NUTAN MAHARASHTRA VIDYA PRASARAK MANDAL'S

NUTAN MAHARASHTRA INSTITUTE OF ENGINEERING AND TECHNOLOGY

AN AUTONOMOUS INSTITUTE | UNDER ADMINISTRATIVE SUPPORT OF PCET

Curriculum Structure and Syllabus of B. Tech. Electronics and Telecommunication Engineering (2025 Pattern)

VISION OF THE INSTITUTE

To be a notable institution for providing quality technical education and ensuring ethical, moral and holistic development of students.

MISSION OF THE INSTITUTE

To nurture engineering graduates with state of the art competence, professionalism and problem solving skills to serve needs of industry as well as society.

VISION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

To be a renowned department of Electronics and Telecommunication engineering for providing quality technical education through holistic development of the students.

MISSION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

- To impart quality technical education for students with continuous upgraded teaching learning process.
- To enhance the employability and entrepreneurship through Industry Institute association.
- To enhance the research competency in students by adapting state of art technology in Electronics and Communication Engineering.
- To inculcate the needs of profession for the society.

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COURSE-WISE CREDIT DISTRIBUTION

Sl. No.	Type of Course	No. of Courses	Total Credits	
			No.	%
1.	Basic Science Course (BSC)	8	14	8.14
2.	Engineering Core Course (ECC)	10	15	8.72
3.	Programme Core Course (PCC)	28	54	31.40
4.	Programme Elective Course (PEC)	9	20	11.63
5.	Multidisciplinary Minor (MDM)	7	13	7.56
6.	Open Elective Course (OEC)	3	8	4.65
7.	Vocational and Skill Enhancement Course (VSEC)	4	8	4.65
8.	Ability Enhancement Course (AEC)	2	4	2.33
9.	Entrepreneurship / Management Course(EMC)	2	4	2.33
10.	Value Education Course (VEC)	2	4	2.33
11.	Experiential Learning Courses	8	22	12.79
12.	Indian Knowledge System	1	2	1.16
13.	Co-curricular Courses	2	4	2.33
	TOTAL	86	172	100

Curriculum Structure: B. Tech. Electronics and Telecommunication Engineering

SEMESTER-WISE COURSE DISTRIBUTION

COURSE DISTRIBUTION: SEMESTER WISE										
Sl. NO.	TYPE OF COURSE	NO. OF COURSES / SEMESTER								Total
		1	2	3	4	5	6	7	8	
1.	Basic Science Course (BSC)	4	4	-	-	-	-	-	-	8
2.	Engineering Science Course (ESC)	6	4	-	-	-	-	-	-	10
3.	Programme Core Course (PCC)	-	2	5	5	5	5	4	2	28
4.	Programme Elective Course (PEC)	-	2	-	-	2	3	2	2	11
5.	Multidisciplinary Minor (MDM)	-	-	1	1	2	1	-	2	7
6.	Open Elective Course (OEC)	-	-	1	1	1	-	-	-	3
7.	Vocational and Skill Enhancement Course (VSEC)	1	1	1	1	-	-	-	-	4
8.	Ability Enhancement Course (AEC)	1	1	-	1	-	-	-	-	3
9.	Entrepreneurship / Management Course(EMC)	-	-	1	1	-	-	-	-	2
10.	Value Education Course (VEC)	-	-	1	1	-	-	-	-	2
11.	Experiential Learning Courses	-	-	-	1	1	1	1	1	5
12.	Indian Knowledge System	-	1	-	-	-	-	-	-	1
13.	Co-curricular Courses	1	1	-	-	-	-	-	-	2
Total		13	16	10	12	11	10	07	07	86

Curriculum Structure: B. Tech. Electronics and Telecommunication Engineering

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SEMESTER-WISE CREDIT DISTRIBUTION

	COURSE DISTRIBUTION: SEMESTER WISE									
	1 Lecture hour = 1 Credit, 2 Lab Hours = 1 Credit, 1 Tutorial Hour = 1 Credit									

Sl. NO.	TYPE OF COURSE	NO. OF COURSES / SEMESTER								Total
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
1.	Basic Science Course (BSC)	7	7	-	-	-	-	-	-	14
2.	Engineering Science Course (ESC)	9	6	-	-	-	-	-	-	15
3.	Programme Core Course (PCC)	-	3	10	10	10	8	8	4	53
4.	Programme Elective Course (PEC)	-	-	-	-	4	8	4	4	20
5.	Multidisciplinary Minor (MDM)	-	-	2	2	4	2	-	4	14
6.	Open Elective Course (OEC)	-	-	4	2	2	-	-	-	8
7.	Vocational and Skill Enhancement Course (VSEC)	2	2	2	2	-	2	-	-	10
8.	Ability Enhancement Course (AEC)	2	-	-	2	-	-	-	-	4
9.	Entrepreneurship / Management Course(EMC)	-	-	2	2	-	-	-	-	4
10.	Value Education Course (VEC)	-	-	2	-	-	-	-	-	2
11.	Experiential Learning Courses	-	-	-	2	2	2	8	8	22
12.	Indian Knowledge System	-	2	-	-	-	-	-	-	2
13.	Co-curricular Courses	2	2	-	-	-	-	-	-	4
	Total	22	22	22	22	22	22	20	20	172

