Annexure 4

Department of Electronics Engineering
Teaching Scheme of B. Tech.-I (Semester I & II)
(Effective from 2022-23)

SEMESTER – I

Sr. No.	Subject	Code	Scheme	Credit
1	**Mathematics-I**	**MA 101 S1**	**3-1-0**	**04**
2	**Branch Specific Course-I**	**XXXX 102 S1**	**3-1-0/3-0-2**	**04**
3	Mechanics, Lasers and Fiber Optics	PH 103 S1/S2	3-0-2	04
4	Applied Chemistry	CY 104 S1/S2	3-0-2	04
5	Engineering Drawing	CEME 105 S1/S2	2-0-4	04
6	Energy and Environmental Engineering	CEME 106 S1/S2	3-0-2	04
7	Holistic Empowerment and Human Values*	HU 107 S1/S2	3-0-0	00
		Total	**20-2-10=32/ 20-1-12=33**	**24**

* Audit Course (attendance would be compulsory as per institute norms)

SEMESTER – II

Sr. No.	Subject	Code	Scheme	Credit
1	Engineering Mechanics	AM 108 S2/S1	3-0-2	04
2	Fundamentals of Computer & Programming	CS 109 S2/S1	3-0-2	04
3	English & Professional Communication	HU 110 S2/S1	3-0-0	03
4	Workshop Practice	ME 111 S2/S1	0-0-4	02
5	Physics of Materials and Nuclei	PH 112 S2/S1	4-0-0	04
6	**Branch Specific Course-II**	**XXXX 113 S2**	**3-1-0/3-0-2**	**04**
7	**Mathematics-II**	**MA 114 S2**	**3-1-0**	**04**
		Total	**19-2-8=29/ 19-1-10=30**	**25**

S1 = Semester-1, S2 = Semester-2
AM = Applied Mechanics, CH = Chemical, CE = Civil, CS = Computer,
ME = Mechanical, EE = Electrical, EC = Electronics,
PH = Physics, CY = Chemistry, MA = Mathematics, HU = Humanities

Department of Electronics Engineering

B. Tech. II Electronics and Communication Engineering

(Effective from 2022-23)

Scheme

SEMESTER – III

Sr. No.	Subject	Code	Scheme	Credit	Examination Scheme				
					Theory Marks	Tutorial Marks	Term work Marks	Practical Marks	Total Marks
1.	Engineering Mathematics-III	MA 217	3-1-0	04	100	25	-	-	125
2.	Core-1 – Electronic Circuits	EC 201	3-1-2	05	100	25	25	25	175
3.	Core-2 – Digital Logic Design	EC 203	3-1-2	05	100	25	25	25	175
4.	Core-3 – Signals and Systems	EC 205	3-1-0	04	100	25	-	-	125
5.	Interdisciplinary Subject 1– Network Analysis and Synthesis	EE 207	3-1-0	04	100	25	-	-	125
		Total	**15-5-4=24**	**22**	**500**	**125**	**50**	**50**	**725**

SEMESTER – IV

Sr. No.	Subject	Code	Scheme	Credit	Examination Scheme				
					Theory Marks	Tutorial Marks	Term work Marks	Practical Marks	Total Marks
1.	Core-4 - Statistical Signal Analysis	EC 202	3-1-0	04	100	25	-	-	125
2.	Core-5 – Principles of Communication Systems	EC 204	3-1-2	05	100	25	25	25	175
3.	Core-6 – Microprocessors and Microcontrollers	EC 206	3-1-2	05	100	25	25	25	175
4.	Core-7 - Linear IC Applications	EC 208	3-1-2	05	100	25	25	25	175
5.	Interdisciplinary Subject 2 – Core-8 – Control Systems	EE 214	3-1-0	04	100	25	-	-	125
		Total	**15-5-6=26**	**23**	**500**	**125**	**75**	**75**	**775**

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Scheme

SEMESTER – V

Sr. No.	Subject	Code	Scheme	Credit	Examination Scheme				
					Theory Marks	Tutorial Marks	Term work Marks	Practical Marks	Total Marks
1.	Professional Ethics, Economics and Business Management	HU 3XX	3-1-0	04	100	25	-	-	125
2.	Core-9 – Transmission Lines and Electromagnetic Waves	EC 301	3-1-2	05	100	25	25	25	175
3.	Core-10 – Digital Communication	EC 303	3-1-2	05	100	25	25	25	175
4.	Core-11 – Digital Signal Processing	EC 305	3-1-2	05	100	25	25	25	175
5.	Seminar	EC 307	0-0-2	01	-	-	25	25	50
6.	Core Elective- I	EC 3XX	3-0-0	03	100	-	-	-	100
7.	Institute Elective-1	EC 3XX	3-0-0	03	100	-	-	-	100
		Total	**18-4-8=30**	**26**	**600**	**100**	**100**	**100**	**900**

List of Subjects for Core Elective I

Sr. No.	Subject	Code
1.	Computer Architecture and Organization	EC 321
2.	Data Structures and Algorithms	EC 323
3.	VLSI Technology	EC 325
4.	Digital Image Processing	EC 327

