B Tech Curriculum – 2023
B.Tech. in Electronics and Computer Engineering

Department of Electronics and Communication Engineering

Year	THIRD SEMESTER						FOURTH SEMESTER					
	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C
II		Engineering Mathematics-III	2	1	0	3		Engineering Mathematics-IV	2	1	0	3
		Analog Electronic Circuits	3	1	0	4		Digital Signal Processing	2	1	0	3
		Digital System Design & Computer Organization	2	1	0	3		Electromagnetic Waves	2	1	0	3
		Network Analysis	2	1	0	3		Analog Integrated Circuits	2	1	0	3
		Object Oriented Programming	2	1	0	3		Design & Analysis of Algorithms	2	1	0	3
		Data Structures	2	1	0	3		Database Systems	2	1	0	3
		Object Oriented Programming Lab	0	0	3	1		Electronic Circuit & System Design Lab	0	0	3	1
		Digital System Design Lab	0	0	3	1		Database Systems Lab	0	0	3	1
		Data Structures Lab	0	0	3	1		Algorithms Lab	0	0	3	1
						22						**21**
	Total Contact Hours (L + T + P)		**28**				**Total Contact Hours (L + T + P)**		**27**			

Year	FIFTH SEMESTER						SIXTH SEMESTER					
	Sub. Code	**Subject Name**	**L**	**T**	**P**	**C**	**Sub. Code**	**Subject Name**	**L**	**T**	**P**	**C**
III		Engg Economics & Financial Management	3	0	0	3		Essentials of Management	3	0	0	3
		Communication Theory	2	1	0	3		Communication Networks	2	1	0	3
		Embedded Systems	2	1	0	3		Machine Learning	2	1	0	3
		Operating Systems	2	1	0	3		PE-1 /Minor Specialization	3	0	0	3
		Software Engineering	2	1	0	3		PE-2 / Minor Specialization	3	0	0	3
		OE (Creativity, Problem Solving, Innovation)	2	0	2	3		OE-1**	3	0	0	3
		Digital Signal Processing Lab	0	0	3	1		Software Engineering Lab	0	0	3	1
		Operating Systems Lab	0	0	3	1		Communication Networks Lab	0	0	3	1
		Embedded Systems Lab	0	0	3	1		Machine Learning Lab	0	0	3	1
						21						**21**
	Total Contact Hours (L + T + P)		**28**				**Total Contact Hours (L + T + P)**		**27**			

Year	SEVENTH SEMESTER						EIGHTH SEMESTER					
	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C
IV		PE-3 / Minor Specialization	3	0	0	3		Industrial Training (MLC)				1
		PE-4 / Minor Specialization	3	0	0	3		Project Work				12
		PE-5	3	0	0	3		Project Work (B Tech – honours) * (V - VIII sem)				20
		PE-6	3	0	0	3		B Tech – honours Theory – 1* (V semester)				4
		PE-7	3	0	0	3		B Tech – honours Theory – 2* (VI semester)				4
		OE-2**	3	0	0	3		B Tech – honours Theory – 3* (VII semester)				4
		Mini Project (Minor specialization) ***				8						
						18/26* **						**13/33***
	Total Contact Hours (L + T + P)						**Total Contact Hours (L + T + P)**					

*Applicable to eligible students who opted for and successfully completed the B Tech – honours requirements

** Performance of students to be recorded in Eighth semester grade sheet.

***Applicable to students who opted for minor specialization

Minor Specializations	**Other Programme Electives**	**Open Electives**
I. Intelligent System 1. Artificial Intelligence 2. Natural Language Processing 3. Deep Learning 4. Computer Vision II. Embedded System 1. Embedded System Design 2. FPGA based System Design 3. Internet of Things 4. Real Time Systems III. Data Analytics based System 1. Data Warehousing and Mining 2. Natural Language Processing 3. Big Data Analytics 4. Semantic Web and Analytics IV. VLSI Design and Technology 1. VLSI Design 2. Low Power VLSI Design 3. Digital Design Verification 4. Machine Learning in VLSI Computer Aided Design Minor specialization through Coursera courses 1. Big Data Modelling and Management Systems 2. Big Data Integration and Processing 3. Machine Learning with Big Data 4. Graph Analytics for Big Data	1. Digital Speech Processing 2. Digital Image Processing 3. Formal Language & Automata Theory 4. Compiler Design 5. Distributed Systems 6. Ethical Hacking and Cyber Security 7. Cloud Computing 8. Human Computer Interface 9. UML and Design Patterns 10. Software Testing and Analysis 11. Quantum Computing 12. Information Security 13. Blockchain Technology 14. Data Analysis and Visualization 15. Number Theory and Cryptography 16. Microwave Integrated Circuits 17. Motion and Geometry Based Methods in Computer Vision 18. Embedded Operating Systems and RTOS 19. Power Electronics 20. Control Systems 21. Machine Learning for Signal Processing 22. Modern Computer Architecture and Organization 23. Nature Inspired Algorithms, Tools and Applications 24. Nano Devices and Nano sensors 25. Switching Theory for Logic Synthesis 26. CMOS Mixed Signal VLSI Design 27. 5G: Fundamentals and Architecture 28. Embedded Programming 29. Pattern Recognition 30. Hardware for Machine Learning 31. Client Server Computing 32. Computer Graphics and Animation 33. Mobile Application Development	1. Consumer Electronics 2. Electronic Product Design & Packaging 3. MEMS Technology 4. Basics of Building Automation Systems 5. Intelligent Instrumentation System 6. Computational Intelligence and Environmental Sustainability 7. Applications of Signal Processing 8. Introduction to Biosensors