



BTECH DIGITAL FORENSIC & INCIDENT RESPONSE

Semester wise Courses

SEMESTER 1	SEMESTER 2
Mathematics	Discrete Mathematics
Applied Physics	Computer System & Organization Architecture
Programming and Data structures	Database Management Systems
IT Landscape and Cyber Security Fundamentals	Computer Networking Basics and Systems Security
Cyber Laws Basics & Cyber Hygiene	Introduction to Cloud Computing and Virtualization
Web Technologies	Course Elective - 1
Human wellbeing Personality Development Program - OE	<ul style="list-style-type: none"> • CISCO
Business Communication	<ul style="list-style-type: none"> • Cyber Defense
Open Elective - 1	<ul style="list-style-type: none"> • Emerging Technologies in Cyber Space - Online (JIT)
<ul style="list-style-type: none"> • Yoga and Meditation 	<ul style="list-style-type: none"> • Colloquium
<ul style="list-style-type: none"> • Blog Writing 	<ul style="list-style-type: none"> • Cyber Volunteering (Social Internship)
<ul style="list-style-type: none"> • Agriculture Organic Farming 	Practical
<ul style="list-style-type: none"> • Design Thinking - PE 	Computer System Organization & Architecture - Lab
Practical	Computer Networking Basics and Systems Security - Lab
Applied Physics	Database Management Systems - Lab
Programming and Data Structures - Lab	Introduction to Cloud Computing and Virtualization - Lab
Web Technologies - Lab	Course Elective Lab

SEMESTER 3	SEMESTER 4
Advanced Data Structures using Object Oriented Programming	Design and Analysis of Algorithms
Security Attack Modeling using Formal Languages and Automata	Scripting Languages
Critical Information Infrastructure	Threat Intelligence Sensors
Open Source Intelligence	Specialization Elective - 1
Basic Electronics Engineering with Microprocessors and Embedded Systems	<ul style="list-style-type: none"> • IT Application & Data Security • Data Communication & Networks Security • Electronic Data Privacy and Security Standards • CyberSecurity Strategy, Policy and Diplomacy/Security Management
Operating Systems	Open Elective - 3
Cryptography	<ul style="list-style-type: none"> • Advance Yoga and Meditation • Dance and Music • Digital Journalism • CyberPeace Corps Social Internship
Open Elective - 2	
<ul style="list-style-type: none"> • Digital Detox • Environmental Science • Professional Report Writing Mix Mode 	
Practical	Practical
Advanced Data Structures using Object Oriented Programming - Lab	Threat Intelligence Sensors - Lab
Basic Electronics Engineering with Microprocessors and Embedded Systems - Lab	Design and Analysis of Algorithms - Lab
Operating Systems Lab	Scripting Languages
Security Attack Modeling using Formal Languages and Automata - Lab	Specialization Elective 1 - Lab
Cryptography - Lab	Electronic Data Privacy and Security Standards - Lab
Open Source Intelligence - Lab	Project 1
Advance Technologies in CyberSpace	

