

Bachelor of Technology in Computer Science and Engineering (Cyber Security)

School of Computer Science and Engineering

Programme Credit Structure		Credits			CSE2008	Operating Systems	3	2	4
University Core Courses		80			CSE1005	Software Engineering	3	2	4
Programme Core Courses		40			CSE3002	Artificial Intelligence	3	2	4
Programme Elective / Specialization Elective		20			CSE2007	Database Management Systems	3	2	4
University Elective		20			CSE3003	Computer Networks	3	2	4
Total Graded Credit Requirement		160			ECE2002	Computer Architecture and Organization	4	0	4
University Core		80			CSE1008	Theory of Computation	4	0	4
Specialization Electives		20							
Course Code	Course Title	T	P	C	CSE1007	Introduction to Cryptography [Compulsory]	3	2	4
MAT1001	Calculus for Engineers	3	2	4	CSE2011	Cyber Security and Digital Forensics	3	2	4
MAT1002	Applications of Differential and Difference Equations	4	0	4	CSE4043	Intrusion Detection and Prevention System	3	2	4
MATXXXX	Probability and Statistics	3	2	4	CSE3040	Incident Response Management System	3	2	4
PHY1008	Modern Physics	3	2	4	CSE4015	Network and System Administration	3	2	4
CHY1009	Chemistry and Environmental Studies	3	2	4	CSE3012	Network Security	3	2	4
CSE1012	Problem Solving using Python	3	2	4	CSE4031	Web Application Security	3	2	4
CSE2005	Object Oriented Programming using JAVA	3	2	4	CSE3041	Malware Analysis	3	2	4
CSE2001	Data Structures and Algorithms	3	2	4	CSE4048	Vulnerability Assessment and Penetration Testing	3	2	4
ECE1002	Fundamentals of Electrical and Electronics Engineering	3	2	4	University Electives 20				
ENG1001/ENG1002	English for Essential Communication/ English for Effective Communication	2	2	3	Compulsory for PAT Registered Students				
ENG1002/ENG2001	English for Effective Communication /English for Professional Communication	2	2	3	CSE2025	AWS Solution Architect			
FRLXXXX	Foreign Language	2	0	2	CSE1022	Introduction to Programming			
MGT1001	Ethics and Values	0	2	2	STSXXX	Competitive Coding Course-I			
MGT1040	Entrepreneurship	3	2	4	STSXXX	Competitive Coding Course-II			
XXXX	Indian Studies	2	0	2	STSXXX	Competitive Coding Course-III			
STSXXXX	Qualitative and Quantitative Skills Practice I	3	0	1	STSXXX	Competitive Coding Course-IV			
STSXXXX	Qualitative and Quantitative Skills Practice II	3	0	1	Engineering Sciences Humanities Social Sciences Liberal arts Economics Finance Management				
BIC4002	Industrial Internship/ Senior Design Project	0	0	12	Honours Degree (20 credits) - Students can opt for an Honours Degree" in the same discipline by earning 20 credits in addition to the minimum credit requirement of the Undergraduate Degree from the courses listed in the Honours options.				
CAP4001	Capstone	0	0	6	Minors Degree (20 credits) - Students can opt for a "Minor Degree" in other disciplines 20 credits in addition to the mini-mum credit requirement of the Undergraduate Degree from the courses listed in the Minor options.				
SIT1001	Summer Internship	0	0	2	Double Major Degree (40 credits) -Students can opt for a "Double Major" in other disciplines by earning 40 credits in addition to the minimum credit requirement of the Undergraduate Degree from the courses listed in the Second Major options.				
ECS2002	Engineering Clinics - System Design	0	4	2					
ECS3001	Engineering Clinics - Real Time System	0	4	2					
EXCXXXX	Extracurricular Activities				2				
Programme Core		40							
ECE1003	Digital Logic Design	3	2	4					
MAT1003	Discrete Mathematical Structures	4	0	4					
CSE3004	Design and Analysis of Algorithms	3	2	4					