Annexure – I

CREDIT FRAMEWORK STRUCTURE

Semester		I	II	III	IV	V	VI	VII	VIII	Total Credits
Basic Science Course	BSC/ESC	7	7							14
Engineering Science Course		6	6							12
Program Core Course (PCC)	Program Courses	2	2	13	10	7	4	6		44
Program Elective Course (PEC)						4	6	6	4	20
Multidisciplinary Minor (MDM)	Multidisciplinary Courses			2	3	3	3	3		14
Open Elective (OE) Other than a particular program						2	3	3		08
Vocational and Skill Enhancement Course (VSEC)	Skill Courses	2		1	1	2	2			08
Ability Enhancement Course (AEC -01, AEC-02)	Humanities Social Science and Management (HSSM)	1	1			2				04
Entrepreneurship/Economics/Management Courses				2	2					04
Indian Knowledge System (IKS)			2							02
Value Education Course (VEC)				2	2					04
Research Methodology	Experiential Learning Courses								4	04
Comm. Engg. Project (CEP)/ Field Project (FP)					2					02
Project							2	2		04
Internship/OJT									12	12
Co-curricular Courses (CC)	Liberal Learning Courses	2	2							04
Total Credits (Major)		**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**160**

GROUP II : SEMESTER I

Sr. No.	Course Category	CourseCode	Course Title	Hours per Week L	T	P	Credits	Mid-Sem Examination	Maximum Marks Continual Assessment	End Sem Examination	Total	Minimum Passing Marks	Duration of ESE (Hours)
1.	BSC	25ET101T	Applied Physics	2	-	-	2	10	10	30	50	23	1.5
2.	BSC	25ET101P	Applied Physics Lab	-	-	2	1	-	25	25	50	25	-
3.	BSC	25ET102T	Linear Algebra & Calculus	3	-	-	3	20	20	60	100	45	3
4.	BSC	25ET102P	Linear Algebra & Calculus Lab	-	-	2	1	-	25	25	50	25	--
5.	ESC	25ET103T	Digital Electronics	3	-	-	3	20	20	60	100	45	3
6.	ESC	25ET103P	Digital Electronics Lab	-	-	2	1	-	25	25	50	25	-
7.	ESC	25ET104P	C Programming Lab	-	-	4	2	-	25	25	50	25	-
9.	PCC	25ET105T	Fundamentals of Electronics Engineering	2	-	-	2	10	10	30	50	23	1.5
10.	AEC	25ET106P	Business Communication Skills I Lab	-	-	2	1	-	25	25	50	25	-
11.	SEC	25ET207T	Design Thinking*	2	-	-	2	10	10	30	50	23	1.5
12.	CC	25ET108T	Co-curricular Courses – I	2	-	-	2	-	50	-	50	25	-
	Total			**14**	**-**	**12**	**20**	**70**	**245**	**335**	**650**		**--**

*Course to be taken online through NPTEL

		July 2025	3.0	Applicable for 2025-26
Chairman - BoS	Dean – Academics	Date of Release	Version	

ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B. Tech. Scheme of Examination & Syllabus 2025-26
ELECTRONICS AND TELECOMMUNICATION ENGINEERING

GROUP II: SEMESTER II

Sr No	Course Category	Course Code	Course Title	Hours per Week L	T	P	Credits	Mid-Sem Examination	Continual Assessment	End Sem Examination	Total	Minimum Passing Marks	Duration of ESE (Hours)
1	BSC	25ET201T	Engineering Chemistry	2	-	-	2	10	10	30	50	23	1.5
2	BSC	25ET201P	Engineering Chemistry Lab	-	-	2	1	-	25	25	50	25	-
3	BSC	25ET202T	Statistics and Transforms	3	-	-	3	20	20	60	100	45	3
	BSC	25ET202P	Statistics and Transforms Lab	-	-	2	1	-	25	25	50	25	-
4	PCC	25ET203T	Electrical Network Theory	2	-	-	2	10	10	30	50	23	1.5
5	ESC	25ET204T	Electronic Devices & Circuits	3	-	-	3	20	20	60	100	45	3
6	ESC	25ET204P	Electronic Devices & Circuits Lab	-	-	2	1	-	25	25	50	25	-
7	ESC	25ET205P	Electronic Workshop Lab – I	-	-	4	2	-	25	25	50	25	-
8	AEC	25ET206P	Business Communication Skills – II Lab	-	-	2	1	-	25	25	50	25	-
9	IKS	25ET107T	Indian Knowledge Systems*	2	-	-	2	10	10	30	50	23	1.5
10	CC	25ET208T	Co-curricular Courses – II	2	-	-	2	-	50	-	50	25	-
			Total	**14**	**-**	**10**	**20**	**70**	**245**	**335**	**650**	**--**	**--**

