Course Structure

1st Year Common Curriculum:

In the first year of this UG Engineering Course, all students are divided into two groups. One group goes through the Physics Cycle and the remaining go through the Chemistry Cycle. The subjects taught in both cycles are the same, but the order is different. Students will study 'Computer Concepts & Programming". This subject will give them the right foundation for further study in the field of Computer Science & Engineering.

The Computer Science Engineering syllabus is as follows:

I & II SEMESTER

- Calculus & Differential Equations
- Engineering Physics
- Basic Electrical Engineerin
- Elements of Civil Engineering and Mechanics
- Engineering Visualization
- Engineering Physics Laboratory
- Basic Electrical Engineering Laboratory
- Communicative English
- Innovation and Design Thinking / Scientific Foundations of Health
- Advanced Calculus and Numerical Methods
- Engineering Chemistry
- Problem-Solving through Programming
- Basic Electronics & Communication Engineering
- Elements of Mechanical Engineering
- Engineering Chemistry Laboratory
- Computer Programming Laboratory
- Professional Writing Skills in English

III SEMESTER

- Transform Calculus, Fourier Series and Numerical Techniques
- Data Structures and Applications
- Analog and Digital Electronics
- Computer Organization and Architecture
- Object Oriented Programming with JAVA Laboratory
- Social Connect and Responsibility
- Samskrutika Kannada / Balake Kannada / Constitution of India and Professional Ethics
- Ability Enhancement Course – III (Mastering Office / Programming in C++)

IV SEMESTER

- Mathematical Foundations for Computing
- Design and Analysis of Algorithms
- Microcontroller and Embedded Systems
- Operating Systems
- Biology for Engineers
- Python Programming Laboratory
- Samskrutika Kannada / Balake Kannada / Constitution of India and Professional Ethics
- Ability Enhancement Course- IV (Web Programming / Unix Shell Programming)
- Universal Human Values
- Inter/Intra Institutional Internship

V SEMESTER

- Automata Theory and compiler Design
- Computer Networks
- Database Management Systems
- Artificial Intelligence and Machine Learning
- Database Management Systems Laboratory with Mini Project
- Research Methodology & Intellectual Property Rights
- Environmental Studies
- Ability Enhancement Course-V (Angular JS and Node JS / C# and .Net Framework)

VI SEMESTER

- Software Engineering & Project Management
- Fullstack Development
- Computer Graphics and Fundamentals of Image Processing
- Professional Elective Course-I
- Open Elective Course-I
- Computer Graphics and Image Processing Laboratory
- Mini Project
- Innovation/Entrepreneurship /Societal Internship

VII SEMESTER

- Big Data Analytics
- Cloud Computing
- Professional elective Course-II
- Professional elective Course-III
- Open elective Course-II
- Project work

VIII SEMESTER

- Technical Seminar
- Research Internship/ Industry Internship
- National Service Scheme (NSS) / Physical Education (PE) (Sports and Athletics) / Yoga

ELECTIVE

Students can choose from the following electives:

PROFESSIONAL ELECTIVE-1

- Agile Technology
- Advanced JAVA Programming
- Advanced Computer Architecture
- Data science and Visualization

OPEN ELECTIVES I – OFFERED BY THE DEPARTMENT TO OTHER DEPARTMENT STUDENTS

- Introduction to Data Structures
- Introduction to Database Management Systems
- Introduction to Cyber Security
- Programming in JAVA

PROFESSIONAL ELECTIVE-2

- Object oriented Modelling and Design
- Digital Image Processing
- Cryptography and Network Security
- Blockchain Technology
- Internet of Things

PROFESSIONAL ELECTIVE-3

- Software Architecture and Design Patterns Multiagent Systems
- Deep Learning
- Robotic Process Automation Design and Development
- NoSQL Data Base

OPEN ELECTIVES II - OFFERED BY THE DEPARTMENT TO OTHER DEPARTMENT STUDENTS

- Programming in Python
- Introduction to AI and ML
- Introduction to Big Data
- Introduction to Data Science

PROFESSIONAL ELECTIVE-4

- Mobile Computing
- Advanced Computer Architectures
- NoSQL Database