

Structure for

Bachelor of Technology (B.Tech.)

in

Electronics and Computer Engineering

With effect from A.Y. 2023-2024

B.TECH IN ELECTRONICS AND COMPUTER ENGINEERING

Semester-I

Course Code	Course Category	Course Name
231FEUES11	Engineering Science	Engineering Mathematics-I
231FEUES12	Engineering Science	Engineering Chemistry
231FEUES13	Engineering Science	Engineering Graphics
231FEUES14	Engineering Science	Basic Electrical Engineering
231FEUEL11	Engineering Science	Engineering Chemistry Lab
231FEUEL12	Engineering Science	Engineering Graphics Lab
231FEUEL13	Engineering Science	Basic Electrical Engineering Lab
231FEUVS11	Vocational and Skill Enhancement Course	Basic Workshop Practices – I
231FEUIK11	Indian Knowledge System	Indian Cultural Studies
231FEUCO11	Co-Curricular Courses	Health and Wellness

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Semester-II

Course Code	Course Category	Course Name
231FEUES21	Engineering Science	Engineering Mathematics-II
231FEUES22	Engineering Science	Engineering Physics
231FEUES23	Engineering Science	Engineering Mechanics
231FEUCC21	Program Core Course	C Programming
231FEUAE21	Ability Enhancement Course	English for Engineers
231FEUEL21	Engineering Science	Engineering Physics Lab
231FEUEL22	Engineering Science	Engineering Mechanics Lab
231FEUCL21	Program Core Course	C Programming Lab
231FEUVS21	Vocational and Skill Enhancement Course	Basic Workshop Practices - II
231FEUCO21	Co-Curricular Courses	Sports and Yoga

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Semester-III

Course Code	Course Category	Course Name
231ECUCC31	Programme Core Course	Electronic Devices and Circuit Theory
231ECUCC32	Programme Core Course	Database Management System
231ECUMM31	MDM- I Multidisciplinary Minor	Applied Mathematics– III
231ENUOE1X	Open Elective I	OE-I
231ENUAE31	Ability Enhancement Course	Professional Communication and Ethics
231ENUHS31	Humanities Social Science and Management	Entrepreneurship Development and Management
231ENUVE31	Value Education Course	Environmental Science
231ECUVS31	Vocational Skill Enhancement Course	Skill Based Lab I (OOPM)
231ECUCL31	Programme Core Course Lab	Electronic Devices and Circuit Theory Lab
231ECUCL32	Programme Core Course Lab	Database Management System Lab

OPEN ELECTIVE –I

Course Code	Course Category	Course Name
231ENUOE11	Management	Human Resource Management
231ENUOE12	Marketing	Macroeconomics
231ENUOE13	Social	Disaster Management and Mitigation Measures
231ENUOE14	Tech	Ethics for IT Users
231ENUOE15	Behavior	Innovation and Creativity

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Semester-IV

Course Code	Course Category	Course Name
231ECUCC41	Programme Core Course	Digital Logic Design
231ECUCC42	PCC (Programme Core Course)	Data Structures
231ECUMM41	MDM – II (Multidisciplinary Minor)	Applied Mathematics- IV
231ENUOE2X	OE II (Open Elective) Other than a particular programme	OE-II
231ENUOE3X	OE III (Open Elective) Other than a particular programme	OE-III
231ENUHS41	HSSM (Humanities Social Science and Management)	Financial Management
231ENUVE41	VEC (Value Education Course)	Digital Technological Solutions
231ECUFP41	CEP/FP (Common Engineering Project/ Field Project)	Mini Project-I
231ECUCL41	PCC (Programme Core Course) Lab	Digital Logic Design Lab
231ECUCL42	PCC (Programme Core Course) Lab	Data Structures Lab
231ENUAU41	Audit Course	Constitution Of India

OPEN ELECTIVE –II

Course Code	Course Category	Course Name
231ENUOE21	Management	Project Management
231ENUOE22	Marketing	E-commerce and Digital Marketing
231ENUOE23	Social	Gender, Economy, and Work
231ENUOE24	Tech	Usability Analysis
231ENUOE25	Behavior	Stress Management

OPEN ELECTIVE –III

Course Code	Course Category	Course Name
231ENUOE31	Management	Management Information Systems
231ENUOE32	Marketing	Product Lifecycle Management
231ENUOE33	Social	Emerging Trends in Technology
231ENUOE34	Tech	Cyber and Data Laws
231ENUOE35	Behavior	Design Thinking