Curriculum Structure: B. Tech. Electronics and Telecommunication Engineering

CURRICULUM STRUCTURE
Fourth Year B. Tech. E and TC Engineering
Semester – VII

				Credit Scheme			Teaching Scheme (Hours/Week)			Examination Scheme and Marks						
										CCE		ESE				
Sl. No.	Course Code	Course Type	Course Name	TH	TUT	PR	L	T	P	UT 25	FA 25	SA 50	PR	OR	TW	TOTAL
1	ETC25PCC-401	Programme Core Course	Radiation and Microwave Theory	2			2			25	25	50				100
2	ETC25PCC-402	Programme Core Course	Radiation and Microwave Theory Lab			2			4				25		25	50
3	ETC25PCC-403	Programme Core Course	Embedded Systems and Sensor Technology	2			2			25	25	50				100
4	ETC25PCC-404	Programme Core Course	Embedded Systems and Sensor Technology Lab			2			4				25		25	50
5	ETC25PEC-405	Programme Elective Course	Programme Elective Course-IV	3			3			25	25	50				100
6	ETC25PEC-406	Programme Elective Course	Programme Elective Course-IV Lab			1			2					25	25	50
7	ETC25ELC-407	Experiential Learning/Internship/OJT	Internship			6			12					100	100	200
8	ETC25ELC-408		Project Stage I			2			4					50	50	100
	TOTAL			7		13	7		26	75	75	150	50	175	225	750
					20			33								

CCE- Comprehensive Continuous Evaluation**, ESE**- End Semester Evaluation, **TW**-Term Work, **OR**-Oral, **PR**-Practical, **TH**- Theory**, L**-Lecture, **T/TUT**-Tutorial, **UT**- Unit Test, **FA**–Formative Assessment, **SA** – Summative Assessment

Curriculum Structure: B. Tech. Electronics and Telecommunication Engineering

Basket: List of Program Elective Courses -IV

Course Code	Course Name	
ETC25PEC-405 A	Biomedical Signal Processing	Choose Any One
ETC25PEC-405 B	Embedded Security	
ETC25PEC-405 C	Wireless Sensors & Network	
ETC25PEC-405 D	Optimization Algorithm	

Curriculum Structure: B. Tech. Electronics and Telecommunication Engineering

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CURRICULUM STRUCTURE
Fourth Year B. Tech. E and TC Engineering

Semester – VIII

				Level 6.0												
				B. Tech E and TC Engineering												
				Semester VIII												
Sl. No.	Course Code	Course Type	Course Name	Credit Scheme			Teaching Scheme (Hours/Week)			Examination Scheme and Marks							
										CCE		ESE				
				TH	TUT	PR	L	T	P	UT	FA	SA	PR	OR	TW	TOTAL
										25	25	50				
1	ETC25PCC-451	Programme Core Course	Broadband Communication	2			2			25	25	50				100
2	ETC25PCC-452	Programme Core Course	Broadband Communication Lab			2			4				25		25	50
3	ETC25PEC-453	Programme Elective Course	Programme Elective Course-V	3			3			25	25	50				100
4	ETC25PEC-454	Programme Elective Course	Programme Elective Couse- V Lab			1			2				25		25	50
5	ETC25MDM-455	Multidisciplinary Course	Advance Java Programming	2			2			25	25	50				100
6	ETC25MDM-456	Multidisciplinary Course	Advance Java Programming Lab			2			4					25	25	50
7	ETC25ELC-457	Experiential Learning Course// Internship/ OJT	Internship			4			8					100	50	150
8	ETC25ELC-458		Research Methodology-II			2			4						50	50
9	ETC25ELC-459		Project Stage- II			2			4					50	50	100
TOTAL				7		13	7		26	75	75	150	50	175	225	750
					20			33								

CCE- Comprehensive Continuous Evaluation**, ESE**- End Semester Evaluation, **TW**-Term Work, **OR**-Oral, **PR**-Practical, **TH**- Theory**, L**-Lecture, **T/TUT**-Tutorial, **UT**- Unit Test, **FA**–Formative Assessment, **SA** – Summative Assessment

Curriculum Structure: B. Tech. Electronics and Telecommunication Engineering

Basket: List of Program Elective Courses –V

Course Code	Course Name	
ETC25PEC-453 A	Deep Learning and Applications	Choose Any One
ETC25PEC-453 B	Malware Analysis	
ETC25PEC-453 C	Wearable Electronics and Health Monitoring	
ETC25PEC-453 D	AI & ML for Electrical Vehicles	

Curriculum Structure: B. Tech. Electronics and Telecommunication Engineering