

**4-year B. Tech. degree Course in Electronics and
Communication Engineering with specialization in
Computer Science**

**FIRST
SEMESTER**

S. No	Course		Contact Hours				Credits
	Code	Title	L	T	P	Total	
1.	15B11MA111	Mathematics-1	3	1	-	4	4
2.	15B11PH111	Physics-1	3	1	-	4	4
3.	15B11CI111	Software Development Fundamentals-I	3	1	-	4	4
4.	15B11HS112	English	1		2	3	2
5.	15B17PH171	Physics Lab-1	-	-	2	2	1
6.	15B17CI171	Software Development Lab-I	-	-	4	4	2
7.	18B15GE112	Workshop			3	3	1.5
		Total				24	18.5

**SECOND
SEMESTER**

S. No	Course		Contact Hours				Credits
	Code	Title	L	T	P	Total	
1.	15B11MA211	Mathematics-2	3	1	-	4	4
2.	15B11PH211	Physics-2	3	1	-	4	4
3.	15B11EC111	Electrical Science-I	3	1	-	4	4
4.	15B11CI211	Software Development Fundamentals-II	3	1	-	4	4
5.	15B17PH271	Physics Lab-2	-	-	2	2	1
6.		Electrical Science Lab-I	-	-	2	2	1
7.	15B17CI271	Software Development Lab-II	-	-	2	2	1
8.	22B12HS111	Life skills & professional communication lab			2	2	0
9.	18B15GE111	Engineering Drawing & Design			3	3	1.5
		Total				27	20.5

**THIRD
SEMESTER**

S. No	Course		Contact Hours				Credits
	Code	Title	L	T	P	Total	
1.	15B11MA301	Probability and Random Processes	3	1	-	4	4
2.	18B11EC214	Signals and Systems	3	1	-	4	4
3.	15B11EC411	Analogue Electronics	3	1	-	4	4
4.	15B17EC471	Analogue Electronics Lab	-	-	2	2	1
5.	18B15EC214	Signals and Systems Lab	-	-	2	2	1
6.	15B11EC211	Electrical Science-II	3	1	-	4	4
7.	15B17EC271	Electrical Science Lab-II	-	-	2	2	1
8.	15B11HS211	Economics	2	1	-	3	3
9.	15B11GE30 1	Environmental Science	3	-	-	3	Qualifying
		Total				28	22
		Course for Specialization (CSP1 Theory)	3	1		4	4
		CSP1 Lab			2	2	1
		Total (with Specialization)				34	22+5 = 27

**FOURTH
SEMESTER**

S. No	Course		Contact Hours				Credits
	Code	Title	L	T	P	Total	
1.		HSS Elective – 1	2	1	-	3	3
2.	18B11EC215	Digital Circuit Design	3	1	-	4	4
3.	15B11EC413	Digital Signal Processing	3	1	-	4	4
4.	15B17EC473	Digital Signal Processing Lab/ADC Lab	-	-	2	2	1
5.	18B11EC212	Analog and Digital Communication	3	1	-	4	4
6.	18B15EC212	Analog and Digital Communication Lab	-	-	2	2	1
7.	18B15EC215	Digital Circuit Design Lab	-	-	2	2	1
9.	XXXXXX	Universal Human Values (UHV)	2	1	-	3	3
		Total				24	21
		CSP2 Theory	3	1		4	4
		CSP2 Lab			2	2	1
		Total (with Specialization)				30	21+5 = 26

FIFTH SEMESTER

S. No	Course		Contact Hours				Credits
	Code	Title	L	T	P	Total	
1.		HSS Elective – 2	3		-	3	3
2.	15B11CI518	Data Structure and Algorithms	3	-	-	3	3
3.	18B11EC312	Electromagnetic Field Theory	3	1	-	4	4
4.		Discipline Elective -1	3		-	3	3
5.		Science Elective	3		-	3	3
6.	18B15EC313	Embedded Systems/IOT Lab	-	-	2	2	1
7.	18B15EC314	Python for Signal Processing & Communication	-	-	2	2	1
8.	15B17CI578	Data Structure and Algorithms Lab	-	-	2	2	1
9.	18B15EC312	Electromagnetic Field Theory Lab	-	-	2	2	1
10.		Minor Project – 1			-	4	2
11.		Indian Constitution & Traditional Knowledge	3	-	-	3	Qualifying
		Total				31	22
		CSP3 Theory	3	1		4	4
		CSP3 Lab			2	2	1
		Total (with Specialization)				37	22+5 = 27

