

# Bachelor of Technology in Computer Science and Engineering (Cybersecurity)

School of Computer Science Engineering and Information Systems

Programme Credit Structure		Credits	Programme Core Courses		40
<b>University Core Courses</b>		60	BACSE103	Computation Structures	3 0 2 4
<b>Professional Core Courses</b>		60	BACSE104	Structured and Object-Oriented Programming	2 0 4 4
Programme Core		40	BACSE105	Data Structures and Algorithm Analysis	3 0 2 4
Concentration		20	BACSE106	Operating Systems	3 0 2 4
<b>Open Elective Courses</b>		40	BACSE201	Models of Computation	3 1 0 4
<b>Total Graded Credit Requirement</b>		160	BACSE202	Database Systems	3 0 2 4
<b>University Core Courses</b>		<b>60</b>	BACSE203	Computer Networks	3 0 2 4
	<b>L T P C</b>		BACSE204	Software Engineering	3 0 2 4
BAPHY100	Physics*	4	BACSE205	Fundamentals of Artificial Intelligence and Machine Learning	3 0 2 4
BACHY100	Chemistry*	4	BAMAT205	Discrete Mathematics and Linear Algebra	3 1 0 4
BAMAT101	Multivariable Calculus and Differential Equations	3 0 2 4	<b>Concentration</b>		
BAMAT200	Mathematics II*	4	<b>Cybersecurity</b>		
BAEEEE101	Basic Engineering	3 0 2 4	<b>20</b>		
BACSE101	Problem Solving Using Python	0 0 4 2	BACSE319	Cryptography and Network Security	3 0 2 4
BACSE102	Problem Solving Using Java	0 0 4 2	BACSE320	Penetration Testing and Vulnerability Assessment	3 0 2 4
BAENG101	Technical English Communication	3 0 2 4	BACSE321	Cyber Crime and Forensics	3 0 2 4
BASTS101	Qualitative and Quantitative Skills Practice I	3 0 0 1	BACSE322	Malware Analysis and Mitigation Techniques	3 0 2 4
BASTS102	Qualitative and Quantitative Skills Practice II	3 0 0 1	BACSE323	Artificial Intelligence for Cybersecurity	3 1 0 4
BAFLC100	Foreign Language	1 0 2 2	<b>Open Elective Courses</b>		
BAHSM100	Humanities, Social Science and Management	3 0 0 3	<b>40</b>		
BAHUM101	India Studies	1 0 0 1	Engineering   Sciences   Humanities   Social Sciences   Liberal Arts   Economics   Finance   Management		
BACHY101	Environmental Sciences	2 0 0 2	<b>Ancillary (20 credits)</b> - Students can opt for "Ancillary" in other disciplines by earning 20 credits from the courses listed in the Ancillary options under Open Elective. Ancillary details will be mentioned only on the transcript.		
BAHUM100	Ethics and Values*	2	<b>Additional Concentration (20 credits)</b> - Students can opt for "Additional Concentrations" in their own discipline by earning 20 credits from the courses listed in the Concentration options under Open Elective. Concentration details will be mentioned only on the transcript.		
BAMGT101	Entrepreneurship	3 0 0 3	<b>Minor (additional 20 credits)</b> - Students can opt for a "Minor Degree" in other disciplines 20 credits in addition to the minimum credit requirement of the Undergraduate Degree from the courses listed in the Minor options		
BACSE191	Basic Multidisciplinary Project	0 0 4 2			
BACSE291	Innovative Design Project	0 0 4 2			
BACSE391	Research / Design Project	0 0 6 3			
BACSE491	Technical Answers for Real World Problems	1 0 4 3			
BACSE399	Internship I	0 0 2 1			
BACSE499	Internship II / Capstone Project	0 0 12 6			
BAENG100	Effective English Communication (NCC)	0 0 4 2			
BAEXC100	Extracurricular Activities (NCCM)	0 0 4 2			
<b>*-Basket Details</b>					
BAPHY105	Engineering Physics	3 0 2 4			
BACHY105	Applied Chemistry	3 0 2 4			
BAMAT207	Probability and Statistics	3 0 2 4			
BAHUM103	Ethics and Values	2 0 0 2			

**Second Major (additional 40 credits)** - Students can opt for a "Second 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.