List of Subjects for Institute Elective 1

Sr. No.	Subject	Code
1.	Sensors and Transducers	EC 361
2.	Neural Networks	EC 363
3.	Multimedia Communication	EC 365

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SEMESTER – VI

(Effective from 2022-23)

Sr. No.	Subject	Code	Scheme	Credit	Examination Scheme				
					Theory Marks	Tutorial Marks	Term work Marks	Practical Marks	Total Marks
1.	Core-12 – Wireless and Mobile Communication	EC 302	3-1-2	05	100	25	25	25	175
2.	Core-13 – Digital Integrated Circuits	EC 304	3-1-2	05	100	25	25	25	175
3.	Core 14 – Optical Fiber Communication	EC 306	3-1-2	05	100	25	25	25	175
4.	Core Elective II Lab - Communication Networks Lab - Machine Learning Lab - Embedded Systems Lab - Electronic Instrumentation Lab	EC 308 EC 310 EC 312 EC 314	0-0-2	01	-	-	25	25	50
5.	Core Elective- II	EC 3XX	3-0-0	03	100	-	-	-	100
6.	Core Elective- III	EC 3XX	3-0-0	03	100	-	-	-	100
7.	Institute Elective-2	EC 3XX	3-0-0	03	100	-	-	-	100
		Total	**18-3-8=29**	**25**	**600**	**75**	**100**	**100**	**875**

List of Subjects for Core Elective II

Sr. No.	Subject	Code
1.	Communication Networks	EC 322
2.	Machine Learning	EC 324
3.	Embedded Systems	EC 326
4.	Electronic Instrumentation	EC 328

List of Subjects for Core Elective III

Sr. No.	Subject	Code
1.	Antenna Theory	EC 330
2.	Satellite Communication	EC 332
3.	Internet of Things	EC 334
4.	Innovation, Incubation and Entrepreneurship (To be offered by DoAMH)	HU 3XX

List of Subjects for Institute Elective 2

Sr. No.	Subject	Code
1.	High Performance Computing	EC 362
2.	Computer Vision	EC 364
3.	Micro - Electromechanical Systems	EC 366

Department of Electronics Engineering

B. Tech. IV Electronics and Communication Engineering

(Effective from 2023-24)

Scheme

SEMESTER – VII

Sr. No.	Subject	Code	Scheme	Credit	Examination Scheme				
					Theory Marks	Tutorial Marks	Term work Marks	Practical Marks	Total Marks
1.	Core-15 – Microwave Engineering	EC 401	3-1-2	05	100	25	25	25	175
2.	Core-16 – VLSI Design	EC 403	3-1-2	05	100	25	25	25	175
3.	Core-17 – Deep Learning	EC 405	3-0-2	04	100	-	25	25	150
4.	Project	EC 407	0-0-6	03	-	-	75	75	150
5.	Core Elective-IV	EC 4XX	3-0-0	03	100	-	-	-	100
6.	Core Elective-V	EC 4XX	3-0-0	03	100	-	-	-	100
7.	Core Elective-VI	EC 4XX	3-0-0	03	100	-	-	-	100
		Total	**18-2-12=32**	**26**	**600**	**50**	**150**	**150**	**950**

List of Subjects for Core Elective IV

Sr. No.	Subject	Code
1.	Optical Wireless Communication	EC 421
2.	Ad-Hoc Networks	EC 423
3.	Adaptive Signal Processing	EC 425
4.	Fundamentals of Nanoelectronics	EC 427
5.	Processor Architecture	EC 429

List of Subjects for Core Elective V

Sr. No.	Subject	Code
1.	Error Control Coding	EC 431
2.	EM Interference and Compatibility	EC 433
3.	Global Navigation Satellite System	EC 435
4.	Real Time Systems	EC 437
5.	Advanced Electronic Circuits	EC 439

List of Subjects for Core Elective VI

Sr. No.	Subject	Code
1.	MIMO Communication systems	EC 441
2.	Visible Light Communication	EC 443
3.	Estimation and Detection Theory	EC 445
4.	Speech Processing and Human-Machine Communication	EC 447
5.	Robotics	EC 449

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SEMESTER – VIII
(Effective from 2023-24)

Sr. No.	Subject	Code	Scheme	Credit	Examination Scheme				
					Theory Marks	Tutorial Marks	Term work Marks	Practical Marks	Total Marks
1.	Internship training in Industry / Research Organization/ Academic Institute	EC 402	0-0-20	10	-	-	120	180	300
		Total	**0-0-20=20**	**10**	**-**	**-**	**120**	**180**	**300**

Course	Semester	Credit
B. Tech. – I	Semester – I	24
	Semester – II	25
B. Tech. – II	Semester – III	22
	Semester – IV	23
B. Tech. – III	Semester – V	26
	Semester – VI	25
B. Tech. – IV	Semester – VII	26
	Semester – VIII	10
	Total UG Credit	**181**

Credit Range: 180-186

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