#### B.Tech in Computer Science & Engineering - Cloud Technology and Information Security

### I Semester Engineering Physics • Fundamentals of Electrical and Electronics Engineering • Communicative English • Problem Solving Techniques • Calculus and Matrix Algebra Applied Chemistry ■ Mind Management and Human Values - 1 PCL 1- Research and Entrepreneurship Project **II Semester** Data Structures Probability and Vector Space Mind Management and Human Values – 2 Object Oriented Programming Digital Logic Design Workshop Practices Biology for Engineers Python Programming PCL 1- Research and Entrepreneurship Project **III Semester** Economics for Engineers Operating Systems • Computer Organization and Architecture ■ Foundations of Mathematics - 1+ Discrete Mathematics and Graph Theory Design and Analysis of Algorithms Indian Constitution Project Centric Learning

## **IV Semester** Inferential Statistics Web Programming and Testing Data Communication and Networks Software Engineering Open Elective I Database Management Systems • Fundamentals of Mathematics - 2+ Project 2 Internship -1 **V** Semester Information Security Cloud Computing Department Specific Elective I Research Methodology Ethical Hacking Open Elective II Cryptography & Network Security • Project Centric Learning **VI Semester** Storage Management and Data Center Cyber Forensics and Investigation ■ Department Specific Elective II Department Specific Elective III Open Elective III • Environmental Studies Project 3 ■ Internship -2

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- Cyber Security Incident and Response management
- Cyber Threats and Attack Vectors
- Department Specific Elective IV
- Department Specific Elective V
- Open Elective IV
- Project 4

#### VIII Semester

- Department Specific Elective VI
- Cloud Migration
- DevOps
- Intellectual Property Rights
- Internship -3
- Research\*

Department Specific Electives								
CTIS (Cloud Technology & Information Security) Tracks		Elective-I	Elective-II	Elective-III	Elective-IV	Elective-V	Elective-VI	
		5th Semester	6th Semester	6th Semester	7th Semester	7th Semester	8th Semester	
Track-	Cloud Administration	Cloud Administrator	Cloud Application and web security	Server Administration	Infrastructure solutions on cloud	IT Governance, Risk, and information security management	Cloud administrator Services	
Track-	Cloud Services solutions	Security and Privacy in Big Data Analytics	Hacktivism and Cyber War Fare	Cloud Web Services	Cloud data engineering	Block Chain Technologies	Cyber security attacks and Defense	
Track-	IoT (Internet of Things) and Cloud Security	Sensor Technology in IoT	IoT Security	IoT Cloud architecture	loT cloud solution development	Cloud Security Tools and Cyber Attacks	Advanced System Security Design	

Computer Science and Engineering (Open Elective Baskets)								
Sl. 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					