

# **B.Tech (Computer Science & Business System)**

## **Course Structure**

### **Semester 1**

- Basic Electrical Engineering [Engineering Sciences Courses]
- Engineering Graphics Lab [Engineering Sciences Courses]
- Introduction to Environmental Studies [Engineering Sciences Courses]
- Applied Mathematics- I [Basic Sciences Courses]
- Engineering Chemistry [Basic Sciences Courses]
- Technical Communication – I [Communication Skills]
- Foreign Business Language
- Open Elective Courses
- Outdoor Activity Based Courses

### **Semester 2**

- Engineering Mechanics [Engineering Sciences Courses]
- Introduction to Computers and Programming in C [Engineering Sciences Courses]
- Workshop Practices [Engineering Sciences Courses]
- Applied Mathematics - II [Basic Sciences Courses]
- Engineering Physics [Basic Sciences Courses]
- Technical Communication – II [Communication Skills]
- Foreign Business Language
- Open Elective Courses
- Outdoor Activity Based Courses

### **Semester 3**

- Term Paper [Non-Teaching Credit Courses]
- Basic Electronics Engineering [Engineering Sciences Courses]
- Object Oriented Programming [Engineering Sciences Courses]
- Data Structures Using C [Core Courses]
- Introduction to Management Principles [Core Courses]
- Computer Organization and Architecture [Core Courses]
- Applied Mathematics- III [Basic Sciences Courses]
- Foreign Business Language
- Open Elective Courses
- Outdoor Activity Based Courses

### **Semester 4**

- Information Theory & Coding [Specialisation Electives for Hons. (Networks and Information Security)]
- Cloud Computing Practitioner [Specialisation Electives for Hons. (Cloud Computing)]
- Exploring the Networks [Industry Specific Courses]
- Self-Reliance and Socialization [Human Social Sciences & Management Courses]
- Basic Simulation Lab [Engineering Sciences Courses]
- Database Management Systems [Core Courses]

- Operations Management [Core Courses]
- Operating System [Core Courses]
- Statistical Methods [Basic Sciences Courses]
- Foreign Business Language
- Open Elective Courses
- Outdoor Activity Based Courses

## **Semester 5**

- Analysis and Design of Algorithms [Core Courses]
- Business Research Methods [Core Courses]
- Software Engineering [Core Courses]
- Managerial Economics [Specialisation Elective Courses]
- Accounting for Management [Specialisation Elective Courses]
- Kinematics and Dynamics of Machines [Specialisation Electives for Minor Degree (Robotics )]
- Information Theory & Coding [Specialisation Electives for Hons. (Networks and Information Security )]
- Essentials of IoT [Specialisation Electives for Hons. (IoT )]
- Introduction To Data Science [Specialisation Electives for Hons. (Data Science & Analytics )]
- Cloud Computing Practitioner [Specialisation Electives for Hons. (Cloud Computing )]
- Introduction to Web Technologies [Specialisation Elective Courses]
- Intelligent Systems and Design Thinking [Specialisation Elective Courses]
- Cyber and Information Security [Specialisation Elective Courses]
- Discrete Mathematical Structures [Specialisation Elective Courses]
- Distributed System [Specialisation Elective Courses]
- Green Computing [Specialisation Elective Courses]
- Intelligent Systems and design thinking [Specialisation Elective Courses]
- In-House Practical Training [Non-Teaching Credit Courses]
- Exploring the Networks [Industry Specific Courses]
- Aptitude and Reasoning Ability [Employability & Skill Enhancement Courses]
- Introduction to Python [Specialisation Elective Courses]
- Cognitive Skills, Leadership and Decision Making [Behavioural Science]
- Foreign Business Language
- Open Elective Courses
- Outdoor Activity Based Courses

## **Semester 6**

- Embedded Robotics Programming [Specialisation Electives for Minor Degree (Robotics )]
- Fundamentals of Molecular Modelling and Drug Design [Specialisation Electives for Minor Degree (Bioinformatics )]
- Network Management and Security [Specialisation Electives for Hons. (Networks and Information Security )]
- IoT System & Applications [Specialisation Electives for Hons. (IoT )]
- R Programming [Specialisation Electives for Hons. (Data Science & Analytics )]
- Linux for Devices [Specialisation Electives for Hons. (Cloud Computing )]

- Fundamentals of Data Analytics [Specialisation Electives for Hons. (Artificial Intelligence and Machine Learning ) ]
- Artificial Intelligence [Core Courses]
- Software Project Management [Core Courses]
- Entrepreneurship and New Venture Creation [Core Courses]
- Mobile Application Development [Specialisation Elective Courses]
- IT Infrastructure Management [Specialisation Elective Courses]
- Marketing Management [Specialisation Elective Courses]
- Human Resource Management [Specialisation Elective Courses]
- Cognitive Science & Analytics [Specialisation Elective Courses]
- Computer Graphics [Specialisation Elective Courses]
- Data Center Virtualization [Specialisation Elective Courses]
- Data Mining and Business Intelligence [Specialisation Elective Courses]
- Full Stack Development [Specialisation Elective Courses]
- Information Assurance and Security [Specialisation Elective Courses]
- Linux for Devices [Specialisation Elective Courses]
- Optimization Methods [Specialisation Elective Courses]
- Parallel Computing [Specialisation Elective Courses]
- Routing and Switching in Networks [Specialisation Elective Courses]
- Data Analytics with Python [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Innovation by Designs [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Product Management & Research [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Software Conceptual Design [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Programming and Employability Skills [Employability & Skill Enhancement Courses]
- Country Report [SAP Courses (Optional)]
- Understanding Principles & Practices of Commercial Research [SAP Courses (Optional)]
- Professional Ethics and Social Responsibility [Professional Ethics]
- Foreign Business Language
- Open Elective Courses
- Outdoor Activity Based Courses

## **Semester 7**

- Strategic Management [Core Courses]
- Financial Modeling [Specialisation Elective Courses]
- Legal Aspects of Business [Specialisation Elective Courses]
- International Business & Practice [Specialisation Elective Courses]
- Advanced Network Solution [Specialisation Elective Courses]
- Big Data Analytics [Specialisation Elective Courses]
- Cloud Infrastructure Services [Specialisation Elective Courses]
- Software Testing and Quality Assurance [Specialisation Elective Courses]
- Block Chain and Distributed Ledger Technologies [Specialisation Elective Courses]
- Simulation and Modeling [Specialisation Elective Courses]
- Internet of Things [Specialisation Elective Courses]
- Principles of 3D-Applications [Specialisation Elective Courses]

- Principles of Virtual Reality [Specialisation Elective Courses]
- Data Center Virtualization [Specialisation Elective Courses]
- Advanced Java Programming [Specialisation Elective Courses]
- Digital Image Processing and Computer Vision [Specialisation Elective Courses]
- Dynamic Routing and Troubleshooting [Specialisation Elective Courses]
- Industry Internship [Non-Teaching Credit Courses]
- Introduction to Machine Learning [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Social Networks [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Deep Learning and Artificial Intelligence [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Ethical Hacking - NPTEL [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Machine Learning with Python [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Product Management & Research [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Social Networks [MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)]
- Minor Project [Mandatory Courses]
- Professional Ethics and Social Responsibility [Professional Ethics]
- Open Elective Courses
- Outdoor Activity Based Courses

## **Semester 8**

- Major Project [Non-Teaching Credit Courses]