



Government Polytechnic, Palanpur
Department of Electronics & Communication Engineering
(Affiliated to GTU / Approved by AICTE / Under CTE, Gujarat)



SELF ASSESSMENT REPORT (SAR)

Diploma Programme in
Electronics & Communication Engineering



Submitted to
National Board of Accreditation (NBA)



Department of Electronics & Communication Engineering

Government Polytechnic, Palanpur
Palanpur, Gujarat 385001

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List of Abbreviations

Accreditation and the outcome framework

NBA	National Board of Accreditation
SAR	Self Assessment Report
AICTE	All India Council for Technical Education
NEP	National Education Policy (2020)
OBE	Outcome Based Education
PEO	Program Educational Objective
PO	Program Outcome
PSO	Program Specific Outcome
CO	Course Outcome
PAM	Program Articulation Matrix
COGC	Competency Oriented Green Curriculum

Assessment years and performance measures

CAY	Current Academic Year; CAYm1–CAYm5 denote the Current Academic Year minus one to minus five
LYG	Last Year Graduate; LYGm1 and LYGm2 denote the preceding two graduating batches
CFY	Current Financial Year; CFYm1–CFYm3 denote the preceding three financial years
API	Academic Performance Index
SI	Success Index
SFR	Student-Faculty Ratio
FQI	Faculty Qualification Index
FPADS	Faculty Performance Appraisal and Development System
PAR	Performance Appraisal Report
ESE	End Semester Examination
PA	Progressive Assessment
CGPA	Cumulative Grade Point Average
SWOT	Strengths, Weaknesses, Opportunities and Threats

Institutions and governing bodies

GP, GPP	Government Polytechnic, Palanpur
EC, ECE	Electronics & Communication Engineering
GTU	Gujarat Technological University

CTE	Commissionerate of Technical Education, Gujarat
DTE	Directorate of Technical Education
KCG	Knowledge Consortium of Gujarat
ACPDC	Admission Committee for Professional Diploma Courses
GPSC	Gujarat Public Service Commission
GSSSB	Gujarat Subordinate Service Selection Board (Gujarat Gaun Seva Pasandgi Mandal)
HNGU	Hemchandracharya North Gujarat University
GAD	General Administration Department, Government of Gujarat
DQAC	Departmental Quality Assurance Cell
ISTE	Indian Society for Technical Education
TPO	Training and Placement Officer
HOD	Head of Department

Schemes, programmes and initiatives

SSIP	Student Startup and Innovation Policy
RUSA	Rashtriya Uchchatar Shiksha Abhiyan
CDTP	Community Development through Polytechnics
CAS	Career Advancement Scheme
AGP	Academic Grade Pay
FDP	Faculty Development Programme
STTP	Short Term Training Programme
TEIM	Technical Institute Inspection Manual
DDCET	Diploma to Degree Common Entrance Test
NPNI	New Palanpur for New India
NSS	National Service Scheme
PTM	Parent-Teacher Meeting
POC	Proof of Concept
IPR	Intellectual Property Rights
GeM	Government e-Marketplace

Facilities, IT and learning resources

BADP	Border Area Development Programme; the BADP Building is the academic block funded under it
CWAN	Campus Wide Area Network
GSWAN	Gujarat State Wide Area Network
LAN	Local Area Network
ICT	Information and Communication Technology
CCTV	Closed Circuit Television
NDLI	National Digital Library of India
ONOS	One Nation One Subscription
NPTEL	National Programme on Technology Enhanced Learning
SWAYAM	Study Webs of Active-Learning for Young Aspiring Minds
MOOC	Massive Open Online Course
LSRW	Listening, Speaking, Reading and Writing

Part I

Part A

Institute Information

1 Name and Address of the Institution

Government Polytechnic Palanpur

Out side malan Gate Ambaji Road palanpur-385001

2 Name and Address of the Directorate of Technical Education

Directorate of Technical Education,

Block No.2,

6th Floor,

Karmyogi Bhavan,

Sector 10-A,

Gandhinagar - 382010.

Gujarat State.

Phone : +91-79-232 53546

Fax : +91-79-232 53539

Email : dire-dte@gujarat.gov.in

3 Year of Establishment

1984

4 Type of the Institution

☐ University

☐ Deemed University

☒ **Affiliated**

☐ Autonomous

☐ Any Other (Please Specify)

5 Ownership Status

- ☐ Central Government
 ☐ Trust
☒ **State Government**
☐ Society
☐ Government Aided
 ☐ Section 25 Company
☐ Self financing
 ☐ Any Other (Please Specify)

6 Other Academic Institutions of the Trust/Society/Company etc., if any

None.

7 Details of all the programs being offered by the institution under consideration

7 Details of all the programs being offered by the institution under consideration

Table 1: Details of All Programs Offered by the Institution

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Electronics & Communication Engineering	Diploma	1994	1994	30	Yes	30	Applying first time	–	–	Yes	3
Information and Communication Technology	Diploma	2022	2022	60	No	60	Not eligible for accreditation	–	–	No	3
DIPLOMA MECHANICAL ENGINEERING	Diploma	1988	1988	30	Yes	60	Granted accreditation for 3 years for the period (specify period)	2021	2027	No	3
DIPLOMA CIVIL ENGINEERING	Diploma	1984	1984	30	Yes	90	Granted accreditation for 3 years for the period (specify period)	2021	2027	0	3
Information Technology	Diploma	2023	2023	30	No	30	Not eligible for accreditation	–	–	No	3
DIPLOMA ELECTRICAL ENGINEERING	Diploma	1984	1984	30	Yes	60	Granted accreditation for 3 years for the period (specify period)	2021	2027	0	3

Sanctioned Intake for Last Five Years for the Electronics & Communication Engineering

Table 2: Sanctioned Intake for Last Five Years – Electronics & Communication Engineering

Academic Year	Sanctioned Intake
2025-26	30
2024-25	30
2023-24	30
2022-23	30
2021-22	30
2020-21	30
2019-20	150

7a Accreditation History

Table 3: Accreditation History of the Institution's Programs

Sr.No	Name of the Department	Name of the Program	Year of 1st Accreditation(if Applicable)	Year of 2nd Accreditation(if Applicable)	Year of 3rd Accreditation(if Applicable)
1	DIPLOMA	DIPLOMA MECHANICAL ENGINEERING	2021	2024	
2	DIPLOMA	DIPLOMA CIVIL ENGINEERING	2021	2024	
3	DIPLOMA	DIPLOMA ELECTRICAL ENGINEERING	2021	2024	

7b Programs to be considered for Accreditation vide this application

Table 4: Programs Considered for Accreditation Under This Application

S No	Level	Discipline	Program
1	Diploma	Engineering & Technology	Electronics & Communication Engineering

8 Total number of Employees

A. Regular Employees (Faculty and Staff)

Engineering and Technology – Diploma Shift-1

Table 5: Regular Employees (Faculty and Staff) – Engineering and Technology, Diploma Shift-1

	2025-26		2024-25		2023-24		2022-23	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering & Technology (Male)	52	52	52	52	54	54	54	58
Faculty in Engineering & Technology (Female)	6	6	6	6	6	6	5	8

	2025-26		2024-25		2023-24		2022-23	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Science & Humanities (Male)	4	4	4	4	4	4	4	4
Faculty in Science & Humanities (FeMale)	1	1	1	1	1	1	1	1
Non-teaching staff (Male)	9	10	10	10	13	13	18	19
Non-teaching staff (FeMale)	4	4	3	4	5	5	5	5

B. Contractual Staff (Not Covered in 9.A)

Engineering and Technology – Diploma Shift-1

Table 6: Contractual Staff (Not Covered in 9.A) – Engineering and Technology, Diploma Shift-1

	2025-26		2024-25		2023-24		2022-23	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering & Technology (Male)	0	0	0	0	0	0	0	3
Faculty in Engineering & Technology (Female)	1	1	1	1	1	1	1	1
Faculty in Science & Humanities (Male)	0	0	0	0	0	0	0	0
Faculty in Science & Humanities (FeMale)	0	0	0	0	0	0	0	0
Non-teaching staff (Male) [†]	0 0		0 0		0 0			0 0
Non-teaching staff (FeMale) [†]	0 0		0 0		0	0	0 0	

[†]Non-teaching staff rows are reproduced exactly as structured in the source SAR document, which does not split MIN/MAX values into separate cells here as it does for every other row in this table; some source cells hold a single combined “0 0” value spanning what would otherwise be two MIN/MAX sub-columns, and one source cell for the Male row is blank. No MIN/MAX split has been inferred beyond what the source states.

