# B.Tech in Computer Science & Engineering - Internet of Things

#### **I Semester**

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- Engineering Physics
- Communicative English
- Fundamentals of Electrical and Electronics Engineering
- Mind Management and Human values -1
- Applied Chemistry
- Problem Solving Techniques
- Calculus and Matrix Algebra

#### **II Semester**

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- PCL-1 Research and Entrepreneurship Project
- Object Oriented Programming
- Probability and Vector Space
- Biology for Engineers
- Data Structures
- Digital Logic Design
- Python Programming
- Mind Management and Human Values 2
- Workshop Practices

#### **III Semester**



- Economics for Engineers
- Operating Systems
- Computer Organization and Architecture
- Foundation of Mathematics 1+
- Discrete Mathematics and Graph Theory
- Software Engineering
- Indian Constitution
- Project Centric Learning

#### **IV Semester**

- Optimization Techniques
- Internet of Things
- Python Programming for IoT
- Design and Analysis of Algorithms
- Open Elective 1
- Database Management Systems
- Foundation of Mathematics 2+
- Project 1
- Internship-1

#### **V** Semester

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- Data Communication and Networks
- Sensor Technologies
- Department Specific Elective 1
- Research Methodology
- Microprocessor and Microcontrollers
- Open Elective 2
- Project Centric Learning
- Business Communication and Presentation Skills

### **VI Semester**



- Embedded System Design
- Department Specific Elective 2
- Web Programming
- Department Specific Elective 3
- Open Elective 4
- Environmental Studies
- Project 2
- Internship 2

# VII Semester

- IoT System Design
- Department Specific Elective 4
- Machine Learning
- Communication Protocol
- Department Specific Elective 5
- Open Elective 5
- Project 3

## **VIII Semester**

- Applications of IoT in
- Robotics and Automation
- Department Specific Elective 6
- IoT in 5G Mobile Technologies
- Intellectual Property Rights
- Research\*
- Internship-3

Department Specific Electives								
DSE Tracks		Elective-I	Elective-II	Elective-III	Elective-IV	Elective-V	Elective-VI	
		5 <sup>th</sup> Semester	6 <sup>th</sup> Semester	6 <sup>th</sup> Semester	7 <sup>th</sup> Semester	7 <sup>th</sup> Semester	8 <sup>th</sup> Semester	
Track I	Data Science and IOT (Internet of Things) Engineer	Data warehousing and data mining	Big Data Analytics	Data Science for IOT	Business Intelligence for IOT	Predictive Models in IOT using Machine Learning	IOT based Data Analytics for Healthcare Industry	
Track II	IOT Developer	IOT Platform Design	Industry 4.0	Edge Computing	Smart Contracts	Fog Computing	Block Chain Technology	
Track III	IOT Security Specialist	Information theory and coding	Cryptography and Network security	Cyber Security	IOT Security Implementation	Ethical Hacking	Security and Privacy in IOT	

Computer Science and Engineering (Open Elective Baskets)							
SI. No	Finance and Accounting	Entrepreneurship and new venture creation	Marketing and Management				
1	Finance for non-finance professionals	Entrepreneurship Theory and Practice	Marketing Management				
2	Wealth Management	Launching and managing an enterprise	Consumer Behavior				
3	Indian Financial System	Business Plan and Project Implementation	Brand Management				
4	Financial Reporting	Sustainable Entrepreneurship	Product Management				