*Course to be taken online through NPTEL

Chairman - BoS	Dean – Academics	July 2025 Date of Release	3.0 Version	Applicable for 2025-26

SEMESTER III

Sr No	Course Category	Course Code	Course Title	Hours per			Credits	Maximum Marks				Minimum Passing Marks	Duration of ESE (Hours)
				L	T	P		Mid-Sem Examination	Continual Assessment	End Sem Examination	Total		
1.	PCC	25ET301T	Microprocessors & Interfacing	3	-	-	3	20	20	60	100	45	3
2.	PCC	25ET301P	Microprocessors & Interfacing Lab	-	-	2	1	-	25	25	50	25	-
3.	PCC	25ET302T	Problem Solving Using Python	3	-	-	3	20	20	60	100	45	3
4.	PCC	25ET302P	Problem Solving Using Python Lab	-	-	2	1	-	25	25	50	25	-
5.	PCC	25ET303T	Sensors & Actuators	2	-	-	2	10	10	30	50	23	1.5
6.	PCC	25ET304T	Signals & Systems	3	-	-	3	20	20	60	100	45	3
7.	VEC	25ES401T	Environmental Science	2	-	-	2	10	10	30	50	23	1.5
8.	HSSM	25ES402T	Fundamentals of Economics and Management	2	-	-	2	10	10	30	50	23	1.5
9.	SEC	25ET341P	Career Development I	-	-	2	1	-	50	-	50	25	
10.	MDM	25ET331M	MDM-I (Refer MDM basket)	2	-	-	2	10	10	30	50	23	1.5
Total				**17**		**6**	**20**	**100**	**200**	**350**	**650**		**17**

Any one course PCC to be conducted online through NPTEL. The course will be notified one month prior to the commencement of the semester.

		July 2025	3.0	Applicable for 2025-26
Chairman - BoS	Dean – Academics	Date of Release	Version	

ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B. Tech. Scheme of Examination & Syllabus 2025-26

ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SEMESTER IV

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks				Minimum Passing Marks	Duration of ESE (Hours)
				L	T	P		Mid-Sem Examination	Continual Assessment	End Sem Examination	Total		
1	PCC	25ET401T	Electromagnetic Fields	3	-	-	3	20	20	60	100	45	3
2	PCC	25ET402T	Analog Circuits & Design	2	-	-	2	10	10	30	50	23	1.5
3	PCC	25ET402P	Analog Circuits & Design Lab	-	-	2	1	-	25	25	50	25	-
4	PCC	25ET403T	Analog Communication	3	-	-	3	20	20	60	100	45	3
5	PCC	25ET403P	Analog Communication Lab	-	-	2	1	-	25	25	50	25	-
6	VEC	25ES301T	Constitution of India	2	-	-	2	10	10	30	50	23	1.5
7	HSSM	25ES302T	Fundamentals of Entrepreneurship	2	-	-	2	10	10	30	50	23	1.5
8	SEC	25ET441P	Career Development - II	-	-	2	1	-	50	-	50	25	-
9	CEP	25ET404P	Mini Project*	-	-	4	2	-	50	-	50	25	-
10	MDM	25ET431M	MDM-II (Refer MDM basket)	3	-	-	3	20	20	60	100	45	3
			Total	**15**	**-**	**10**	**20**	**90**	**240**	**320**	**650**		**--**

* Field Project or Community engagement project in the major discipline

\# Any one course PCC to be conducted online through NPTEL. The course will be notified one month prior to the commencement of the semester.

		July 2025	3.0	Applicable for 2025-26
Chairman - BoS	Dean – Academics	Date of Release	Version	

ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B. Tech. Scheme of Examination & Syllabus 2025-26

ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SEMESTER V

Sr No	Course Category	Course Code	Course Title	Hours per Week L	Hours per Week T	Hours per Week P	Credits	Mid-Sem Examination	Continual Assessment	End Sem Examination	Total	Minimum Passing Marks	Duration of ESE (Hours)
1	PCC	25ET501T	Digital Communication	3	-	-	3	20	20	60	100	45	3
2	PCC	25ET501P	Digital Communication Lab	-	-	2	1	-	25	25	50	25	-
3	PCC	25ET502T	Object Oriented Programming and Data Structure	2	-	-	2	10	10	30	50	23	1.5
4	PCC	25ET502P	Object Oriented Programming and Data Structure Lab	-	-	2	1	-	25	25	50	25	-
5	PEC	25ET503T	Program Elective course -I	3	-	-	3	20	20	60	100	45	3
6	PEC	25ET503P	Program Elective course -I Lab	-	-	2	1	-	25	25	50	25	-
7	AEC	25ET541P	English for Engineers	-	-	4	2	-	50	-	50	25	-
8	VSC	25ET504P	Technical Skill Development - I	-	-	4	2	-	50	-	50	25	-
9	MDM	25ET531M	MDM – III (Refer MDM basket)	3	-	-	3	20	20	60	100	45	3
1	OE	25ET561O	Open Elective – I (Refer OE basket)	2	-	-	2	10	10	30	50	23	1.5
			Total	**13**	**-**	**14**	**20**	**80**	**255**	**315**	**650**		**--**

 # Any one course PCC/PEC to be conducted online through NPTEL. The course will be notified one month prior to the commencement of the semester.