9 Total number of Students

Engineering and Technology – Diploma Shift-1

Table 7: Total Number of Students – Engineering and Technology, Diploma Shift-1

Course Name	2025-26	2024-25	2023-24	2022-23
Total no. of Boys	358	351	331	213
Total no. of Girls	32	30	29	7
Total	390	381	360	220

10 Contact Information of the Head of the Institution and NBA Coordinator

Head of the Institution

Name Mr. Sureshkumar D. Dabhi
Designation Head of the Department (Mechanical Engineering), Principal (I/C)
Mobile No. 9825697278
Email ID gp-palanpur-dte@gujarat.gov.in

NBA Coordinator, If Designated

Name Mr. N V OZA
Designation Lecturer in Mechanical Engineering
Mobile No. 9067737576
Email ID gpptpo@gmail.com

Part II

Part B

Criterion 1

Vision, Mission and Program Educational Objectives (50)

Total Marks: 50

Table 1.0.1: Sub-Criteria and Marks Distribution – Criterion 1: Vision, Mission and Program Educational Objectives (Total 50 Marks)

No.	Sub-Criterion	Marks
1.1	State the Vision and Mission of the Department & Institution	5
A	Availability of the Vision & Mission statements of the Department	1
B	Appropriateness/Relevance of the Statements	2
C	Consistency of the Department statements with the Institute statements	2
1.2	State the Program Educational Objectives (PEOs)	5
·	Listing of the Program Educational Objectives (3 to 5) of the program under consideration	5
1.3	Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders	10
A	Adequacy in respect of publication & dissemination	2
B	Process of dissemination among stakeholders	2
C	Extent of awareness of Vision, Mission & PEOs among the stakeholders	6
1.4	State the process for defining the Vision and Mission of the Department, and PEOs of the program	15
A	Description of process for defining the Vision, Mission of the Department	7
B	Description of process for defining the PEOs of the program	8
1.5	Establish consistency of PEOs with Mission of the Department	15
A	Preparation of a matrix of mapping PEOs and elements of Mission statement	5
B	Consistency/justification of mapping of the matrix	10
Total Marks – Criterion 1		50

1.1 State the Vision and Mission of the Department & Institution (05)

A. Availability of the Vision & Mission statements of the Department (01)

Vision and Mission of the Institute

Vision of Institute

To produce competent diploma engineers as per need of industries and entrepreneurs with ethical values.

Mission of Institute

Government Polytechnic, Palanpur strives to impart:

- To impart industry oriented technical education.
- Excellent teaching and learning environment.
- Promote entrepreneurship activities.
- Continual growth in every sphere of life by developing core human values.

Vision and Mission of the Department

Vision of Department

To prepare competent diploma level electronics and communication engineers, catering the needs of industries and society as an excellent employee, innovator and entrepreneur with moral values.

Mission of department

- Provide quality education in the field of EC engineering
- Develop state of art laboratories, classrooms and up gradation of faculties
- Strengthen industrial liaison by offering mutual beneficiaries services
- Execute extra-curricular and co-curricular activities to inculcate innovation, entrepreneurship and moral values

Availability of Department Vision and Mission

The department's Vision, Mission, and PEOs are formally documented and disseminated via institute/department websites, display boards at the department entrance and corridors, HOD office, laboratories, classrooms, course files, and induction/orientation programs.

