DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

B.Tech (E & C) Syllabus of III – VIII Semester

Year	THIRD SEMESTER						FOURTH SEMESTER					
	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C
II	MAT-2152	Engineering Mathematics III	2	1	0	3	MAT-2257	Engineering Mathematics IV	2	1	0	3
	ECE-2151	Analog Electronic Circuits	3	1	0	4	ECE-2252	Electromagnetic Waves	3	1	0	4
	ECE-2152	Computer Organization and Architecture	2	1	0	3	ECE-2253	Linear Integrated Circuits	3	1	0	4
	ECE-2153	Digital System Design	3	1	0	4	ECE-2254	VLSI Design	3	1	0	4
	ECE-2154	Network Analysis	2	1	0	3	ECE-2255	Digital Signal Processing	2	1	0	3
	ECE-2155	Signals and Systems	3	1	0	4	*******	Open Elective I	*	*	*	3
	ECE-2161	Digital System Design Lab	0	0	6	2	ECE-2261	Electronic Circuit Design Lab	0	0	6	2
	ECE-2162	Signals & Circuits Simulation Lab	0	0	3	1	ECE-2262	VLSI Lab	0	0	3	1
			15	**6**	**9**	**24**			**13**	**5**	**9**	**24**
	Total Contact Hours (L + T + P)		**30**				**Total Contact Hours (L + T + P) + OE**		**27+3=30**			
III	**FIFTH SEMESTER**						**SIXTH SEMESTER**					
	HUM-3051	Engg. Economics & Financial Management	3	0	0	3	HUM-3052	Essentials of Management	3	0	0	3
	ECE-3151	Analog and Digital Communication	3	1	0	4	ECE-3251	Communication Networks	3	0	0	3
	ECE-3152	Linear Control Theory	3	1	0	4	ECE-3252	Wireless Communication	4	0	0	4
	ECE-3153	Microprocessors	3	0	0	3	ECE****	Program Elective-I	3	0	0	3
	ECE-3154	Microwave Engineering	3	1	0	4	ECE****	Program Elective-II	3	0	0	3
	******	Open Elective II	*	*	*	3	******	Open Elective-III	*	*	*	3
	ECE-3161	DSP Lab	0	0	3	1	ECE-3261	Communication Networks lab	0	0	6	2
	ECE-3162	Microprocessor Lab	0	0	6	2	ECE-3262	Communication Systems Lab	0	0	6	2
			15	**3**	**9**	**24**			**16**	**0**	**12**	**23**
	Total Contact Hours (L + T + P) + OE		**27+3=30**				**Total Contact Hours (L + T + P) + OE**		**28+3=31**			
IV	**SEVENTH SEMESTER**						**EIGHTH SEMESTER**					
	ECE-****	Program Elective-III	3	0	0	3	ECE-4298	Industrial Training				1
	ECE-****	Program Elective-IV	3	0	0	3	ECE-4299	Project work/Practice School				12
	ECE-****	Program Elective-V	3	0	0	3	ECE-4296	Project work (Only for B.Tech honour students)				20
	ECE-****	Program Elective-VI	3	0	0	3						
	ECE-****	Program Elective-VII	3	0	0	3						
	******	Open Elective IV	*	*	*	3						
			15	**0**	**0**	**18**						**13**
	Total Contact Hours (L + T + P) +OE		**15+3=18**									

Minor Specializations

I. Embedded System
(Common to Electrical Sciences)
ECE-4053: Embedded System Design
ELE 4064: Real Time Systems
ELE 4063: FPGA Based System Design
ECE-4054: Internet of Things

II. Signal Processing
(Common to Electrical Sciences)
ECE 4055: Advanced Digital Signal Processing
ELE 4073: Digital Image Processing
ECE 4056: Digital Speech Processing
ELE 4074: Linear Algebra for Signal Processing

III. Telecommunication
ECE 4060-: Satellite Communication
ECE-4057: Mobile Communication
ECE-4059: Optical Fiber Communication
ECE-4058: Modern Wireless Technologies

IV. VLSI Design
(Common to Electrical Sciences)
ECE 4063: Low power VLSI Design
ECE 4061: Analog & Mixed Signal Design
ECE 4062: Digital Design Verification
ECE 4064 : Semiconductor Device Theory

VI. Computational Intelligence
(Common to Electrical Sciences)
ECE 4051: Computer Vision
ECE 4052: Machine Learning
ELE 4061: Artificial Intelligence
ELE 4062: Soft Computing Techniques

VII. Control Systems
(Common to Electrical Sciences)
ICE 4053: Robust Control
ICE 4051: Digital Control Systems
ICE 4052: Non-Linear Control Systems
ICE 4054: System Identification

VIII. Sensor Technology
(Common to Electrical Sciences)
ICE 4056 : Micro Electro Mechanical Systems
ICE 4057:Multi Sensor Data Fusion
ICE 4058: Smart Sensors
ICE 4055 : Advanced Sensor Technology

IX. Illumination Technology
(Common to Electrical Sciences)
ELE 4067: Lighting Science : Devices and Systems
ELE 4065: Integrated Lighting Design
ELE 4068 : Solid State Lighting
ELE 4066 : Lighting Controls: Technology & Applications

Other Programme Electives

ECE 4065: Advanced MOS Devices
ECE 4066: Advanced Processors and Controllers
ECE 4067: Building Automation Systems
ECE 4068: CAD for VLSI Design
ECE 4069: Cipher Systems
ECE 4070: Data Structures and Algorithms
ECE 4071: Electronic Instrumentation
ECE 4072: Electronic System Design
ECE 4073: Error Control Coding
ECE 4074: Flexible Electronics
ECE 4075: Information Theory and Coding
ECE 4076: Low Voltage Analog Signal Processing
ECE 4077: Microwave Integrated Circuits
ECE 4078: Motion & Geometry based methods in Computer Vision
ECE 4079: Nano Technology
ECE 4080: Object Oriented Programming Using C++
ECE 4081: Operating Systems for Advanced Processors
ECE 4082: Optical Wireless Communication
ECE 4083: Power Electronics
ECE 4084: Radar and Navigation Systems
ECE 4085: RF Circuit Design
ECE 4086: Spread Spectrum Communication
ECE 4087: System on Chip Design
ECE 4088: Thin films & Nanostructures
ECE 4089: Time Frequency and Wavelet Transforms
ECE 4090: VLSI Process Technology
ECE 4091: Wireless Sensor Networks
ECE 4092: Analog IC Design

V. Business Management HUM-4051: Financial Management HUM-4052: Human Resource Management HUM-4053: Marketing Management HUM-4054: Operation Management	**X. Material Science** PHY 4051:Physics of Low Dimensional Materials PHY 4052: Physics of Photonic & Energy Storage Devices CHM 4051: Chemical Bonding CHM 4052: Chemistry of Carbon Compound **Xl. Computational Mathematics** MAT 4051: Applied Statistics and Time Series Analysis MAT 4052: Computational Linear Algebra MAT 4053: Computational Probability and Design of Experiments MAT 4054: Graphs and Matrices	**Open Electives** ECE 4302 : Consumer Electronics ECE 4303 : Electronic Product Design & Packaging ECE 4304: Introduction to Communication Systems ECE 4306: MEMS Technology ECE 4301: Basics of Building Automation Systems ECE 4305: Introduction to Nano science & Technology ECE 4307: Intelligent Instrumentation System ECE 4308: Computational Intelligence And Environmental Sustainability ECE 4309: Applications Of Signal Processing