

Bachelor of Technology in Computer Science and Engineering (Data Science)

School of Computer Science and Engineering

Programme Credit Structure			Credits	Programme Core Courses				40			
University Core Courses			60	BACSE103	Computation Structures	3	0	2	4		
Professional Core Courses			60	BACSE104	Structured and Object-Oriented Programming	2	0	4	4		
Programme Core			40								
Concentration			20	BACSE105	Data Structures and Algorithm Analysis	3	0	2	4		
Open Elective Courses			40								
Total Graded Credit Requirement			160	BACSE106	Operating Systems	3	0	2	4		
				BACSE201	Models of Computation	3	1	0	4		
University Core Courses			60	BACSE202	Database Systems	3	0	2	4		
			L T P C	BACSE203	Computer Networks	3	0	2	4		
BAPHY100	Physics*		4	BACSE204	Software Engineering	3	0	2	4		
BACHY100	Chemistry*		4	BACSE205	Fundamentals of Artificial Intelligence and Machine Learning	3	0	2	4		
BAMAT101	Multivariable Calculus and Differential Equations	3	0	2	4	BAMAT205	Discrete Mathematics and Linear Algebra	3	1	0	4
BAMAT200	Mathematics II*		4								
BAEEE101	Basic Engineering	3	0	2	4	Concentration					
BACSE101	Problem Solving Using Python	0	0	4	2	Data Science					
BACSE102	Problem Solving Using Java	0	0	4	2	20					
BAENG101	Technical English Communication	3	0	2	4	BACSE304	Exploratory Data Analysis	3	0	2	4
BASTS101	Qualitative and Quantitative Skills Practice I	3	0	0	1	BACSE305	Foundations of Data Science	3	0	2	4
BASTS102	Qualitative and Quantitative Skills Practice II	3	0	0	1	BACSE306	MLOps	3	0	2	4
BAFLC100	Foreign Language	1	0	2	2	BACSE307	Mining Massive Data	3	0	2	4
BAHSM100	Humanities, Social Science and Management	3	0	0	3	BACSE402	Data Security	3	1	0	4
BAHUM101	India Studies	1	0	0	1	Open Elective Courses					
BACHY101	Environmental Sciences	2	0	0	2	40					
BAHUM100	Ethics and Values*		2	Engineering Sciences Humanities Social Sciences Liberal Arts Economics Finance Management							
BAMGT101	Entrepreneurship	3	0	0	3	Ancillary (20 credits) - Students can opt for "Ancillary" 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.					
BACSE191	Basic Multidisciplinary Project	0	0	4	2	Additional Concentration (20 credits) - 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.					
BACSE291	Innovative Design Project	0	0	4	2	Minor (additional 20 credits) - 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					
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						
*-Basket Details											
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						

Concentration

Data Science

20

BACSE304	Exploratory Data Analysis	3	0	2	4
BACSE305	Foundations of Data Science	3	0	2	4
BACSE306	MLOps	3	0	2	4
BACSE307	Mining Massive Data	3	0	2	4
BACSE402	Data Security	3	1	0	4

Open Elective Courses

40

Engineering | Sciences | Humanities | Social Sciences | Liberal Arts | Economics | Finance | Management

Ancillary (20 credits) - 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.

Additional Concentration (20 credits) - 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.

Minor (additional 20 credits) - 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

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.