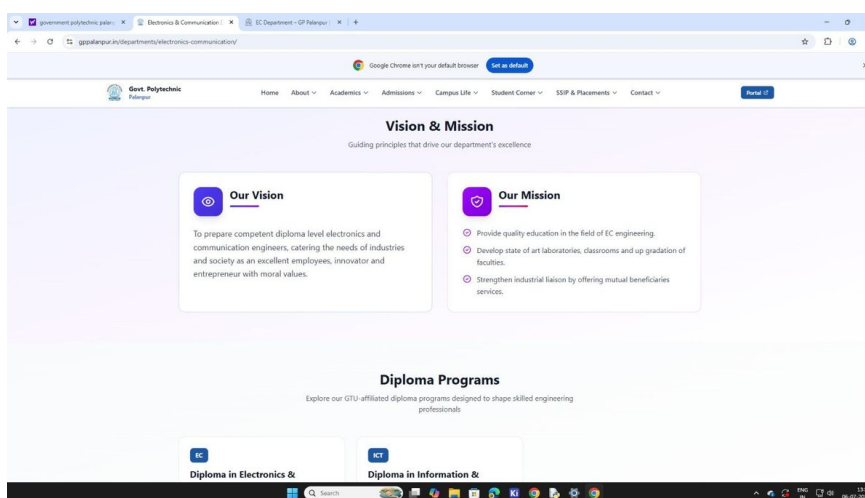


Figure 1.1.1: Availability of Vision and Mission on Institute Website

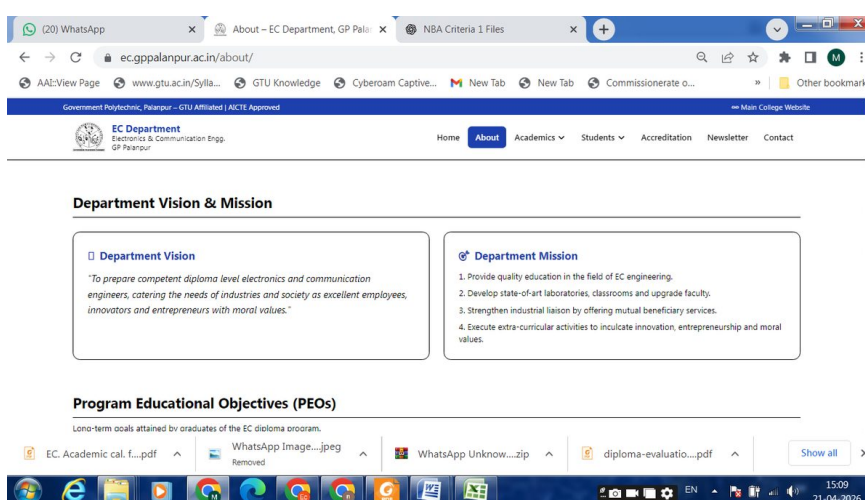


Figure 1.1.2: Availability of Vision and Mission on Department Website

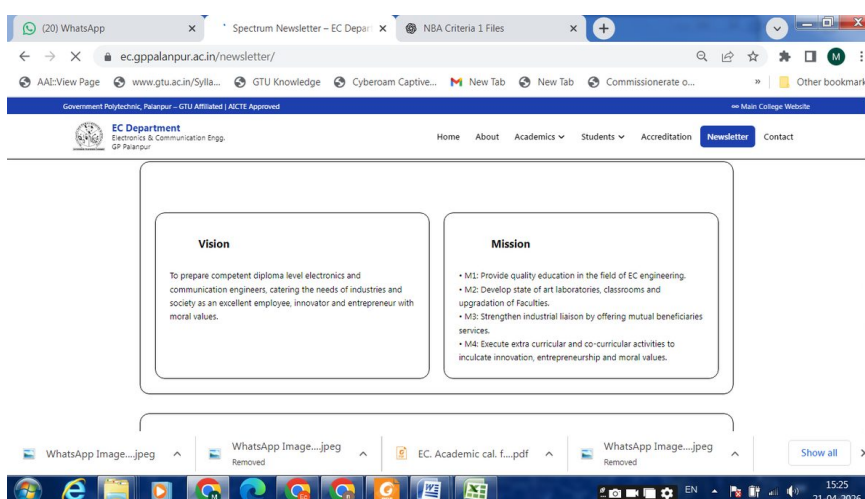


Figure 1.1.3: Availability of Vision and Mission in Departmental Newsletter

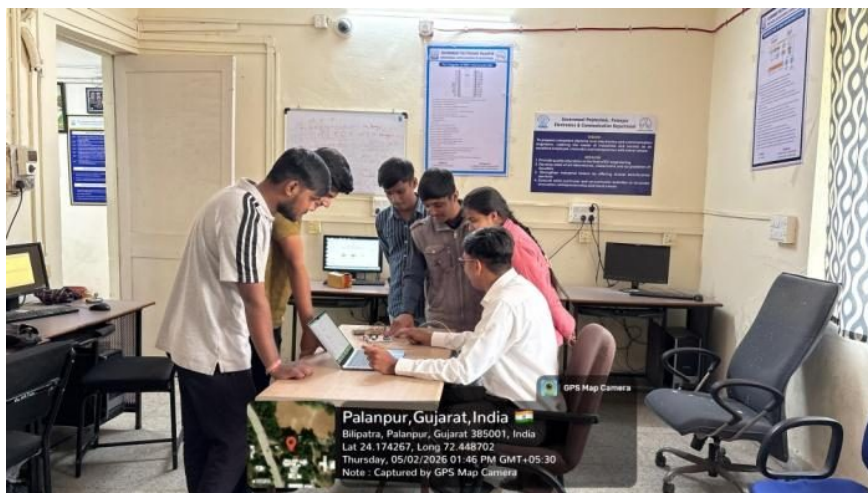


Figure 1.1.4: Availability of Vision and Mission in Laboratories



Figure 1.1.5: Availability of Vision and Mission in Laboratories



Figure 1.1.6: Availability of Vision and Mission in Classrooms



Figure 1.1.7: Availability of Vision and Mission in HoD Office

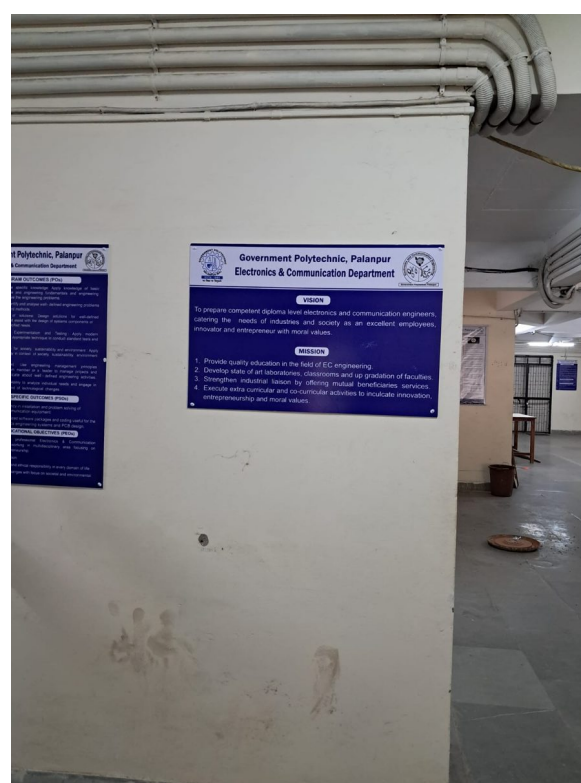


Figure 1.1.8: Availability of Vision and Mission in Corridor

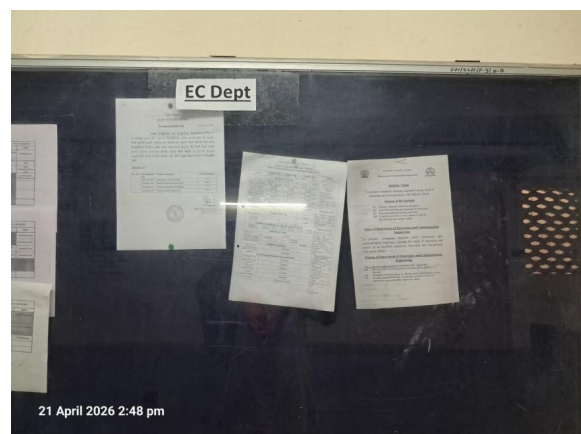


Figure 1.1.9: Availability of Vision and Mission in Corridor and Notice Board

Government Polytechnic, Palanpur
Academic Calendar - Even Term - 2025-26
Electronics & Communication Engineering Department

Activity	SEMESTER-6		SEMESTER-4		SEMESTER-2	
	From	To	From	To	From	To
Academic activity						
Term Date	22/12/25	28/04/26	22/12/25	29/04/26	02/02/26	05/05/26
Attendance review-1	20/02/26	--	20/02/26	--	27/03/26	--
PA-1 Result Display	08/04/26	10/04/26	08/04/26	10/04/26	18/05/26	25/05/26
Parents Meeting	13/04/26	18/04/26	13/04/26	18/04/26	28/05/26	30/05/26
Remedial Classes	09/03/26	20/04/26	09/03/26	20/04/26	04/05/26	05/06/26
Attendance review-2	27/03/26	27/03/26	27/03/26	27/03/26	29/05/26	29/05/26
Prog. Assessment-2	20/04/26	24/04/26	20/04/26	24/04/26	01/06/26	05/06/26
PA-2 Result Display	27/04/26	27/04/26	27/04/26	27/04/26	05/06/26	05/06/26
Term work submission	24/04/26	28/04/26	24/04/26	28/04/26	01/06/26	05/06/26
GTU practical exam	As per GTU	As per GTU	As per GTU	As per GTU	As per GTU	As per GTU
GTU Theory End Semester Examination	As per GTU	As per GTU	As per GTU	As per GTU	As per GTU	As per GTU
Project (Sem 6)						
Project Review-1	18/02/26	--	18/02/26	--	--	--
Project Review-2	12/03/26	--	12/03/26	--	--	--
Final Project Presentation	28/04/26	--	28/04/26	--	--	--
Students feedback on faculty performance						
Feedback 1	23/02/26	27/02/26	23/02/26	27/02/26	23/03/26	27/03/26
Feedback 2	24/04/26	28/04/26	24/04/26	28/04/26	01/06/26	05/06/26
Industrial Visits						
Railway station control room		07/02/26		07/02/26		07/02/26
Banas dairy		07/03/26		07/03/26		07/03/26
Expert Lectures						
Workshop on PCB design		21/02/26		21/02/26		21/02/26
Workshop on Website development/ Drone technologies		27/03/26		27/03/26		27/03/26
International/ National day celebration/ Institute level celebration						
Republic Day		26/01/26		26/01/26		26/01/26
Sports Week		23/02/26 - 27/02/26		23/02/26 - 27/02/26		23/02/26 - 27/02/26
International Women's Day		08/03/26		08/03/26		08/03/26
Summer Vacation		13/05/26- 30/05/26		13/05/26- 30/05/26		13/05/26- 30/05/26

Head of Electronic & Comm. Engg. Deptt.
Government Polytechnic
PALANPUR-355 001(B.K.)

Government Polytechnic, Palanpur
EC Department

Title : _____

Semester: 3
Course Name: Electronic Measurements and Instruments
Course Code: 4331102

Academic year	Term date	Course Coordinator
2022-23	03/10/2022 to 31/01/2023	Shri S P Joshiara
2023-24	10/08/2023 to 30/12/2023	Mrs G N Acharya
2024-25	27/06/2024 to 25/10/2024	Shri S P Joshiara

Vision of EC Department, GP Palanpur
To Prepare Competent Diploma Level Electronics And Communication Engineers, Catering The Needs of Industries and Society as an excellent employee, Innovator and Entrepreneur With Moral Values.

Mission of EC Department, GP Palanpur
• Provide Quality Education in the Field of EC Engineering
• Develop State of Art Laboratories, Classrooms and Upgradation of Facilities.
• Strengthen Industrial Liaison By Offering Mutual Beneficiaries Services.
• Execute Extracurricular and Co-Curricular Activities to Incubate Innovation Entrepreneurship and Moral Values.

Institute Vision
To Produce Competent Diploma Engineers as Per Need of Industries and Entrepreneurs, With Ethical Values.

Institute Mission
• To prepare Industry Oriented Technical Education
• Excellent Teaching and Learning environment
• Promote Entrepreneurship Activities
• Continual Growth in every Sphere of Life By Developing Core Human Values.

