

Bachelor of Technology in Computer Science and Engineering (Cyber Physical Systems)

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 | BACSE105 | Data Structures and Algorithm Analysis | 3 0 2 4 |
| Concentration | | 20 | BACSE106 | Operating Systems | 3 0 2 4 |
| Open Elective Courses | | 40 | BACSE201 | Models of Computation | 3 1 0 4 |
| Total Graded Credit Requirement | | 160 | BACSE202 | Database Systems | 3 0 2 4 |
| University Core Courses | | 60 | BACSE203 | Computer Networks | 3 0 2 4 |
| | L T P C | | 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 | Concentration | | |
| BAMAT200 | Mathematics II* | 4 | Cyber Physical System | | |
| BAEEEE101 | Basic Engineering | 3 0 2 4 | BACSE312 | Embedded Systems | 3 0 2 4 |
| BACSE101 | Problem Solving Using Python | 0 0 4 2 | BACSE313 | Internet of Things | 3 0 2 4 |
| BACSE102 | Problem Solving Using Java | 0 0 4 2 | BACSE314 | Security and Privacy in Cyber Physical Systems | 3 0 2 4 |
| BAENG101 | Technical English Communication | 3 0 2 4 | BACSE315 | Cyber Physical Systems Design | 3 0 2 4 |
| BASTS101 | Qualitative and Quantitative Skills Practice I | 3 0 0 1 | BACSE316 | Sensors and Actuators | 3 0 2 4 |
| BASTS102 | Qualitative and Quantitative Skills Practice II | 3 0 0 1 | Open Elective Courses | | |
| BAFLC100 | Foreign Language | 1 0 2 2 | Engineering Sciences Humanities Social Sciences Liberal Arts Economics Finance Management | | |
| BAHSM100 | Humanities, Social Science and Management | 3 0 0 3 | 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. | | |
| BAHUM101 | India Studies | 1 0 0 1 | 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. | | |
| BACHY101 | Environmental Sciences | 2 0 0 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 | | |
| BAHUM100 | Ethics and Values* | 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. | | |
| BAMGT101 | Entrepreneurship | 3 0 0 3 | | | |
| 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 | | | |
| *-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 | | | |