SEMESTER 5	SEMESTER 6
Introduction to SOC and SIEM	Artificial Intelligence and Machine Learning
Elementary Assembly Language and Malware Analysis	Parallel and High Performance Computing
Cloud Computing Architecture and Deployment	Real Time Operating System and Security
Distributed Database System	Course Elective - 3
Course Elective - 2	<ul style="list-style-type: none"> • Multimedia and Image Processing
<ul style="list-style-type: none"> • Blockchain Technologies 	<ul style="list-style-type: none"> • Computer Graphics
<ul style="list-style-type: none"> • IOT & Automation 	<ul style="list-style-type: none"> • Software Project Management Using Agile Methods
<ul style="list-style-type: none"> • Computational Logics 	<ul style="list-style-type: none"> • Dataware Warehousing and Data Mining
<ul style="list-style-type: none"> • Business Process Reengineering 	<ul style="list-style-type: none"> • Java Programming and Android Application Development
Specialization Elective 2	Specialization Elective - 2
<ul style="list-style-type: none"> • NOC 	<ul style="list-style-type: none"> • Privacy and Security and Online Social Media
<ul style="list-style-type: none"> • Return Oriented Programming 	<ul style="list-style-type: none"> • IT Risk Analysis, Mitigation and Compliances
<ul style="list-style-type: none"> • Attack Analysis and Reverse Engineering 	<ul style="list-style-type: none"> • DNS Architecture and Security
<ul style="list-style-type: none"> • Digital Forensic 	<ul style="list-style-type: none"> • Digital Image Forensic
Open Elective - 4	Open Elective - 5
<ul style="list-style-type: none"> • Internet Governance 	<ul style="list-style-type: none"> • Disaster Management
<ul style="list-style-type: none"> • Indian Constitution 	<ul style="list-style-type: none"> • Business Accounting
<ul style="list-style-type: none"> • IPR 	<ul style="list-style-type: none"> • Business Ideation and Entrepreneurship Practices
<ul style="list-style-type: none"> • Cyber Insurance 	<ul style="list-style-type: none"> • Sensatization for Gender and Physical Ability
<ul style="list-style-type: none"> • Recent Trends in CyberSpace 3 	<ul style="list-style-type: none"> • Cyber Terrorism and Digital Warfare
<ul style="list-style-type: none"> • Project 2 Ideation and Synopsis Submission 	<ul style="list-style-type: none"> • Project 2 Implementation and Presentation
Practical	Practical
Assembly Language fundamental and Malware Analysis - Lab	Artificial Intelligence and Machine Learning - Lab
Cloud Computing Architecture and Deployment - Lab	Parallel and High Performance Computing - Lab
Distributed Database System - Lab	Real Time Operating System and Security - Lab
Specialization Elective 2 Lab	Java Programming and Android Application Development - Lab
Cyber Marshal - Social Internship	

SEMESTER 7	SEMESTER 8
E-Waste and Data Security Practices	Professional Ethics
Course Elective - 4	Course Elective 7
<ul style="list-style-type: none"> • Computational Intelligence 	<ul style="list-style-type: none"> • Search Engine Logic and Information Retrieval Techniques
<ul style="list-style-type: none"> • System Software / Compiler Design 	
<ul style="list-style-type: none"> • Web Services and Service Oriented Architecture 	<ul style="list-style-type: none"> • Information Life Cycle management
<ul style="list-style-type: none"> • Enterprise Resource Planning and Customer Relation Management 	<ul style="list-style-type: none"> • IT Business Continuity & Disaster Recovery planning
Course Elective - 5	Course Elective 8
<ul style="list-style-type: none"> • Big Data Analytics 	<ul style="list-style-type: none"> • Predictive Analysis
<ul style="list-style-type: none"> • Business Analytics 	<ul style="list-style-type: none"> • Business Simulation Modelling
<ul style="list-style-type: none"> • Digital Business Management 	<ul style="list-style-type: none"> • Optimization Techniques
<ul style="list-style-type: none"> • E-Commerce 	Major Project Dissertation
Course Elective - 6	
<ul style="list-style-type: none"> • Data Encoding and Compression Techniques 	
<ul style="list-style-type: none"> • Security Metrics and Key Performance Indicators 	
Specialization Elective - 4	
<ul style="list-style-type: none"> • Mobile Application Security 	
<ul style="list-style-type: none"> • Steganography 	
<ul style="list-style-type: none"> • Information Security Management Certification 	
Open Elective - 6	
<ul style="list-style-type: none"> • CSR 	
<ul style="list-style-type: none"> • Digital Media Marketing 	
<ul style="list-style-type: none"> • Cyber Law Basics 	
<ul style="list-style-type: none"> • Mental Conditioning and Stress Management 	
<ul style="list-style-type: none"> • Employability Planning and Preparation 	
<ul style="list-style-type: none"> • Summer Internship Report and Presentation 	
Major Project	