

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**  
**UNDER GRADUATE ( B.Tech.) SCHEME AND SYLLABUS**

**III Semester**

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
<b>MTH24231</b>	Applied Numerical Methods	3	1	-	4
<b>HUM24252</b>	Fundamentals of Design Methods	2	1	-	3
<b>ECE24211</b>	Electronic circuits and devices	3	-	-	3
<b>ECE24212</b>	Digital Circuit Design	3	-	-	3
<b>ECE24213</b>	Network Analysis and Synthesis	3	-	-	3
<b>ECE24214</b>	Signals & Systems	3	-	-	3
<b>ECE24215</b>	Network Lab	-	-	2	1
<b>ECE24216</b>	Digital Circuit Design Lab	-	-	2	1
<b>ECE24217</b>	Electronics Circuit Lab	-	-	2	1
<b>ECE24211</b>	Professional Practices	-	2	-	2
	Minor-1 (Electronic circuits and devices)	3	-	-	3*
<b>Total Hours: 27</b>		<b>17</b>	<b>4</b>	<b>6</b>	<b>24</b>
<b>Total Credits (Cumulative)</b>					<b>65</b>
<b>Additional Subject: - National Cadet Corps (NCC)</b>					
<b>NCC24251</b>	<b>National Cadet Corps III</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>7</b>
<b>Total Credits (Cumulative)</b>					<b>11</b>

## IV Semester

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
<b>HUM24251</b>	Fundamentals of Entrepreneurship	3	-	-	3
<b>ECE24221</b>	Digital Signal Processing	3	-	-	3
<b>ECE24222</b>	Linear Integrated Circuits	3	-	-	3
<b>ECE24223</b>	Microprocessors and Microcontrollers	3	-	-	3
<b>ECE24224</b>	EM Fields and Transmission Lines	3	-	-	3
<b>ECE24225</b>	Electronic Instrumentation and Measurement	3	-	-	3
<b>ECE24226</b>	Linear Integrated Circuits lab	-	-	2	1
<b>ECE24227</b>	Microprocessors and Micro Controllers Lab	-	-	2	1
<b>ECE24228</b>	Digital Signal Processing Lab	-	-	2	1
<b>ECE24229</b>	Project Based Lab1	-	-	2	1
<b>ECE24224</b>	Minor-2 (Digital Signal Processing)	3	-	-	3*
<b>Total Hours: 26</b>		<b>18</b>	<b>-</b>	<b>8</b>	<b>22</b>
<b>Total Credits (Cumulative) 87</b>					
<b>Additional Subject: - National Cadet Corps (NCC)</b>					
<b>NCC24252</b>	<b>National Cadet Corps IV</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>3</b>
<b>Total Credits (Cumulative) 14</b>					

## V Semester

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
<b>CS24352</b>	Data Structures and Algorithm	3	1	-	4
<b>ECE24311</b>	Information theory and coding	3	1	-	4
<b>ECE24312</b>	Control Systems	3	-	-	3
<b>ECE24313</b>	Communication Systems	3	-	-	3
<b>ECE24314</b>	VLSI Design	3	-	-	3
	Departmental Elective-1(A)	3	-	-	3
<b>ECE24315</b>	Communication Systems Lab	-	-	2	1
<b>ECE24316</b>	Control and instrumentation lab	-	-	2	1
<b>ECE24317</b>	VLSI Design Lab	-	-	2	1
<b>ECE24318</b>	Internship / Industrial Training	-	-	2	1
<b>ECE24313</b>	Minor-3* (Communication Systems)	3	-	-	3*
<b>Total Hours: 28</b>		<b>18</b>	<b>2</b>	<b>8</b>	<b>24</b>
<b>Total Credits (Cumulative) 111</b>					
<b>Additional Subject: - National Cadet Corps (NCC)</b>					
<b>NCC24351</b>	<b>National Cadet Corps V</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>7</b>
<b>Total Credits (Cumulative) 21</b>					

## VI Semester

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
ME24351	Engineering Management	3	-	-	3
ECE24321	Digital Image Processing	3	1	-	4
ECE24322	Optical Communication	3	-	-	3
ECE24323	Microwave Engineering	3	-	-	3
	Departmental Elective-2(A)	3	-	-	3
ECE24324	Digital Image Processing Lab	-	-	2	1
ECE24325	Optical communication lab	-	-	2	1
ECE24326	Microwave Engineering lab	-	-	2	1
ECE24327	Project-1	-	-	2	1
ECE24322	Minor-4* (Optical Communication)	3	-	-	3*
Total Hours: 27		18	1	8	20
		Total Credits (Cumulative)			131
Additional Subject: - National Cadet Corps (NCC)					
NCC24352	National Cadet Corps VI	2	-	1	3
Total Credits (Cumulative)					24

## List of Departmental Electives A (3rd Year)

ECE24331	VLSI Technology
ECE24332	Digital system Design
ECE24333	Design of Analog IC
ECE24334	Telecom switching system
ECE24335	Satellite Communication
ECE24336	Optimization Techniques
ECE24337	Computer Networks
ECE24338	Computer Engineering

## VII Semester

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
<b>HUM24451</b>	Engineering Economics and IPR	3	-	-	3
<b>ECE24411</b>	RF and Antenna Design	3	-	-	3
	Departmental Elective-3(A)	3	-	-	3
	Departmental Elective-4(A)	3	-	-	3
	Open Elective-1(C)	3	-	-	3
<b>ECE24412</b>	RF & Antenna Lab	-	-	2	1
<b>ECE24413</b>	Project Based Lab-2	-	-	4	2
<b>ECE24414</b>	Industrial/Field Training	-	-	2	1
	Minor-5 (Any core or Elective)	3	-	-	3*
<b>Total Hours: 23</b>		<b>15</b>	<b>-</b>	<b>8</b>	<b>19</b>
<b>Total Credits (Cumulative) 150</b>					

## VIII Semester

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
	Departmental Elective -5 (A) (NPTEL/SWAYAM Courses Only)	3	-	-	3
	Departmental Elective-6(A) (NPTEL/SWAYAM Courses Only)	3	-	-	3
<b>ECE24421/ ECE24422</b>	Internship/Project 2	-	-	16	8
<b>ECE24423</b>		-	-	-	1
<b>Total Hours: 22</b>		<b>6</b>	<b>-</b>	<b>16</b>	<b>15</b>
<b>Total Credits (Cumulative) 165</b>					

### **List of Departmental Electives A (4th Year)**

ECE24440	Physical Design Automation	ECE24450	RADAR & Navigation Systems
ECE24441	CMOS RF Circuit Design	ECE24451	Video Signal Processing
ECE24442	Low Power VLSI Design	ECE24452	Advance Instrumentation
ECE24443	Computer Aided Design of Digital Systems	ECE24453	Multirate Signal Processing
ECE24444	Nano Technology	ECE24454	Micro Electro Mechanical Systems
ECE24445	Embedded Systems	ECE24455	Statistical signal processing
ECE24446	Broadband Optical Communication	ECE24456	Biomedical Signal Processing
ECE24447	Wireless Communication	ECE24457	IOT and Applications
ECE24448	Computer Vision and Pattern Recognition	ECE24458	Internet technology
ECE24449	Mobile Communication	ECE24459	Biomedical Instrumentation

### **List of Open Electives C (4th Year)**

ECE24460	Neural Networks
ECE24461	Fuzzy Logic
ECE24462	Probability theory and Random process
ECE24463	Artificial Intelligence and Machine Learning
ECE24464	RF Design and Planning