B.Tech. in Engineering Sciences
Course Curriculum for AY: 2025-26

Semester I

Course No.	Course Title	Credits
CHE103	Engineering Design and Drawing	3
CHM101	General Chemistry	3
EES101	Earth Materials and Processes	3
HSS101	English for Communication	2
MTH102	Linear Algebra	3
PHY101	Mechanics	3
PHY103	General Physics Laboratory I	1
PT101	Physical Training	0
Elective Courses (Any One)		
BIO101*	Biology I: Biomolecules	3
ECO101*	Principles of Economics I	3
Total Credits		21

Semester II

Course No.	Course Title	Credits
CHM112	Basic Organic Chemistry I	3
MTH101	Calculus of One Variable	3
PHY106	Quantum Physics	3
EES102	Introduction to Environmental Sciences	3
ECS102	Introduction to Programming	3
CHM114	Chemistry Laboratory I	1
Elective Courses (Any One)		
BIO102*	Biology II: Fundamentals of Cell Biology	3
ECO102*	Principles of Economics II	3
Total Credits		19

* BS (Engineering Sciences) students can take either BIO101 or ECO101 in their 1st semester, followed by BIO102 or ECO102, respectively in their 2nd semester. In other words, these students must either do both BIO101 and BIO102 in their 1st year, or both ECO101 and ECO102.

Chemical Engineering
B.Tech./M.Tech Course Curriculum

Semester III

Course No.	Course Title
CHE***	Fluid Mechanics
CHE***	Chemical Engineering Thermodyanamics
CHE***	Chemical Process Calculations
CHE***	Fluid Mechanics and Thermodynamics Laboratory
CHE***	Open Elective I

Semester IV

Course No.	Course Title
CHE***	Mechanical Operations
CHE***	Chemical Reaction Engineering I
CHE***	Heat Transfer Operations
CHE***	Mechanical Operations and Heat Transfer Laboratory
*** ***	Open Elective II

Semester V

Course No.	Course Title
CHE***	Chemical Process Technology
CHE***	Mass Transfer
CHE***	Numerical Methods in Chemical Engineering
CHE***	Chemical Reaction Engineering and Mass Transfer Laboratory
*** ***	Open Elective III

Semester VI

Course No.	Course Title
CHE***	Chemical Reaction Engineering II
CHE***	Process Dynamics and Control
CHE***	Separation Process
CHE***	Departmental Elective I
*** ***	Open Elective IV

Chemical Engineering
B.Tech./M.Tech Course Curriculum

Semester VII

Course No.	Course Title
CHE***	Process Design and Economics
CHE***	Process Equipment Deign
CHE***	Transport Phenomena
CHE***	Process Modelling and Simulation
CHE ***	B.Tech. Project
CHE ***	Industrial / Research Internship

Semester VIII

Course No.	Course Title
CHE***	B. Tech Project
CHE***	Department Elective II
CHE***	Department Elective III
CHE***	Principles of Management and Industrial Psychology
*** ***	Open Elective V

Semester IX

Course No.	Course Title
CHE***	M.Tech. Thesis
CHE***	Department Elective IV
*** ***	Open Elective VI

Semester X

Course No.	Course Title
CHE***	M.Tech. Thesis

Data Science and Engineering
B.Tech./M.Tech Course Curriculum

Semester III

Course No.	Course Title
DSE***	Engineering Mathematics
DSE***	Probability and Random Processes
DSE***	Data Structures and Algorithm
DSE***	Signals and Systems
DSE***	Optimization Techniques
DSE***	Data Structures Laboratory
DSE***	Database Management System
ECO500	Law Relating to Intellectual Property and Patents

Semester IV

Course No.	Course Title
DSE***	Advanced Programming
DSE***	Algorithms
DSE***	Data Science in Practice
DSE***	Machine Learning
DSE***	Computer Organization

Semester V

Course No.	Course Title
DSE***	Deep Learning
DSE***	Deep Learning Laboratory
DSE***	Computer Vision
DSE***	Artificial Intelligence
DSE***	Discrete Mathematics
DSE***	Departmental Elective

Semester VI

Course No.	Course Title
DSE***	Natural Language Processing
DSE***	Departmental Elective
DSE***	Departmental Elective
*** ***	Open Elective
*** ***	Open Elective

Data Science and Engineering
B.Tech./M.Tech Course Curriculum

Semester VII

Course No.	Course Title
DSE***	Departmental Elective
DSE***	Departmental Elective
*** ***	Open Elective
*** ***	Open Elective
*** ***	Open Elective

