GRADUATION REQUIREMENTS

FOR

B. TECH.

in

ELECTRONICS & COMMUNICATION ENGINEERING

(Regular)

Batch 2024 (2024-28)

GRADUATION REQUIREMENTS FOR B. TECH. in
ELECTRONICS & COMMUNICATION ENGINEERING
(Regular) Batch 2024 (2024-28)

Sl. No.	Course No.	Course Title	Credit			
			Cr	L	T	P
First Year Courses (Basic Sciences, Social Science, Humanities, Engineering Sciences)						
1.	BPP-198	Semiconductor Physics	**5**	3	1	2
2.	BPM-142	Calculus and Differential Equations	**5**	4	1	0
3.	TEE-104	Basic Electrical Engineering	**5**	3	1	2
4.	TCE-114	Engineering Graphics & Design	**3**	1	0	2x2
5.	TWP-101	Work Programme	**1**	0	0	3
6.	BPC-102	Chemistry –I	**4**	3	0	3
7.	BPM-152	Linear Algebra, Transform Calculus and Numerical Methods	**4**	3	1	0
8.	TIT-121	Programming for Problem Solving	**4**	3	0	2
9.	TIP-103	Workshop Practices	**3**	1	0	2x2
10.	BHS-186	English	**3**	2	0	2
11.	BPS-228	Probability & Statistics	**4**	3	1	0
12.	TID-109/ TSW - 109/ TCE-109/ TME-109	Environmental Engineering and Disaster Management	**3**	3	0	0
13.	TCE-206	Engineering Mechanics	**4**	3	1	0
14.	BHS-188	Industrial Sociology	**3**	3	0	0
15.	BHS-100	Constitution of India	**1**	1	0	0
16.	TEC-191	Practical Training-I (2 weeks)	**0**			
17.	TIC-100	Induction Programme (2 Weeks)	**0**			
		TOTAL	**52**	36	6	22
Professional Courses						
18.	TEC-205	Electronic Devices	**4**	3	1	0
19.	TEC-206	Electronic Devices Lab	**1**	0	0	2
20.	TEC-207	Digital System Design	**4**	3	1	0
21.	TEC-208	Digital System Design Lab	**1**	0	0	2
22.	TEC-209	Signals and Systems	**4**	3	1	0
23	TEE-205	Network Theory	**3**	3	0	0
24.	TEC-211	Electromagnetic Waves	**4**	3	1	0
25.	TEC-214	Analog Communication Systems	**4**	3	1	0
26.	TEC-215	Analog Circuits	**4**	3	1	0
27.	TEC-216	Analog Circuits Lab	**1**	0	0	2
28.	TEC-217	Microcontrollers	**2**	2	0	0
29.	TEC-218	Microcontrollers Lab	**1**	0	0	2
30.	TEC-219	Antenna and Propagation	**4**	3	1	0
31.	TEC-291	Practical Training-II (2 weeks)	**0**			
32.	TEC-305	Digital Communication Systems	**4**	3	1	0
33.	TEC-306	Communication Systems Lab	**1**	0	0	2

