



Year	THIRD SEMESTER						FOURTH SEMESTER						
	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C	
II	MAT 2122	Engineering Mathematics - III	2	1	0	3	MAT 2228	Engineering Mathematics - IV	2	1	0	3	
	ICE 2121	Analog Electronic Circuits	3	1	0	4	ICE 2221	Linear Integrated circuits	3	0	0	3	
	ICE 2122	Digital Circuits & System Design	3	0	0	3	ICE 2222	Microcontrollers	3	1	0	4	
	ICE 2123	Networks and Signals	3	1	0	4	ICE 2223	Industrial Instrumentation	3	0	0	3	
	ICE 2124	Sensors and Transducers	3	0	0	3	ICE 2224	Digital Signal processing	2	1	0	3	
	ICE 2125	Linear Control Theory	2	1	0	3	ICE 2229	Communication Techniques	3	0	0	3	
	ICE 2141	Digital Circuits and Systems Lab	0	0	3	1	ICE 2241	Analog systems lab	0	0	3	1	
	ICE 2142	Sensors and Circuits lab	0	0	3	1	ICE 2242	Microcontroller Lab	0	0	3	1	
Total Contact Hours (L + T + P)			16	4	6	22	Total Contact Hours (L + T + P)			16	3	6	21

Year	FIFTH SEMESTER						SIXTH SEMESTER						
	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C	
III	HUM 3022	Essentials of Management	3	0	0	3	HUM 3021	Engg Economics & Financial Management	3	0	0	3	
	ICE 3121	Industrial Automation & Drives	3	1	0	4	ICE ****	Flexible Core – (A2/B2/C2)	3	0	0	3	
	ICE 3122	VLSI Design	3	0	0	3	ICE ****	Flexible Core – (A3/B3)	3	0	0	3	
	ICE 3123	Process Instrumentation and control	3	0	0	3	ICE ****	PE – 1 / Minor Specialization	3	0	0	3	
	ICE ****	Flexible Core – (A1/B1/C1)	3	0	0	3	ICE ****	PE – 2 / Minor Specialization	3	0	0	3	
	IPE 4302	OE 1– Creativity, Problem Solving and Innovation** (MLC)	3	0	0	3	*** ****	OE – 2** (MLC)	3	0	0	3	
	ICE 3141	Industrial Instrumentation Lab	0	0	3	1	ICE 3241	Control and Signal Processing Lab	0	0	3	1	
	ICE 3142	Process Control Lab	0	0	3	1	ICE 3242	Industrial automation lab	0	0	3	1	
						ICE 3243	Virtual Instrumentation LAB	0	0	3	1		
Total Contact Hours (L + T + P)			18	1	6	21	Total Contact Hours (L + T + P)			18	0	9	21

*Courses of three independent tracks A, B, C

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

Year	SEVENTH SEMESTER						EIGHTH SEMESTER					
	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C
IV	ICE ****	PE – 3 / Minor Specialization	3	0	0	3	ICE 4291	Industrial Training (MLC)				1
	ICE ****	PE – 4 / Minor Specialization	3	0	0	3	ICE 4292	Project Work				12
	ICE ****	PE – 5	3	0	0	3	ICE 4293	Project Work (B Tech – honours)* (V - VIII sem)				20
	ICE ****	PE – 6	3	0	0	3	ICE ****	B Tech – honours Theory – 1* (V semester)				4
	ICE ****	PE - 7	3	0	0	3	ICE ****	B Tech – honours Theory – 2* (VI semester)				4
	*** ****	OE – 3** (MLC)	3	0	0	3	ICE ****	B Tech – honours Theory – 3* (VII semester)				4
	ICE 4191	Mini Project (Minor specialization)***				8						
					18/26***						13/33*	
	Total Contact Hours (L + T + P)		18			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

<p>Flexible Core-A Instrumentation (A) ICE 3124 Smart sensors (A1) ICE 3221 Micro Electro Mechanical Systems (A2) ICE 3223 Wireless Sensor Networks (A3) Flexible Core-B Applied Electronics (B) ICE 3125 Embedded Systems Design (B1) ICE 3222 Internet of Things (B2) ICE 3224 Digital Image Processing (B3) Flexible Core C(L&T EduTech) C1 XXX xxxx Fundamentals of EV and Hybrid Vehicles C2 XXX XXXX Automotive mechanics of Electric Vehicles</p> <p>Minor Specialization</p> <p>I. Computational Intelligence ELE 4409: Artificial Intelligence ECE 4409: Machine Learning ELE 4410: Soft Computing Techniques ECE 4410: Computer Vision</p> <p>II. Control Systems ICE 4401: Modern Control Theory ICE 4402: Nonlinear control theory ICE 4403: Digital Control Systems ICE 4404: System Identification</p> <p>III. Embedded Systems ECE 4411: Embedded System Design ELE 4411: FPGA Based System Design ECE 4412: Internet of Things ELE 4412: Real Time Systems</p> <p>IV. Sensor Technology ICE 4405: Sensor Design ICE 4406: Biosensors and BioMEMS ICE 4407: Multi Sensor Data Fusion ICE 4408: Automotive Sensors</p>	<p>V. Systems Engineering ICE 4409: Introduction to Systems Engineering ICE 4410: System architecture and Design ICE 4411: SysML and MBSE ICE 4412: System Verification and validation</p> <p>VI. Smart Transportation Systems ICE 4413: Automotive Electronics ICE 4414: In-vehicle Networking ICE 4415: Intelligent Transportation Systems ICE 4416: Advanced Driver Assistance Systems</p> <p>VII. Hybrid and Electric Vehicle technology(L&T Edutech) *** **EV Battery technology and Power train management *** **EV charging infrastructure, Vehicle testing and homologation *** **EV design and analysis *** **EV data analytics and cyber security.</p> <p>Other Program Electives ICE 4441: Advanced Sensor Technology ICE 4442: Analytical and optical Instrumentation ICE 4443: Biomedical Instrumentation and Equipment ICE 4444: Cyber physical systems ICE 4445: Data Structures and algorithms ICE 4446: DSP algorithms and Architecture ICE 4447: Electronic Measurement Systems ICE 4448: Industrial Internet of Things ICE 4449: Machine learning for control systems ICE 4450: Neural Network and Fuzzy Logic ICE 4451: Power Electronics ICE 4452: Real Time Operating System ICE 4453: Reliability and safety Engineering ICE 4454: Robotic Control Systems ICE 4455: Robust Control</p>	<p>Open Electives ICE 4311 Feedback Control Theory ICE 4312 Industrial Automation ICE 4313 Industrial Instrumentation ICE 4314 Sensor Technology ICE 4315 Smart Sensor ICE 4316 Virtual Instrumentation ICE 4317 Farm Automation</p>
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