

Specialization: Data Science and Artificial Intelligence	
Course Name	Remarks
Semester 5	
<ul style="list-style-type: none"> • Big Data Analytics • Soft Computing • Advanced-Data Science 	Choose Only One
Semester 6	
<ul style="list-style-type: none"> • Natural Language Processing and Text Analytics • Data Science in Financial Markets • Biomedical Data Analysis • Deep Learning 	Choose any Two
Semester 7	
<ul style="list-style-type: none"> • Social Network Analysis • Computer Vision • Data Science and Complex System • Audio and Speech Processing 	Choose any Two

Specialization: Cyber Security	
Course Name	Remarks
Semester 5	
<ul style="list-style-type: none"> • Security Attack and Defense • Fog Computing • Cyber security tools and cyber-attacks 	Choose Only one
Semester 6	

<ul style="list-style-type: none"> • Information retrieval and Security • Cyber Forensics • Blockchain • Security Risk Analysis 	Choose any Two
Semester 7	
<ul style="list-style-type: none"> • Vulnerability Assessment and Penetration Testing • Security Audit • Cloud Security • Cyber Threat Intelligence 	Choose any Two

Specialization: Internet of Things	
Course Name	Remarks
Semester 5	
<ul style="list-style-type: none"> • Sensor, Actuators, and Programming in IoT • Embedded System • IoT devices 	Choose Only One
Semester 6	
<ul style="list-style-type: none"> • IoT Architecture and Protocols • Communications and Networking Technologies for IoT • Applications of IoT in Industrial, commercial, and home automation 	Choose any Two
Semester 7	
<ul style="list-style-type: none"> • IoT Using RFID and Microcontroller 	

<ul style="list-style-type: none"> • Industrial and Medical IoT • IoT in Big Data 	Choose any Two
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*Note- A student enrolling in BTech in Computer Science and Engineering can also have major specialization in VLSI design, Automobile Engineering, Robotics and Automation. For the description of these specializations, please follow the link of major specializations in EComE, ME (add the two links of major specializations of EcomE and ME)

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