DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

B.TECH. PROGRAMME IN ELECTRONICS AND COMMUNICATION ENGINEERING

For the students admitted from 2023-24

SCHEDULING OF COURSES

i) Knowledge Segments and Credits

Every course of B. Tech Programme is placed in one of the nine categories as listed in table below. No semester shall have more than six lecture-based courses and two laboratory courses, and/or drawing/seminar/project courses in the curriculum.

Sl. No.	Category	Category Code	Total credits
1	Humanities and Social Sciences including Management Courses	HSC	**9**
2	Basic Science Courses	BSC	**26**
3	Engineering Science Courses	ESC	**21**
4	Programme Core Courses	PCC	**72**
5	Programme Elective Courses	PEC	**18**
6	Institute Elective Courses	IEC	**6**
7	Project Work, Seminar, Comprehensive Course Viva Voce and Internship	PWS	**15**
8	Mandatory Student Activities (P/F)	MSA	**3**
	Total Mandatory Credits		**170**
	Value Added Courses (Optional) – Honours/Minor	VAC	15

ii) Semester-wise Credit Distribution

Semester	I	II	III	IV	V	VI	VII	VIII	Total
Credits for Courses	19	22	23	21	22	22	24	14	*167*
Credits for Activities				3					*3*
Total Credits									*170*
Value Added Courses (Optional) – Honours / Minor									*15*
Total Credits									*185*

			SEMESTER I			
Slot	**Cate-gory**	**Course Code**	**Courses**	**L-T-P-J**	**Hours**	**Credit**
A	BSC	23MAL10A	Linear Algebra and Calculus	3-1-0-0	4	4
B	BSC	23PYL10A	Engineering Physics	3-1-0-0	4	4
D	ESC	23ESB10D	Problem Solving and Programming in C	2-1-2-0	5	4
E	ESC	23ESL10J	Basics of Electrical Engineering A	2-0-0-0	4	2
		23ESL10L	Basics of Electronics Engineering	2-0-0-0		2
G	ESC	23ESL1NA	Environmental Science	2-0-0-0	2	1*
S	BSC	23PYP10A	Engineering Physics Lab	0-0-2-0	2	1
T	ESC	23ESP10B	Electrical and Electronics Workshop	0-0-2-0	2	1
TOTAL					**23**	**19**

Not to be considered for Grade/GPA/CGPA. Pass or Fail Only

			SEMESTER II			
Slot	**Cate-gory**	**Course Code**	**Courses**	**L-T-P-J**	**Hours**	**Credit**
A	BSC	23MAL10B	Vector Calculus, Differential Equations and Transforms	3-1-0-0	4	4
B	BSC	23CYL10A	Engineering Chemistry	3-1-0-0	4	4
C	ESC	23ESB10A	Engineering Graphics	2-0-2-0	4	3
D	ESC	23ESB10G	Python Programming	2-0-2-0	4	3
E	PCC	23ECL10A	Network Theory	3-1-0-0	4	4
G	HSC	23HSJ1NB	Professional Communication	2-0-0-2	4	1*
S	BSC	23CYP10A	Engineering Chemistry Lab	0-0-2-0	2	1
T	ESC	23ESB10P	Manufacturing and Construction Practices B	1-0-2-0	3	2
TOTAL					**29**	**22**

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			SEMESTER III			
Slot	Cate-gory	Course Code	Courses	L-T-P-J	Hours	Credit
A	BSC	23MAL20A	Partial Differential Equation and Complex Analysis	3-1-0-0	4	4
B	PCC	23ECL20A	Analog Circuits	3-1-0-0	4	4
C	PCC	23ECL20B	Solid State Devices	3-1-0-0	4	4
D	PCC	23ECJ20C	Logic Circuit Design	2-1-0-1	4	4
E	ESC	23ESL00A	Design Engineering	2-0-0-0	2	2
G	HSC	23HSL2NA	Professional Ethics	2-0-0-0	2	1*
S	PCC	23ECP20A	Analog Circuits Lab	0-0-3-0	3	2
T	PCC	23ECP20B	Logic Circuit Design Lab	0-0-3-0	3	2
M/H	VAC		Minor Course	3-0-0-0/ 2-1-0-0	3	3
TOTAL					26/29	23/26