DISCIPLINE ELECTIVE-1

Introduction to Big Data And Data Analytics 20B12CS333

SIXTH SEMESTER

S. No	Course		Contact Hours				Credits
	Code	Title	L	T	P	Total	
1.		HSS Elective – 3	2	1	-	3	3
2.	15B11EC611	Telecommunication Networks	3	-	-	3	3
3.	15B17EC671	Telecommunication Networks Lab	-	-	2	2	1
4.	1BB11EC315	VLSI Design Networks	3	1	-	4	4
5.	1BB15EC315s	VLSI Design Lab	-	-	2	2	1
6.		Discipline Elective -2	3		-	3	3
7.		Discipline Elective -3	3		-	3	3
8.		Open Elective – 1	3	-	-	3	3

9.		Selected Value Added Course	2	-		2	Qualifying
10.	15B19EC691	Minor Project – 2			-	4	2
		Total				29	23
		CSP4 Theory	3			3	3
		Total (with Specialization)				32	23+3 = 26

DISCIPLINE ELECTIVE – 2

21B12CS412 Cryptography and its Applications

DISCIPLINE ELECTIVE – 3

21B12CS313 Fundamentals of distributed and cloud computing

OPEN ELECTIVE-1 VALUE ADDED

SEVENTH SEMESTER

S. No	Course		Contact Hours				Credits
	Code	Title	L	T	P	Total	
1.		Discipline Elective -4	3		-	3	3
2.		Discipline Elective -5	3		-	3	3
3.		Discipline Elective -6	3		-	3	3
4.		Open Elective – 2	3	-	-	3	3
5.	15B19EC791	Major Project-1	-	-	8	8	4
6.		Summer Training Viva	-	-	-	-	Qualifying
		Total				20	16

DISCIPLINE ELECTIVE – 4, DISCIPLINE ELECTIVE – 5, DISCIPLINE ELECTIVE – 6:

Select any three out of the followings:

- 18B12CS428 Introduction to Deep Learning
- Android Programming and iOS (new program)
- 17B1NCI731 Machine Learning and Natural Language Processing
- 21B12CS317 Introduction to Blockchain Technology
- 19B12CS426 IOT Analytics

EIGHTH SEMESTER

S. No	Course		Contact Hours				Credits
	Code	Title	L	T	P	Total	
1.		Discipline Elective -7	3		-	3	3
2.		Discipline Elective -8	3		-	3	3
3.		Open Elective – 3	3	-	-	3	3
4.	15B19EC891	Major Project-2	-	-	16	16	8

		Total				25	17
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DISCIPLINE ELECTIVE – 7

22B12CS415 AI for healthcare &
Smart systems
22B12CS419 Cryptocurrency
Technologies

DISCIPLINE ELECTIVE – 8

22B12CS411 Industrial automation &
IOT
22B12CS414 Agile Software
Development Process

OPEN ELECTIVE-3

The courses added for specialization in CS (**18 credits**): [Courses for Specialization (**CSP**)]

III Sem: (5 Credit) [CSP1]

15B11CI312 Database Systems and Web

15B17CI372 Database
Systems and
Web Lab

IV Sem: (5 Credit) [CSP2]

New course Object
Oriented
Analysis and
Design(OOAD)
using Java

New course OOAD Lab

V Sem: (5 Credit) [CSP3]

15B11CI313 Computer
Organisation
and
Architecture

15B17CI373 Computer
Organisation
and
Architecture
Lab

VI Sem: (3 Credit) [CSP4]

18B11CS212 Computer

Networks
and
Security