Figure 1.1.10: Availability of Vision and Mission in Academic Calendar and Course Files

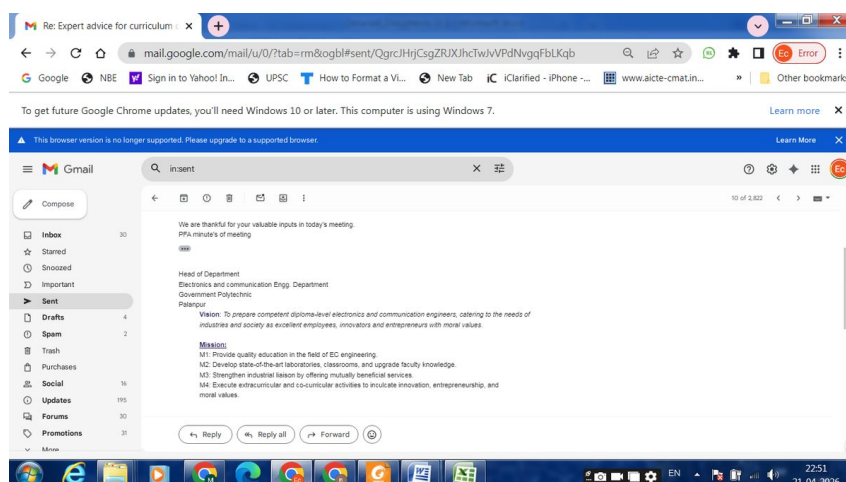


Figure 1.1.11: Availability in E-Mail Signature

B. Appropriateness/Relevance of the Statements (02)

1. **Vision Statement** To prepare competent diploma-level electronics and communication engineers, catering the needs of industries and society as an excellent employee, innovator and entrepreneur with moral values.

Justification:

- **Clear and aspirational:** Vision statement emphasizes on technical competence, innovation, employability, and ethics. These are the essential attributes for a diploma engineer.
- **Future-oriented and stakeholder-centric:** Statement addresses expectations of key stakeholders such as industry and society which aligns vision with Outcome-Based Education principles.
- **Aligned with diploma-level outcomes:** Statement focuses on practical skills, employability and responsible citizens contributing to the society.

Institute Vision:

To produce competent diploma engineers as per need of industries and entrepreneurs with ethical values.

Key principles from institute Vision and relevance of program Vision with institute Vision:

- **Competent engineers:** Program vision statement is focused on preparing competent diploma engineers and excellent employees in the field of Electronics & Communication, which directly supports the institute's goal of meeting industry requirements.
- **Stakeholders need:** Program statement is centered upon industry and society as stakeholders in similarity with the institute vision.
- **Entrepreneur:** Program statement includes innovators and entrepreneurs like the institute statement. So it strongly aligns with the institute's vision of developing entrepreneurial capabilities.
- **Ethical values:** Both visions emphasize ethical and moral values, ensuring responsible professional behavior and societal contribution.

The department vision is well aligned with the institute vision through strong emphasis on competence, innovation, entrepreneurship, and ethical values.

2. Mission Statements

M1: Provide quality education in the field of EC engineering.

M2: Develop state-of-the-art laboratories, classrooms, and up gradation of faculties

M3: Strengthen industrial liaison by offering mutually beneficiaries services

M4: Execute extra-curricular and co-curricular activities to inculcate innovation, entrepreneurship, and moral values.

Justification: Mission statements are the statements that describes operational strategies and the immediate objectives that will enable the achievement of the vision statement. It provides the framework to fulfil the vision.

The key characteristics of the program mission statements are:

Actionable strategy: The statements specify pedagogy (M1), infrastructure and faculty development (M2), industry connect (M3), and value-based development (M4).

Comprehensive approach: These statements address academic excellence, practical exposure, and value-based education.

Enables the vision: This statement collectively ensures development of competent, industry-ready, innovative, and ethical diploma engineers. And it works towards building outcomes for diploma programs.

The mission statements effectively operationalize the vision by providing a structured and outcome-oriented framework, ensuring continuous improvement and stakeholder satisfaction.

Appropriateness and relevance of program vision and mission can be summarized as:

- Internal consistency is maintained between vision and mission, along with its relevance to EC discipline reflects stakeholder needs (students, faculty, employers, society).
- The core purpose of the diploma level technical program is effectively reflected.
- Statements follow the standard definitions being clear, relevant and aligned with long term objectives of the institute vision.
- Program vision and mission are highly relevant and appropriate in the context of Outcome-Based Education(OBE).

The relevance of program vision and mission with OBE is as shown in Table [1.1.1](#)

Table 1.1.1: Relevance of Vision and Mission with Outcome Based Education

	Outcome based curriculum	Outcome based Teaching and Learning process	Outcome based assessment
Vision	Identifies attributes required in an EC diploma engineer to meet industrial and societal needs.	Focused on developing lifelong learning; highly student-centric; aims at apply–analyze–solve engineering problems.	Ensures students use knowledge and skills professionally (problem solving, designing experiments, communication).
M1: Quality EC education	Focus on imparting EC core knowledge and its application.	Inclusion of tools and methods enabling students to learn all aspects of EC as diploma engineers.	Criteria-based assessments demonstrating achievement of outcomes and abilities.
M2: Labs/classrooms and faculty dev.	Framework for collaborative curriculum planning and improving the curriculum.	Strategic enhancement of teaching–learning quality via student-centric processes in classrooms and laboratories by qualified faculty.	Measures technical skills through quizzes, laboratories, and project-based learning.
M3: Industry liaison	Develop curriculum aligned to industrial needs by involving industry experts during design/review.	Correlates student learning with industry via visits, workshops, expert seminars, and innovation/startup initiatives (e.g., SSIP).	Articulates knowledge and practical skills from internships/projects.
M4: Co- and extra-curriculars & values	Includes co- and extra-curricular that encourage innovation, moral values, and entrepreneurship within the departmental planning.	Arranges activities under gymkhana/department cells; student-led technical events to boost innovation and entrepreneurial skills and teamwork.	Assesses innovation/entrepreneurship and values through participation quality and performance in activities.

C. Consistency of the Department statements with the Institute statements (02)

The Department of Electronics and Communication Engineering ensures strong alignment with the institute's vision and mission.

- The focus on competency and industry readiness is reflected in both vision statements.
- The department extends the institute's vision by incorporating innovation and societal contribution.

Table 1.1.2: Consistency of the Department Vision with the Institute Vision

Institute Vision	Department Vision Element	Justification
To produce competent diploma engineers	To prepare competent diploma-level electronics and communication engineers	There exists strong consistency as both statements emphasize developing technically competent diploma engineers. The department vision is a specialization of the institute vision in the EC domain.

Institute Vision	Department Vision Element	Justification
As per need of industries and entrepreneurs	Catering the needs of industries and society	Both visions focus on fulfilling industry requirements. The department additionally extends it to societal needs, strengthening relevance. Hence there exists strong consistency.
Engineers with entrepreneurial orientation	Innovator and entrepreneur	The department vision directly supports entrepreneurship and innovation, aligning perfectly with the institute's focus showcasing strong consistency.
With ethical values	With moral values	"Ethical values" and "moral values" convey the same intent of value-based education and responsible behaviour indicating strong consistency.

The Department Vision is fully consistent and aligned with the Institute Vision. While the Institute Vision provides a broad framework, the Department Vision:

- Specializes it for Electronics and Communication Engineering
- Expands the scope to include societal needs
- Reinforces innovation and entrepreneurship
- Maintains a strong focus on ethical and moral values.

Thus, the Department Vision effectively derives from and supports the Institute Vision, ensuring coherence in institutional goals and direction.

- Mission statements are well synchronized with institute Mission, emphasizing on:
 - **Quality education:** Fulfilling the institute mission to offer an excellent teaching and learning environment. Classrooms, laboratories and faculty up gradation provide the environment for an improved TL process.
 - **Industry interaction:** Industry oriented technical education will be enhanced by strengthening industrial liaison.
 - **Entrepreneurship:** By extra-curricular and co-curricular activities will drive entrepreneurship and innovation.
 - **Ethical and moral values:** Extra-curricular and co-curricular activities impart Lifelong learning and ethics.

Thus, the department's vision and mission are consistent, complementary, and supportive of the institute's broader goals.

- Industry oriented technical education.
- Excellent teaching and learning environment.
- Promote entrepreneurship activities.
- Continual growth in every sphere of life by developing core human values.

