computation
- Data Visualization Lab
- Professional Elective Course
- Mini Project
- Research Methodology and IPR
- Environmental Studies
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 7

- Scalable Computing
- Statistical Machine Learning for Data Science
- Information & Network Security
- Professional Elective Course
 - IOT Analytics
 - Business Analytics
 - Data Engineering & MLOps
 - Deep Learning
- Open Elective Course
 - Introduction to DBMS
 - Introduction to Algorithms
 - Software Engineering
 - Data Management
- Major Project Phase-II

Semester 6

- Big Data Analytics
- Artificial Intelligence & Machine Learning
- Professional Elective Course
 - Natural Language Processing
 - Exploratory Data Analysis
 - Blockchain Technology
 - Time Series Analysis
- Open Elective Course
 - Fundamentals of Operating Systems
 - Introduction to Data Structures
 - Mobile Application Development
 - Introduction to AI
- Project Phase I
- Machine Learning lab
- Ability Enhancement Course/Skill Development Course V
 - Explainable AI
 - PyTorch
 - Generative AI
 - Devops
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 8

- Professional Elective (Online Courses) Only through NPTEL
- BOS will publish courses based on the availability
- Open Elective (Online Courses) Only through NPTEL
- BOS will publish courses based on the availability
- Internship (Industry/Research) (14 - 20 weeks)



Acharya Legacy

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.

11 Institutions

15 Research Centers

100+ Programmes

75+ Nationalities

12000+ Students

1000+ Eminent Faculties

120 Acres State-of-the-Art Campus

B Premnath Reddy
Founder Chairman
Acharya Group

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Collaboration



Center of Excellence



Clubs



Digital Library



Laboratories



Research



Sports



Hostels



Habba



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