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			SEMESTER IV			
Slot	Cate-gory	Course Code	Courses	L-T-P-J	Hours	Credit
A	BSC	23MAL20C	Probability, Random Processes and Numerical Methods	3-1-0-0	4	4
B	PCC	23ECL20D	Linear Integrated Circuits	3-1-0-0	4	4
C	PCC	23ECL20E	Signals and Systems	3-1-0-0	4	4
D	PCC	23ECJ20F	Microcontroller based system design	3-0-2-1	6	5
E	HSC	23HSL2NB	Universal Human Values-II	2-1-0-0	3	1*
G	ESC	23ESL2NC	Industrial Safety Engineering	2-1-0-0	3	1*
S	PCC	23ECP20C	Linear Integrated Circuits Lab	0-0-3-0	3	2
M/H	VAC		Minor/Honours Course	3-0-0-0/ 2-1-0-0	3	3
TOTAL					27/30/33	21/24/27

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			SEMESTER V			
Slot	**Cate-gory**	**Course Code**	**Courses**	**L-T-P-J**	**Hours**	**Credit**
A	PCC	23ECL30A	Analog and Digital Communication	3-1-0-0	4	4
B	PCC	23ECL30B	Digital Signal Processing	3-1-0-0	4	4
C	PCC	23ECL30C	Electromagnetic Field Theory	3-1-0-0	4	4
D	PEC	23ECL31X	Program Elective I	3-0-0-0/ 2-1-0-0/	3	3
E	HSC	23HSL00A	Management for Engineers	3-0-0-0	3	3
S	PCC	23ECP30A	Communication Lab	0-0-3-0	3	2
T	PCC	23ECP30B	Digital Signal Processing Lab	0-0-3-0	3	2
M/H	VAC		Minor/Honours Course	3-0-0-0/ 2-1-0-0	3	3
			TOTAL		**24/27/30**	**22/25/28**

			SEMESTER VI			
Slot	**Cate-gory**	**Course Code**	**Courses**	**L-T-P-J**	**Hours**	**Credit**
A	PCC	23ECL30D	Control Systems	3-1-0-0	4	4
B	PCC	23ECJ30E	VLSI Circuit Design	3-1-2-0	6	5
D	PEC	23ECL32X	Program Elective II	3-0-0-0/ 2-1-0-0	3	3
E	IEC	23IEL31X	Institute Elective I	3-0-0-0	3	3
F	HSC	23HSL30A	Business Economics and Accountancy	3-0-0-0	3	3
T	PWS	23ECS38A	Seminar	0-0-4-0	4	2
U	PWS	23ECJ38B	Mini Project	0-0-3-0	3	2
M/H	VAC		Minor/Honours Course	3-0-0-0/ 2-1-0-0	3	3
			TOTAL		**26/29/32**	**22/25/ 28**

			SEMESTER VII			
Slot	**Cate-gory**	**Course Code**	**Courses**	**L-T-P-J**	**Hours**	**Credit**
A	PCC	23ECL40A	Information Theory and Coding	3-1-0-0	4	4
B	PCC	23ECL40B	Wireless Communication	3-0-0-0	3	3
C	PCC	23ECL40C	Computer Networks	3-0-0-0	3	3
D	PEC	23ECL43X	Program Elective III	3-0-0-0 2-1-0-0	3	3
E	IEC	23IEL42X	Institute Elective II	3-0-0-0 2-1-0-0	3	3
T	PWS	23ECV48A	Comprehensive Course Viva	0-0-2-0	2	1
U	PWS	23ECJ48A	Project	0-0-10-0	10	5
		23ECI48A	Internship*			
S	PCC	23ECP40A	Advanced Communication Lab	0-0-3-0	3	2
M/H	VAC		Minor/Honours Course	0-1-0-6/ 3-1-0-0	3	3
			TOTAL		**31/34/37**	**24/27/30**

* Students can opt for Internship either in S7 or S8. However, in S7, the internship can be permitted only if there are no pending Programme/Course requirements in the semester, that need to be completed in College in the offline mode, such as laboratory sessions.

			SEMESTER VIII			
Slot	**Cate-gory**	**Course Code**	**Courses**	**L-T-P-J**	**Hours**	**Credit**
A	PEC	23ECL44X	Program Elective IV	3-0-0-0/ 2-1-0-0	3	3
B	PEC	23ECL45X	Program Elective V	3-0-0-0/ 2-1-0-0	3	3
C	PEC	23ECL46X	Program Elective VI	3-0-0-0/ 2-1-0-0	3	3
U	PWS	23ECJ48B	Project	0-0-10-0	10	5
		23ECI48B	Internship*			
M/H	VAC		Minor/Honours Course	0-0-0-6	6	3
			TOTAL		**25/31**	**14/17**