Table 1.1.3: Mapping of Departmental Mission with Institute Mission

Dept Mission \ Inst Mission	M1: Industry oriented technical education.	M2: Excellent teaching and learning environment.	M3: Promote entrepreneurship activities.	M4: Continual growth in every sphere of life by developing core human values.
DM1: Quality education	3: Strongly supports industry-oriented technical knowledge through curriculum delivery	3: Strongly ensures effective teaching-learning processes providing an excellent environment.	1: Indirect contribution towards entrepreneurship development	1: Education indirectly contributes to human values.
DM2: Infrastructure & faculty	2: Moderately supports technical education through improved facilities	3: Strongly enhances teaching-learning via modern labs and skilled faculty	1: Limited direct role in entrepreneurship promotion	0: Being academic and technical enablers, it does not directly contribute to the development of core human or holistic personal growth.
DM3: Industry interaction	3: Strongly aligns with industry-oriented learning and practical exposure	2: Moderately improves teaching-learning through real-world inputs	3: Strongly promotes entrepreneurial mindset and innovation	0: It is primarily skill/industry oriented.
DM4: Activities & values	1: Limited direct contribution to technical education	2: Moderately supports experiential and active learning	3: Strongly promotes innovation and entrepreneurship	3: Strongly inculcates moral values and holistic development

Departmental Mission 1 (Quality Education): strongly supports M1 and M2 by delivering industry-relevant curriculum through effective teaching-learning processes. It moderately contributes to M3 and M4 by nurturing basic entrepreneurial awareness and ethical values among students

Departmental Mission 2 (Infrastructure & Faculty): highly aligns with M2 by ensuring availability of qualified faculty and infrastructure to create an excellent learning environment. It moderately supports M1 through technical resource enhancement and has limited contribution to M3.

Departmental Mission 3 (Industry Interaction): strongly contributes to M1 and M3 by facilitating industry exposure, training, and entrepreneurial development. It moderately supports M2 by enriching practical learning experiences.

Departmental Mission 4 (Activities & Values): strongly aligns with M3 and M4 by promoting co-curricular, extracurricular, and value-based activities that enhance entrepreneurship and human values. It moderately supports M2 and has limited contribution to M1.

The Departmental Missions are well aligned with the Institute Missions. Strong correlations exist in areas of industry-oriented education, teaching-learning processes, and entrepreneurship development, while moderate alignment exists in promoting infrastructure support and human values, ensuring holistic development of students.

Consistency of the Department statements with regulatory bodies

The department's Vision and Mission are consistent with the broader framework of regulatory authorities and national education policies:

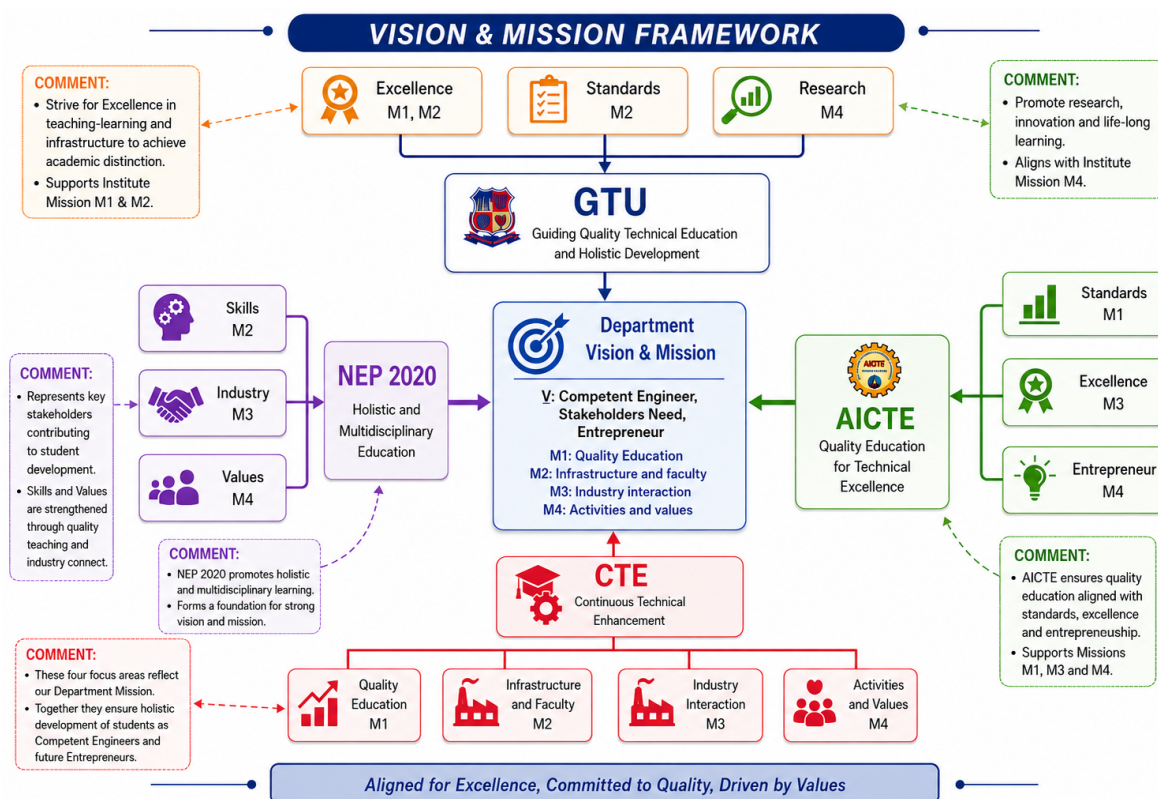


Figure 1.1.12: Department Vision & Mission Alignment with Regulatory Bodies

Alignment with GTU (Gujarat Technological University)

Mission of University are:

- To develop centres of academic excellence at university premises and at affiliated colleges in domains of science, engineering, technology, management, and environment for imparting comprehensive education, training, and research infrastructure as per the nation's requirements.
- To build resources, facilities, proficiencies and other related infrastructure of global standard for the development of knowledge, skills, and competencies in the various educational domains.
- To develop research-oriented pedagogy for flourishing ideas and to nurture innovators, entrepreneurs and professionals of tomorrow
- To build and enhance collaborations with other academic, research, industry, and government organizations as well as NGOs across the globe so that education, training and research at university and its affiliated colleges become aligned with national and global level requirements.
- To encourage multidisciplinary research and develop flexible learning ecosystem,

CORE VALUES:

- Excellence with value-based education.
- Responsiveness to society.
- Integrity and transparency.
- Mutual Respect.
- Sustainable development.

GTU emphasizes developing centers of academic excellence, building global-standard resources, fostering research-oriented pedagogy, and encouraging multidisciplinary research. The department's focus on quality education (M1), modern infrastructure and faculty development (M2), and innovation through co-curricular activities (M4) directly supports these objectives.

Alignment with AICTE (All India Council for Technical Education)

Mission of AICTE:

- A true facilitator and an objective regulator.
- Transparent governance and accountable approach towards the society.
- Planned and coordinated development of Technical Education in the country by ensuring world-class standards of institutions through accreditation.
- Emphasis on developing high quality institutions, academic excellence, and innovative research and development programmes.
- Networking with/ or a network of institutions for optimum resource utilization.
- Dissemination of knowledge.
- Technology forecasting and global manpower planning.
- Promoting industry-institution interaction for developing new products, services, and patents.
- Inculcating entrepreneurship.
- Encouraging indigenous technology.
- Focusing on non-formal education.
- Providing affordable education to all.
- Making Technical Education in India globally acceptable.

AICTE's mission includes planned development of technical education with world-class standards, emphasis on quality institutions and academic excellence, industry-institution interaction, and promoting entrepreneurship. The department's mission elements align with these priorities through quality education delivery(M1), industry liaison programs(M3), and entrepreneurship initiatives(M4).

*Alignment with CTE (Commissionerate of Technical Education, Gujarat)***Mission of CTE:**

- Quality technical and professional education with continuous improvement of all the resources and personnel
- To promote conducive ecosystem for Academic, Industry, Research, Innovations and Start-ups
- To provide affordable quality professional education with moral values, equal opportunities, accessibility and accountability
- To allocate competent and dedicated human resources and infrastructure to the institutions for providing world-class professional education to become a Global Leader (“Vishwa Guru”)

CTE promotes quality technical education with continuous improvement, industry-academia collaboration, and value-based learning with equal opportunities. The department’s mission addresses these through systematic quality enhancement (M1-M2), industry partnerships (M3), and ethical value development (M4).

Alignment with NEP 2020 (National Education Policy 2020)

NEP 2020 emphasizes holistic, multidisciplinary, skill-based education with strong industry-academia linkages, continuous faculty development, and value-based learning. The department’s approach incorporates:

- Skill-based education: Practical, hands-on learning through modern laboratories (M1, M2)
- Industry collaboration: Strong industry liaison for internships and skill validation (M3)
- Value-based learning: Explicit focus on moral values and ethical responsibility (M4)
- Faculty development: Continuous upgradation of faculty knowledge and skills (M2)
- Holistic development: Co-curricular and extra-curricular activities fostering innovation and entrepreneurship (M4)

1.2 State the Program Educational Objectives (PEOs) (05)

Graduates from Diploma in Electronics & Communication Engineering Program are expected to achieve the following Program Educational Objectives:

- **PEO1:** Successfully pursue professional electronics and communication engineering careers working in multidisciplinary areas, focusing on innovation and entrepreneurship.
- **PEO2:** Pursue higher education.
- **PEO3:** Demonstrate societal and ethical responsibility in every domain of life.
- **PEO4:** Adapt to technological changes with focus on societal and environmental issues.