34.	TCT-207	Computer Organization and Architecture	**3**	2	0	2
35.	TEC-308	Digital Signal Processing	**4**	3	1	0
36.	TEC-309	Control Systems	**4**	3	1	0
37.	TEC-314	Simulation Software	**2**	0	0	2x2
38.	TEC-315	Electronic Measurement Lab	**1**	0	0	2
39.	TEC-316	Electronic Design workshop	**2**	0	0	2x2
40.	TEC-317	Digital Signal Processing Lab	**1**	0	0	2
41.	TEC-319	Microwave Theory and Techniques	**4**	3	1	0
42.	TEC-322	Microwave Lab	**1**	0	0	2
43.		Open Elective-1**/ MOOC-2	**3**	3	0	0
44.	TEC-391	Practical Training-III (4 weeks)	**0**			
45.	TEC-321	CMOS Design	**3**	3	0	0
46.		Open Elective-2**	**3**	3	0	0
47.	TEC-*	Program Elective -1/MOOC-1	**4/3**[#]	3	$*^2$	$*^2$
48.	TEC-*	Program Elective -2	**4**	3	$*^2$	$*^2$
49.	TEC-*	Program Elective -3	**4**	3	$*^2$	$*^2$
50.		Open Elective-3**	**3**	3	0	0
51.	TEC-495A	Project-I	**4**	0	0	8
52.	TIP-454	Principles of Management	**2**	2	0	0
53.	TEC-492	Seminar	**1**	0	0	2
54.	TEC-*	Program Elective -4	**4**	3	$*^2$	$*^2$
55.	TEC-429	Computer Network	**4**	3	1	0
56.	TEC-430	IC Fabrication Technology	**3**	3	0	0
57.	TEC-*	Program Elective -5	**4**	3	$*^2$	$*^2$
58.	TEC-*	Program Elective -6	**4**	3	$*^2$	$*^2$
59.		Open Elective-4**	**3**	3	0	0
60.	TEC-495B	Project-II	**8**	0	0	16
Any One Package from the followings (NSS or NCC)						
Package-I (NSS)						
61.	NSS-201	National Service Scheme (NSS)	**0**	0	0	4
62.	NSS-202	National Service Scheme (NSS)	**1**	0	0	4
63.	NSS-301	National Service Scheme (NSS)	**0**	0	0	4
64.	NSS-302	National Service Scheme (NSS)	**1**	0	0	4
Package-II (NCC)						
61.	NCC-201	National Cadet Core (NCC)	**0**	0	0	4
62.	NCC-202	National Cadet Core (NCC)	**1**	0	0	4
63.	NCC-301	National Cadet Core (NCC)	**0**	0	0	4
64.	NCC-302	National Cadet Core (NCC)	**1**	0	0	4
		Total Core Credits	**127**	81	12	68
Total Credits including First Year Courses			**179/ 178**	**117**	**18-24**	**90-112**

Total Credit Hours : 179/178[#] Total Contact Hours: 225/237

TEC-*[1]: (Program Elective Course) Course to be selected from the list of Department Program Electives list

***[2]: as per opted Program Elective Course credits**

OE: (Open Elective Course) Open Elective from other technical and/or emerging subjects**

#: If opt for MOOC-1 instead of Program Elective Course -1

Note: Semester-wise interchange in the course curriculum may be done as per availability of experts and Lab facilities.

List of Program Elective Courses (TEC-*)

Sl. No.	Course No.	Course Title	Credit			
			Cr	L	T	P
1	TEC-320	Information Theory and Coding	**4**	3	1	0
2	TEC-323	Neural Processing and Systems	**4**	3	1	0
3	TEC-324	Mixed Signal Design	**4**	3	1	0
4	TEC-325	Embedded systems	**4**	3	1	0
5	TEC-431	Fiber Optic Communications	**4**	3	0	2
6	TEC-432	Mobile Communication and Networks	**4**	3	1	0
7	TEC-433	Satellite Communication	**4**	3	1	0
8	TEC-434	High Speed Electronics	**4**	3	0	2
9	TEC-435	Digital Image & Video Processing	**4**	3	0	2
10	TEC-436	Wireless Sensor Networks	**4**	3	1	0
11	TEC-437	Error correcting codes	**4**	3	1	0
12	TEC-438	Artificial Intelligence	**4**	3	0	2
13	TEC-439	Speech and Audio Processing	**4**	3	0	2
14	TEC-444	Synthesis of Digital Systems	**4**	3	0	2

Rules for MOOC-1 /MOOC-2 Courses:

1. A student can opt to offer at the most 02 MOOC courses in third year of his/her B. Tech. degree program; one in liu of Program Elective and the other in lieu of Open Elective.
2. The credit load of the MOOC courses will not be considered to calculate maximum credit load in a semester.
3. The MOOC 1 course under the category Program Elective of credits equal to the credits of program elective shall be taken from the list of MOOC courses available on SWAYAM/ NPTEL at the time of registration in the concerned semester, as notified by the concerned department.
4. Similarly, The MOOC 2 course under the category Open Elective of credits equal to the credits of open elective shall be taken from the list of MOOC courses available on SWAYAM/ NPTEL at the time of registration in the concerned semester in the department other than their parent department, as notified by that department.
5. All the expenditure including the fee for examination or passing certificate shall be borne by the student.
6. Grades will be submitted on producing the passing certificate to the faculty designated by the department.
7. The passing marks for the MOOC courses shall be at par with passing marks as per university academic regulation ie. 50%.
8. In case a student fails to pass the MOOC course as per minimum passing marks criterion of university, he /she shall have to either repeat the same course or offer any other course of the same credits from the list of courses notified by the department in subsequent semester/ year.

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