Semester VIII

Course No.	Course Title
DSE***	B.Tech. Thesis

Semester IX

Course No.	Course Title
DSE***	M.Tech. Thesis
DSE***	Department Elective
DSE***	Department Elective

Semester X

Course No.	Course Title
DSE***	M.Tech. Thesis

Electronics and Communication Engineering
B.Tech./M.Tech Course Curriculum

Semester III

Course No.	Course Title
ECS***	Engineering Mathematics
ECS***	Network/Circuit Theory
ECS***	Data Structure and Algorithm
ECS***	Signals and Systems
ECS***	Electronic Devices
ECS***	Basic Electronics Laboratory
ECO500	Law Relating to Intellectual Property and Patents

Semester IV

Course No.	Course Title
ECS***	Principles of Communication
ECS***	Analog Circuits
ECS***	Digital Circuits and Systems
ECS***	Machine Learning
ECS***	Electronic Devices Laboratory
ECS***	Analog and Digital Circuit Laboratory

Semester V

Course No.	Course Title
ECS***	Microcontroller and Embedded Systems
ECS***	Eletromagnetic Theory
ECS***	Probability and Random Processes
ECS***	RF Comunication and Systems
ECS***	Microcontroller and Embedded Systems Laboratroy
ECS***	Communication Laboratory

Semester VI

Course No.	Course Title
ECS***	Control Systems
ECS***	Digital Signal Processing
ECS***	Digital Communication
ECS***	Information Theory and Coding
ECS***	Control and Instrumentation System Laboratory
ECS***	B. Tech. Project Work I

Electronics and Communication Engineering
B.Tech./M.Tech Course Curriculum

Semester VII

Course No.	Course Title
ECS***	Departmental Elective
ECS***	Departmental Elective
*** ***	Open Elective
AND	
ECS***	B.Tech. Project Work II
OR	
*** ***	Open Elective
*** ***	Open Elective

Semester VII

Course No.	Course Title
ECS***	Departmental Elective
*** ***	Open Elective
*** ***	Open Elective
AND	
ECS***	B.Tech. Project Work III
OR	
*** ***	Open Elective
*** ***	Open Elective

Semester IX

Course No.	Course Title
ECS***	M.Tech. Thesis
*** ***	Open Elective
*** ***	Open Elective

Semester X

Course No.	Course Title
ECS***	M.Tech. Thesis

Computer Science and Engineering
B.Tech./M.Tech Course Curriculum

Semester III

Course No.	Course Title
ECS***	Engineering Mathematics
ECS***	Discrete Mathematics
ECS***	Data Structure and Algorithm
ECS***	Numerical Methods
ECS***	Data Structure and Algorithm Laboratroy
ECS***	Optimization Techniques
ECO500	Law Relating to Intellectual Property and Patents

Semester IV

Course No.	Course Title
ECS***	Database Management System
ECS***	Advanced Programming
ECS***	Algorithms
ECS***	Digital Circuits and Login Design
ECS***	Machine Learning
ECS***	Digital Circuits and Login Design Laboratory

Semester V

Course No.	Course Title
ECS***	Computer Organization
ECS***	Theory of Computation
ECS***	Probability and Random Processes
ECS***	Operating Systems
ECS***	Artificial Intelligence
ECS***	Operating Systems Laboratory

Semester VI

Course No.	Course Title
ECS***	Software Engineering
ECS***	Compiler Design
ECS***	Computer Networks
ECS***	Information and Theory and Coding
ECS***	Computer Networks and Embedded Systems Laboratory
ECS***	B. Tech. Project Work I

Computer Science and Engineering
B.Tech./M.Tech Course Curriculum

Semester VII

Course No.	Course Title
ECS***	Departmental Elective
ECS***	Departmental Elective
*** ***	Open Elective
AND	
ECS***	B.Tech. Project Work II
OR	
*** ***	Open Elective
*** ***	Open Elective

Semester VII

Course No.	Course Title
ECS***	Departmental Elective
*** ***	Open Elective
*** ***	Open Elective
AND	
ECS***	B.Tech. Project Work III
OR	
*** ***	Open Elective
*** ***	Open Elective

Semester IX

Course No.	Course Title
ECS***	M.Tech. Thesis
*** ***	Open Elective
*** ***	Open Elective

Semester X

Course No.	Course Title
ECS***	M.Tech. Thesis