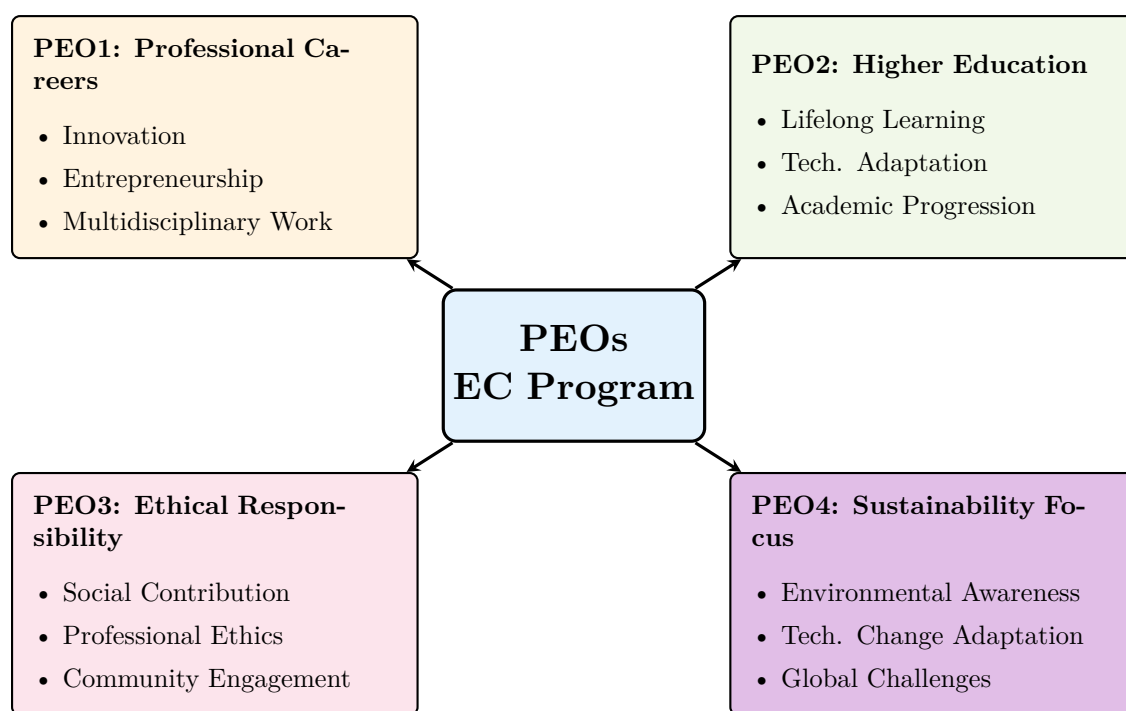


Figure 1.2.1: PEO Framework Overview - Four Pillars of Program Educational Objectives

PEO1: Application of Knowledge and Skills for Careers

“Successfully pursue professional electronics and communication engineering careers working in multidisciplinary areas, focusing on innovation and entrepreneurship.”

Justification: Ensures job readiness and problem-solving aligned with NBA’s outcome-based focus. Reflects practical, hands-on orientation of diploma education and industry relevance.

PEO2: Higher Education and Vertical Mobility

“Pursue higher education.”

Justification: Supports NEP/AICTE pathways for progression and lifelong learning. Encourages higher studies, technical certifications, and lateral professional growth. Reinforces academic rigor and preparedness for evolving roles.

PEO3: Ethical and Professional Contribution

“Demonstrate societal and ethical responsibility in every domain of life.”

Justification: Addresses ethics, responsibility, and societal contribution mandated by NBA graduate attributes. Encourages entrepreneurship and professionalism aligned with national initiatives. Reinforces teamwork, communication, and responsible practice in diverse workplaces.

PEO4: Lifelong Learning and Adaptability

“Adapt to technological changes with focus on societal and environmental issues.”

Justification: Prepares graduates to track emerging technologies (IoT, AI, 5G) and adapt roles. Encourages flexibility, critical thinking, and self-directed learning. Supports sustained employability and innovation in dynamic, multidisciplinary contexts.

1.3 Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

The Vision, Mission, and PEOs of the Electronics & Communication Engineering department are strategically published and disseminated to ensure they serve as the foundation for all academic and administrative activities. The department ensures that both internal and external stakeholders are well-versed in these objectives through a multi-channel approach and processes:

A. Adequacy in respect of publication & dissemination (02)

Publication Channels

The following table outlines the specific locations and target audiences for the dissemination of the Departmental Vision, Mission, and PEOs.

Table 1.3.1: Publication and Dissemination Channels for Vision, Mission, and PEOs

Sr. No.	Place of Dissemination	Target Stakeholders
1	Institute & Departmental Website (https://gppalanpur.ac.in/)(https://ec.gppalanpur.ac.in/)	Internal & External Stakeholder (Global access)
2	Department Notice Board & Head Office	Internal & External Stakeholder
3	Department Laboratories & Classrooms	Internal Stakeholder
4	Orientation Programme & Parents Teacher Meetings	Internal & External Stakeholder
5	Curriculum documents: Course Files, Lab Manuals	Internal Stakeholder
6	Departmental Newsletter & email (Signatures)	Internal & External Stakeholder

The Vision and Mission statements that are included in the course files and the lab manuals make the faculty members and students aware of the statements.

The College website/ department website forms an indispensable platform to disseminate the statements of both the institute and the department to the internal and external stakeholders. The signature in email helps in disseminating the statements to the internal and external stakeholders.