Chairman - BoS	Dean – Academics	July 2025	3.0	Applicable for 2025-26
		Date of Release	Version	

SEMESTER VI

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks				Minimum Passing Marks	Duration of ESE (Hours)
				L	T	P		Mid-Sem Examination	Continual Assessment	End Sem Examination	Total		
1.	PCC	25ET601T	Digital Signal Processing	3	-	-	3	20	20	60	100	45	3
2.	PCC	25ET601P	Digital Signal Processing Lab	-	-	2	1	-	25	25	50	25	-
3.	PEC	25ET602T	Program Elective II	3	-	-	3	20	20	60	100	45	3
4.	PEC	25ET602P	Program Elective II Lab	-	-	2	1	-	25	25	50	25	-
5.	PEC	25ET603T	Program Elective III	2	-	-	2	10	10	30	50	23	1.5
6.	VSC	25ET604P	Technical Skill Development -II	-	-	4	2	-	50	-	50	25	-
7.	PROJ	25ET605P	Project – I	-	-	4	2	-	50	50	100	50	-
8.	MDM	25ET631M	MDM – IV (Refer MDM basket)	3	-	-	3	20	20	60	100	45	3
9.	OE	25ET661O	Open Elective – II (Refer OE basket)	3	-	-	3	20	20	60	100	45	3
			Total	**14**	**-**	**12**	**20**	**90**	**240**	**370**	**700**	**-**	

 # Any one course PCC/PEC to be conducted online through NPTEL. The course will be notified one month prior to the commencement of the semester.

Chairman - BoS	Dean – Academics	July 2025	3.0	Applicable for 2025-26
		Date of Release	Version	

ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B. Tech. Scheme of Examination & Syllabus 2025-26

ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SEMESTER VII

Sr No	Course Category	Course Code	Course Title	Hours per Week L	T	P	Credits	Maximum Marks Mid-Sem Examination	Continual Assessment	End Sem Examination	Total	Minimum Passing Marks	Duration of ESE (Hours)
1.	PCC	25ET701T	Microwave Engineering	2	-	-	2	10	10	30	50	23	1.5
2.	PCC	25ET701P	Microwave Engineering Lab	-	-	2	1	-	25	25	50	25	-
3.	PCC	25ET702T	Embedded Systems	2	-	-	2	10	10	30	50	23	1.5
4.	PCC	25ET702P	Embedded Systems Lab	-	-	2	1	-	25	25	50	25	-
5.	PEC	25ET703T	Program Elective IV	3	-	-	3	20	20	60	100	45	3
6.	PEC	25ET703P	Program Elective IV Lab	-	-	-	1	-	25	25	50	25	-
7.	PCC	25ET704T	Program Elective V	2	-	-	2	10	10	30	50	23	1.5
8.	PROJ	25ET705P	Project - II	-	-	4	2	-	50	50	100	50	-
9.	MDM	25ET731M	MDM – V (Refer MDM basket)	3	-	-	3	20	20	60	100	45	3
10.	OE	25ET761O	Open Elective – III (Refer OE basket)	3	-	-	3	20	20	60	100	45	3
Total				**15**	**-**	**8**	**20**	**90**	**215**	**395**	**700**	**--**	**--**

 # Any one course PCC/PEC to be conducted online through NPTEL. The course will be notified one month prior to the commencement of the semester.

		July 2025	3.0	Applicable for 2025-26
Chairman - BoS	Dean – Academics	Date of Release	Version	

SEMESTER VIII

Option A

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks				Minimum Passing Marks	Duration of ESE (Hours)
				L	T	P		Mid-Sem Examination	Continual Assessment	End Sem Examination	Total		
1	RM	25ES801T	Research Methodology#	2	-	-	2	10	10	30	50	23	1.5
2	RM	25ES801P	Research Methodology Lab#	-	-	4	2	-	25	25	50	25	
3	PEC	25ET802T	Professional Elective-VI#	3	-	-	3	20	20	60	100	45	3
4	PEC	25ET802P	Professional Elective-VI Lab#	-	-	2	1	-	25	25	50	25	
5	OJT	25ET803P	Industry/Research Internship*	-	-	24	12	-	300	100	400	200	-
			Total	**5**	**-**	**30**	**20**	**30**	**380**	**240**	**650**	**317**	

