Program Schemes for *BE (CSE) (Hons.) (with Specialization in Cyber Security) (In association with IBM) Regular 2026 (CS230) & LEET 2027 (CS232)*

Cluster: Engineering **Institute**: UIE

Department: AIT-CSE **Type of Program:** UG

SEMESTER-1		
Course Name	**Course Category**	**Credits**
Logical Thinking & Problem Solving	Major Core	4
Mathematics-I	Major Core	5
Communication Skills-I	Skill Enhancement	1
Semiconductor Physics And Applications	Major Core	3
Universal Human Values, Ethics And Life Skills-1	Value Education	1
AI Applications Lab	Ability Enhancement	1
Computer Graphics Lab	Major Core	1
Engineering Physics	Major Core	4
Academic & Career Pathway Planning	Value Education	0

SEMESTER-2		
Course Name	**Course Category**	**Credits**
Data Structures & Algorithms	Major Core	4
Mathematics-II	Major Core	5
Communications Skills - II	Skill Enhancement	1
Programming Practice	Major Core	1
Digital Electronics	Major Core	4
Emerging & Disruptive Technologies Workshop	Major Core	1
Design Thinking and Innovation	Skill Enhancement	1
General Proficiency-I	Ability Enhancement	1
Soft Skills-I	Skill Enhancement	1
Biology for Engineers	Major Core	3

SEMESTER-3		
Course Name	**Course Category**	**Credits**
Computer Organization and	Major Core	3

Architecture		
Advanced Data Structures	Major Core	4
Agile Development Methodologies	Minor Core	4
Database Management System	Major Core	4
Object Oriented Programming using JAVA	Major Elective	2
Probability and Statistics	Major Core	4
Universal Human Values, Ethics and Life Skills-2	Value Education	2
Social Internship	Internship	2
Aptitude-I	Ability Enhancement	1
Gender Equity and Empowerment	Value Education	1
Entrepreneurship Mindset	Ability Enhancement	1
Critical Enquiry and Research Methodology	Ability Enhancement	1
General Proficiency-II	Ability Enhancement	1

SEMESTER-4		
Course Name	**Course Category**	**Credits**
Operating System	Major Core	5
Computer Networks	Major Core	4
Advanced Database Management System	Major Core	1
Professional Elective -I	Minor Elective	4
Statistical Methods for AI	Major Core	4
RIE-1	Ability Enhancement	1
RIE-2	Skill Enhancement	1
General Proficiency-III	Skill Enhancement	1
Competitive Coding-I	Skill Enhancement	1
Mid-Grade Project-1	Project	**1**

SEMESTER-5		
Course Name	**Course Category**	**Credits**
Security Intelligence	Major Elective	4
Full Stack Development -I	Minor Core	2
Design and Analysis of Algorithms	Major Core	4
Programming in Python	Major Core	4
Competitive Coding-II	Skill Enhancement	1

Professional Elective -II	Minor Elective	1
Professional Elective -III	Minor Elective	3
Technical Internship	Internship	1
RIE-3	Skill Enhancement	1
RIE-4	Ability Enhancement	1
General Proficiency-IV	Skill Enhancement	1

SEMESTER-6		
Course Name	**Course Category**	**Credits**
System Design	Major Core	3
Identity and Access Manager	Major Elective	4
Theory of Computation	Major Core	3
Professional Elective-IV	Minor Elective	3
Professional Elective-V	Minor Elective	3
Mid-Grade Project-2	Project	1
RIE-5	Skill Enhancement	1
RIE-6	Ability Enhancement	1
Competitive Coding-III	Skill Enhancement	1
Full Stack Development-II	Major Core	2
Software Engineering	Major Core	2

SEMESTER-7		
Course Name	**Course Category**	**Credits**
Incident Response & Threat Hunting	Minor Core	4
Professional Elective-VI	Minor Elective	3
Capstone Project – I	Project	3
Open Elective-I	Open Elective	3
Open Elective-II	Open Elective	3
Environmental Science and Management	Value Education	2
Industrial Internship	Internship	1

Professional Ethics	Ability Enhancement	1
Competitive Coding-IV	Skill Enhancement	1
Introduction to SDGs	Value Education	1

SEMESTER-8		
Course Name	**Course Category**	**Credits**
AI and NLP	Minor Core	4
Capstone Project – II	Project	9
Open Elective-III	Open Elective	3

Program Electives			
Semester	**Course Name**	**Course Category**	**Credits**
4th	Fundamental of Cybersecurity	Minor Elective	4
4th	Cloud Fundamentals	Minor Elective	4
5th	Applied Network Security	Minor Elective	1
5th	Applied Cryptography	Minor Elective	1
5th	Governance, Risk and Compliance	Minor Elective	3
5th	IOT Architecture	Minor Elective	3
6th	Cyber Threat Intelligence	Minor Elective	3
6th	Blockchain Technology	Minor Elective	3
6th	Fundamental of Malware Analysis	Minor Elective	3
6th	Digital Forensics	Minor Elective	3
6th	Big Data Security	Minor Elective	3
7th	Cloud Security	Minor Elective	3
7th	Fundamental of SOC & SIEM	Minor Elective	3
7th	Prompt Engineering	Minor Elective	3