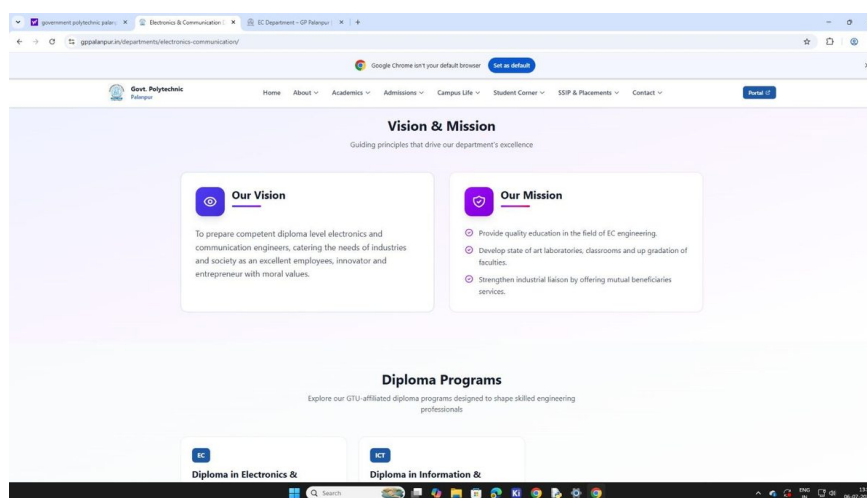


Figure 1.3.1: Dissemination of Vision and Mission on Institute Website

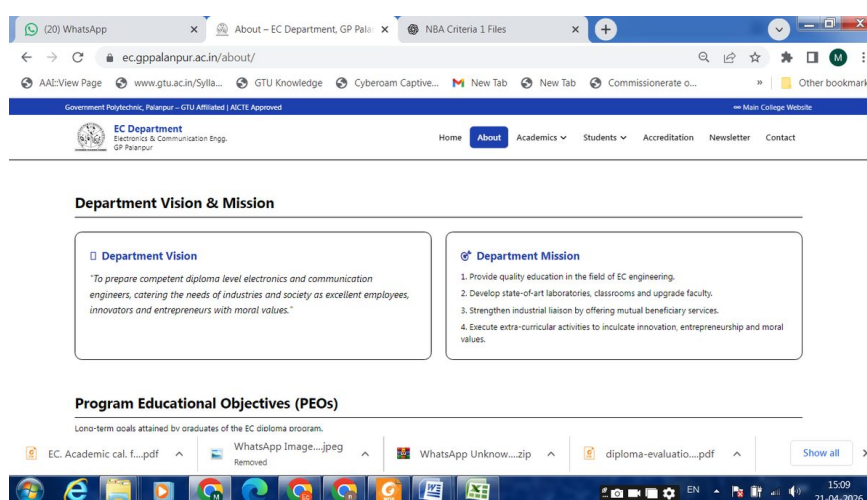


Figure 1.3.2: Dissemination of Vision and Mission on Department Website

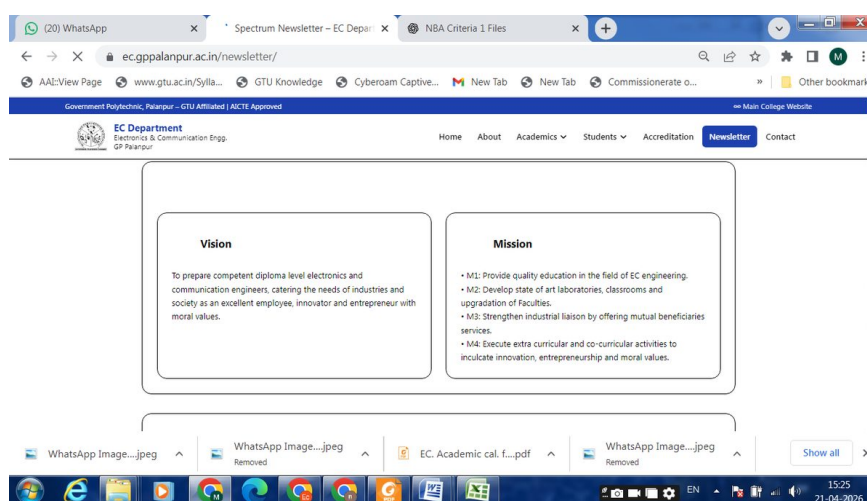


Figure 1.3.3: Dissemination of Vision and Mission in Departmental Newsletter



Figure 1.3.4: Dissemination of Vision and Mission in Classrooms



Figure 1.3.5: Dissemination of Vision and Mission in HoD Office



Figure 1.3.6: Dissemination of Vision and Mission in Laboratories

Government Polytechnic, Palanpur						
Academic Calendar - Even Term – 2025-26						
Electronics & Communication Engineering Department						
Activity	SEMESTER-6		SEMESTER-4		SEMESTER-2	
	From	To	From	To	From	To
Academic activity						
Term Date	22/12/25	29/04/26	22/12/25	29/04/26	02/02/26	05/06/26
Attendance review-1	20/02/26	--	20/02/26	--	27/03/26	--
Prog. Assessment-1	05/04/26	10/04/26	05/04/26	10/04/26	18/05/26	25/05/26
PA-1 Result Display	13/04/26		13/04/26		28/05/26	
Parents Meeting	18/04/26		18/04/26		30/05/26	
Remedial Classes	09/03/26	29/04/26	09/03/26	29/04/26	04/05/26	05/06/26
Attendance review-2	27/03/26		27/03/26		29/05/26	
Prog. Assessment-2						
Remedial exam	20/04/26	24/04/26	20/04/26	24/04/26	01/06/26	05/06/26
PA-2 Result Display	27/04/26		27/04/26		05/06/26	
Term work submission	24/04/26	29/04/26	24/04/26	29/04/26	01/06/26	05/06/26
GTU practical exam	As per GTU		As per GTU		As per GTU	
GTU-Theory End Semester Examination	As per GTU		As per GTU		As per GTU	
Project (Sem 6)						
Project Review-1	19/02/26		--		--	
Project Review-2	12/03/26		--		--	
Final Project Presentation	28/04/26		--		--	
Students feedback on faculty performance						
Feedback 1	23/02/26	27/02/26	23/02/26	27/02/26	23/03/26	27/03/26
Feedback 2	24/04/26	29/04/26	24/04/26	29/04/26	01/06/26	05/06/26
Industrial Visits						
Railway station control room	07/02/2026					
Banas dairy	07/03/26					
Expert Lectures						
Workshop on PCB design	21/02/2026					
Workshop on Website development/ Drone technologies	27/03/2026					
International/ National day celebration/ Institute level celebration						
Republic Day	26/01/2026					
Sports Week	23/02/26 – 27/02/26					
International Women's Day	08/03/26					
Summer Vacation	13/05/2026- 30/06/2026					
Vision To produce competent diploma engineers as per need of Industries, Entrepreneurs with ethical values						
Mission • Industry oriented technical education • Excellent teaching and learning environment • Promote entrepreneurship activities • Continual growth in every sphere of life by developing core human values						
Department Vision To prepare competent diploma level electronics and communication engineers, catering the needs of industries and society as an excellent employee, innovator and entrepreneur with moral values.						
Department Mission • Provide quality education in the field of EC engineering • Develop state of art laboratories, classrooms and up gradation of faculties. • Strengthen industrial liaison by offering mutual beneficiaries services • Execute extracurricular and co-curricular activities to inculcate innovation, entrepreneurship and moral values						
Program Educational Objectives (PEOs) • Successfully pursue professional electronics and communication engineering career working in multidisciplinary area focusing on innovation and entrepreneurship. • Pursue higher education • Demonstrate societal and ethical responsibility in every domain of life • Adapt technological changes with focus on societal and environmental issues						



Shauk

Head of Electo. & Comm. Engg. Dept

Government Polytechnic

PALANPUR-385 001(B.K.)