Option B

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks				Minimum Passing Marks	Duration of ESE (Hours)
				L	T	P		End Sem Examination	Continual Assessment	End Sem Examination	Total		
1	RM	25ES801T	Research Methodology#	2	-	-	2	10	10	30	50	23	1.5
2	RM	25ES801P	Research Methodology Lab#	-	-	4	2	-	25	25	50	25	
3	PEC	25ET802T	Professional Elective-VI#	3	-	-	3	20	20	60	100	45	3
4	PEC	25ET802P	Professional Elective-VI Lab#	-	-	2	1	-	25	25	50	25	
5	OJT	25ET803P	Institutional Internship$ & Project III	-	-	24	12	-	300	100	400	200	-
			Total	**5**	**-**	**30**	**20**	**30**	**380**	**240**	**650**	**317**	

Option B is available to students only after recommendation of the concerned Head of the department. The project and internship should contribute towards career development plan of the students.

\# Courses to be mapped with NPTEL/SWAYAM/MOOC offered course in that semester. Exam will be conducted by NPTEL/Institute

* One semester internship in any industry and project is to be carried. $ Two NPTEL courses of total 6 credits (as per choice of student) or Institutional Internship by IEDC, SVPCET.

		July 2025	3.0	Applicable for 2025-26
Chairman - BoS	Dean – Academics	Date of Release	Version	

Basket for Multi-Disciplinary Minor Courses (MDM)

A. Electronics and Telecommunication Engineering

Semester	Course Category	Course Code	Name of Course	Credit
III	MDM-I	25ET331M	Electronics Devices & Applications	2
IV	MDM-II	25ET431M	Digital Electronics	3
V	MDM-III	25ET531M	Microprocessor and Microcontrollers	3
VI	MDM-IV	25ET631M	Overview of Communication Systems	3
VII	MDM-V	25ET731M	Mobile communication.	3

Basket for Program Elective Courses (PEC)

B. Electronics and Telecommunication Engineering

Semester	Course Category	Course Code	Name of Course	Credit
V	PEC	25ET503T(i)	Digital System Design	3
V	PEC	25ET503T(ii)	Antenna Design and Propagation	3
VI	PEC	25ET602T(i)	Digital VLSI Design	3
VI	PEC	25ET602T(ii)	Digital Image Processing	3
VI	PEC	25ET603T(i)	Wireless and Mobile Communication	2
VI	PEC	25ET603T(ii)	Computer Communication Network	2
VII	PEC	25ET703T(i)	CMOS Design	3
VII	PEC	25ET703T(ii)	Internet of Things (IoT) and Applications	3
VII	PEC	25ET704T(i)	Smart Antennas	2
VII	PEC	25ET704T(ii)	AI for Wireless Communication Systems	2
VIII	PEC	25ET802T(i)	Embedded Sensing, Actuation and Interfacing Systems	3
VIII	PEC	25ET802T(ii)	Neural Network for Signal Processing	3
VIII	PEC	25ET802T(iii)	Software Defined Radio and Cognitive Radio	3

Basket for Open Elective Courses (OE)

C. Electronics and Telecommunication Engineering

Semester	Course Category	Course Code	Name of Course	Credit
V	OE I	25ET561O	Basics of Communication Systems	2
VI	OE II	25ET661O	Sensor Technology & Applications	3
VII	OE III	25ET761O	Introduction to 5G Technology	3

		July 2025	3.0	Applicable for 2025-26
Chairman - BoS	Dean – Academics	Date of Release	Version	

EXIT OPTIONS

Award of UG Certificate in Major with 40 credits and an additional 8 credits (After First Year)

EXIT COURSES			
S.N.	Course name	Mode of	Credits
1.	Fundamentals of Electronic Device Fabrication	Online / NPTEL	2
2.	Digital Electronics and Microprocessor	Online / NPTEL	3
3.	Microelectronics: Devices to Circuits	Online / NPTEL	3

Award of UG Diploma in Major with 80credits and an additional 8 credits (After Second Year)

EXIT COURSES			
S.N.	Course name	Mode of	Credits
1.	ESim - EDA tool for circuit design, simulation, analysis and PCB design	Online / NPTEL	2
2.	Electronic Systems Design: Hands-on Circuits and PCB Design with CAD	Online / NPTEL	3
3.	C Programming and Assembly Language	Online / NPTEL	3

Award of UG Degree in Major with 120 credits and an additional 8 credits (After Third Year)

EXIT COURSES			
S.N.	Course name	Mode of	Credits
1.	Python 3.4.3	Online / NPTEL	2
2.	Embedded Systems	Online / NPTEL	3
3.	VLSI system design	Online / NPTEL	3

		July 2025	3.0	Applicable for 2025-26
Chairman - BoS	Dean – Academics	Date of Release	Version	