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Semester-V

Course Code	Course Category	Course Name
231ECUCC51	PCC (Programme Core Course)	Microprocessor and Microcontroller Applications
231ECUCC52	PCC (Programme Core Course)	Design and Analysis of Algorithms
231ECUCC53	PCC (Programme Core Course)	Digital Signal Processing
231ECUEC1X	PEC I (Program Elective Course) I	PEC-1
231ECUMM51	MDM III (Multidisciplinary Minor)	Software Engineering
231ECUMM52	MDM IV (Multidisciplinary Minor)	Analog and Digital Communication
231ENUOE4X	OE IV (Open Elective) Other than a particular programme	OE-IV
231ECUCL51	PCC (Programme Core Course) Lab	Microprocessor and Microcontroller Applications Lab
231ECUCL52	PCC (Programme Core Course) Lab	Design and Analysis of Algorithms Lab
231ECUCL53	PCC (Programme Core Course) Lab	Digital Signal Processing Lab
231ECUEL1X	PEC I Lab	PEC - I Lab

Program Elective Course-I (PEC-I)

231ECUEC11	Web Technology
231ECUEC12	Introduction to Data Science
231ECUEC13	Computer Organization and Architecture
231ECUEC14	VLSI Design

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Semester-VI

Course Code	Course Category	Course Name
231ECUCC61	PCC (Programme Core Course)	Artificial Intelligence and Machine Learning
231ECUCC62	PCC (Programme Core Course)	Control Systems
231ECUEC2X	PEC II (Program Elective Course)	PEC-II
231ECUEC3X	PEC III (Program Elective Course)	PEC-III
231ECUMM51	MDM V (Multidisciplinary Minor)	Computer Networks
231ECUVS61	VSEC (Vocational and Skill Enhancement Course)	Skill Based Lab-II Python and R
231ECUCL61	PCC(Programme Core Course)Lab	Artificial Intelligence and Machine Learning Lab
231ECUCL62	PCC(Programme Core Course)Lab	Control Systems Lab
231ECUEL2X	PEC II (Program Elective Course) Lab	PEC-II Lab
231ECUEL3X	PEC III (Program Elective Course) Lab	PEC-III Lab

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Program Elective Course-II-(PEC-II)		Program Elective Course-II (PEC-III)	
231ECUEC21	Embedded Systems	231ECUEC31	Computer Graphics
231ECUEC22	Verilog HDL	231ECUEC32	Cloud Computing
231ECUEC23	Linear Integrated Circuits	231ECUEC33	Data Warehousing and Mining
231ECUEC24	Introduction to Drones	231ECUEC34	Cryptography and Network Security

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Semester-VII

Course Code	Course Category	Course Name
231ECUCC71	PCC (Programme Core Course)	Robotics
231ECUCC72	PCC (Programme Core Course)	High Performance Computing
231ECUEC4X	PEC IV (Program Elective Course)	PEC IV
231ECUEC5X	PEC V (Program Elective Course)	PEC V
231ENURM71	Research Methodology	Research Methodology
231ENURM72	Research Methodology	Intellectual Property Rights
231ECUCL71	PCC(Programme Core Course) Lab	Robotics Lab
231ECUCL72	PCC(Programme Core Course) Lab	High Performance Computing Lab
231ECUEL4X	PECIV (Program Elective Course) Lab	PEC IV Lab
231ECUEL5X	PEC V (Program Elective Course) Lab	PEC V Lab

Program Elective Course-IV(PEC-IV)		Program Elective Course-V (PEC-V)	
231ECUEC41	Internet of Things	231ECUEC51	Augmented Reality and Virtual Reality
231ECUEC42	Advanced Network Technology	231ECUEC52	Big Data Analytics
231ECUEC43	Power Electronics	231ECUEC53	Neural Network and Deep Learning
231ECUEC44	Mobile and Wireless Communication	231ECUEC54	Block Chain Technology

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Semester-VIII

Course Code	Course Category	Course Name
231ECUM M61	MDM VI (Multidisciplinary Minor)	NPTEL course
231ECUM P81	Project	Major Project
231ECUIN 81	Internship /OJT	Internship

Program Elective Course

SEM V PEC I	SEM VI PEC II	SEM VI PEC III	SEM VII PEC IV	SEM VII PEC V
231ETUEC11 Computer Communication Network	231ETUEC21 Internet Communication Engineering	231ETUEC31 Adhoc Wireless Networks	231ETUEC41 Network Management in Telecommunication	231ETUEC51 Broadband Networks
231ETUEC12 Advanced Microcontrollers	231ETUEC22 Microelectronics Circuits	231ETUEC32 Embedded Systems	231ETUEC42 Digital VLSI	231ETUEC52 Robotics
231ETUEC13 Database Management System	231ETUEC23 Neural Network & Fuzzy Logic	231ETUEC33 Big Data Analytics	231ETUEC43 Machine Learning	231ETUEC53 Data Compression and Encryption
231ETUEC14 Optical Communication	231ETUEC24 Radio frequency and Microwave	231ETUEC34 Antennas	231ETUEC44 Modern Digital Communication	231ETUEC54 5G Communication Technologies