

# CURRICULUM

## I Semester

- Calculus and Matrix Algebra
- Engineering Physics
- Electrical and Electronics for Computational Thinking
- Mind Management and Human Values – 1
- Problem Solving Techniques
- Engineering Chemistry
- Communicative English
- Research and Entrepreneurship Project

## II Semester

- Probability and Vector Spaces
- Python Programming
- Foundations of AI
- Workshop Practices
- PCL - 1 - Research and Entrepreneurship Project
- Biology for Engineers
- Mind Management and Human Values – 2
- Data Structures for problem solving
- Digital Logic Design

### III Semester

- Introduction to DevOps
- Operating System
- Computer organisation & Architecture
- Foundations of Mathematics –I+
- Discrete Mathematical structures
- Software Engineering & Project management
- Database Management Systems
- Introduction to computer networks and security
- Research and Entrepreneurship Project.

## IV Semester

- Machine Learning
- Design and Analysis of Algorithms
- Environmental Studies
- Automation in software development
- Open Elective I
- Foundations of Mathematics –II+
- PCL -2 Research and Entrepreneurship Project
- Internship-1

## V Semester

- Build and Release Management
- Software Development & Project Management
- Research Methodology
- Department-Specific Elective I
- Advanced Machine Learning
- Cloud Computing & DevOps on Cloud
- Open Elective II
- Research and Entrepreneurship Project

## VI Semester

- AI for DevOps
- Continuous Integration and Continuous Deployment (CI & CD)
- Department Specific Elective II
- Department Specific Elective III
- Open Elective III
- PCL -3 Research and Entrepreneurship Project
- Internship-2

## VII Semester

- Automation and Scripting for DevOps
- AI-Driven testing
- Indian Constitution
- Intellectual Property Rights
- Department Specific Elective IV
- Department Specific Elective V
- Open Elective IV
- Mini Project

## VIII Semester

- Department Specific Elective VI
- AI Powered DevOps: Resilient system
- ML Ops for DevOps
- Internship-3
- Research (Publications/Patent)