Figure 1.3.7: Dissemination of Vision and Mission in the Academic Calendar



Figure 1.3.8: Dissemination of Vision and Mission in Laboratories

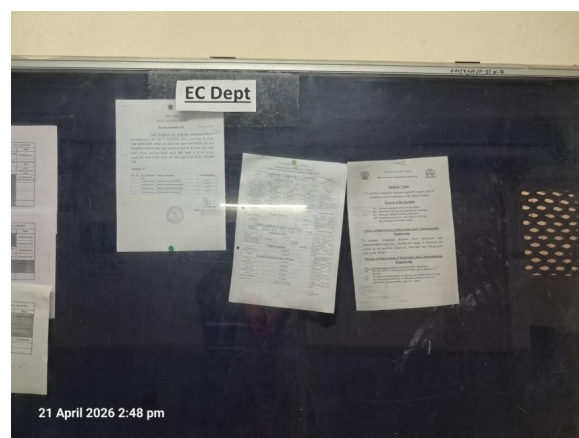


Figure 1.3.9: Dissemination of Vision and Mission in Corridor and Notice Board

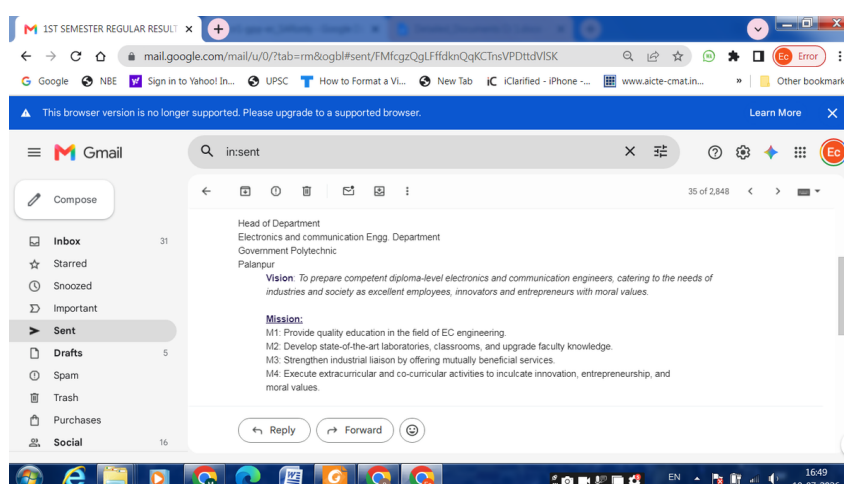


Figure 1.3.10: Dissemination in E-Mail Signature

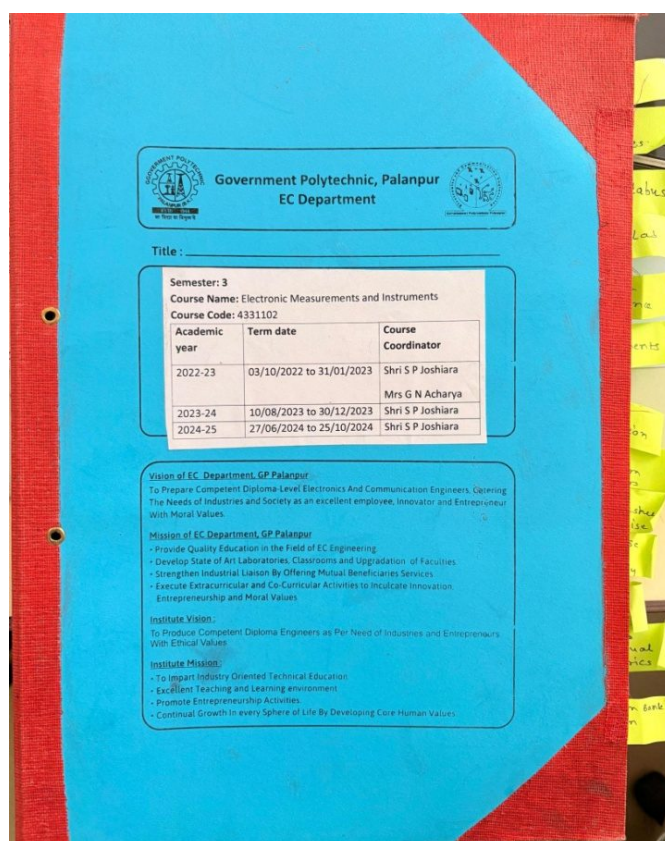


Figure 1.3.11: Dissemination of Vision and Mission in Course Files

B. Process of dissemination among stakeholders (02)

The statements are not merely displayed; a defined process carries them to each stakeholder group through the academic cycle.

- **Internal Stakeholders (Students & Faculty):**
 - **Induction Programs:** Newly admitted students are briefed on the Vision, Mission, and PEOs in the orientation program.
 - **Continuous Awareness:** Faculty members reiterate the alignment of Course Outcomes (COs) with the Departmental Mission during the introductory lecture of every course.
 - **Academic Records:** Every lab manual and course file begins with these statements to remind students about the motive behind their education.
- **External Stakeholders (Parents, Alumni, & Industry):**
 - **Parent-Teacher Meetings (PTM):** Statements are presented to parents to align their support with departmental goals.
 - **Industry-Institute Interaction:** The statements are shared with industry partners to ensure our objectives match professional requirements.
- **Alumni Meets:** The statements are reviewed with alumni to validate if the program successfully prepared them.

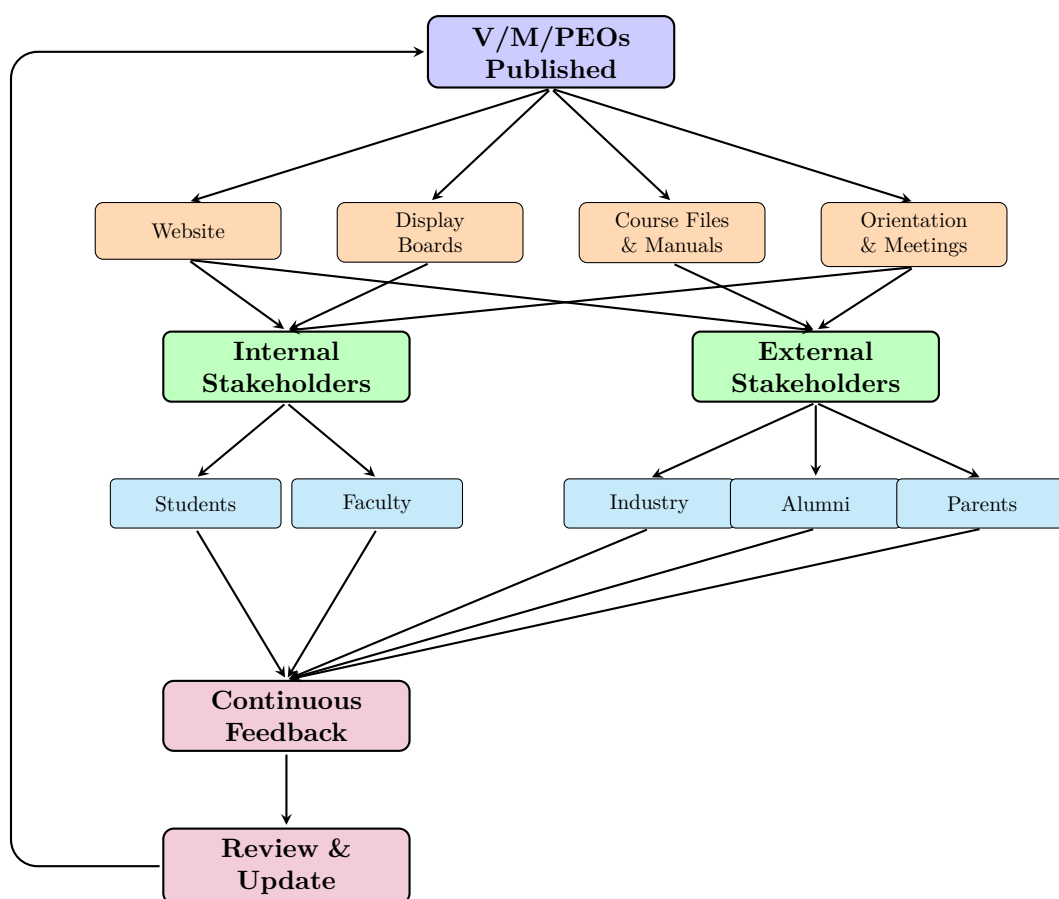


Figure 1.3.12: Dissemination Process and Stakeholder Engagement Framework

To ensure the deep-rooted understanding of Vision and Mission, these statements are actively disseminated through structured engagements among stakeholders.

Stakeholder Roles and Contributions

The department recognizes that quality enhancement is a collaborative effort. Each stakeholder plays a specific role in the formulation, implementation, and attainment of the Vision, Mission, and PEOs.

Table 1.3.2: Stakeholder Roles and Contributions to Quality Enhancement

Stakeholder	Type	Role in V/M/PEO Implementation	Contribution to Quality Enhancement
Students	Internal	Primary beneficiaries of the program	- Active participation in the Teaching-Learning Process - Provide feedback through Course Exit Surveys and Program Exit Surveys - Participate in professional bodies and technical events to achieve POs

Stakeholder	Type	Role in V/M/PEO Implementation	Contribution to Quality Enhancement
Faculty / DQAC	Internal	Implement vision and mission via teaching	• Execute teaching-learning processes • Mapping of COs to POs and PEOs • Serve in academic committees • Provide inputs for curriculum design and assessment
Parents	External	Support students' academic journey and career goals	• Attend orientation and Parent-Teacher Meetings (PTM) to monitor student progress • Support students' career aspirations
Industry	External	Key employers and skill validators	• Employ graduates and provide internships • Conduct workshops, seminars, and guest lectures
Alumni	External	Long-term success indicators	• Represent program effectiveness in careers • Provide feedback on curriculum relevance • Mentoring support to our students • Facilitate placement opportunities and industry networking

C. Extent of awareness of Vision, Mission & PEOs among the stakeholders (06)

Publication establishes access; awareness has to be demonstrated. The department therefore treats every stakeholder group as a distinct audience and records the occasions on which the Vision, Mission and PEOs are explained to that group, the form in which the group engages with them, and the evidence that the engagement took place. The table below summarises this, and the record that follows is organised by the same grouping.

Table 1.3.3: Extent of Awareness of Vision, Mission and PEOs across Stakeholder Groups

Stakeholder	Occasion of Engagement	Evidence of Awareness
Students (entry)	Induction / orientation programme at admission	Statements presented and explained to every incoming batch
Students (continuing)	Introductory lecture of every course; lab manuals and course files	Faculty relate Course Outcomes to the Departmental Mission; statements open every course file

Stakeholder	Occasion of Engagement	Evidence of Awareness
Students (senior)	Classroom sessions conducted by students	Students themselves present the Vision and Mission to their peers
Parents	Parent–Teacher Meetings	Statements presented to parents alongside student progress
Alumni	Alumni meets and e-mail correspondence	Alumni review the statements and respond on curriculum relevance
Industry	Industry–institute interaction, expert lectures, industrial visits	Statements shared with partners to confirm objectives match professional requirements

Awareness among Students

Every incoming batch is briefed on the Vision, Mission, PEOs and PSOs during the induction and orientation programme, so awareness begins at admission rather than at the point of assessment. It is then sustained through the academic cycle: faculty members reiterate the alignment of Course Outcomes with the Departmental Mission in the introductory lecture of every course, and the statements open every lab manual and course file the student works from.

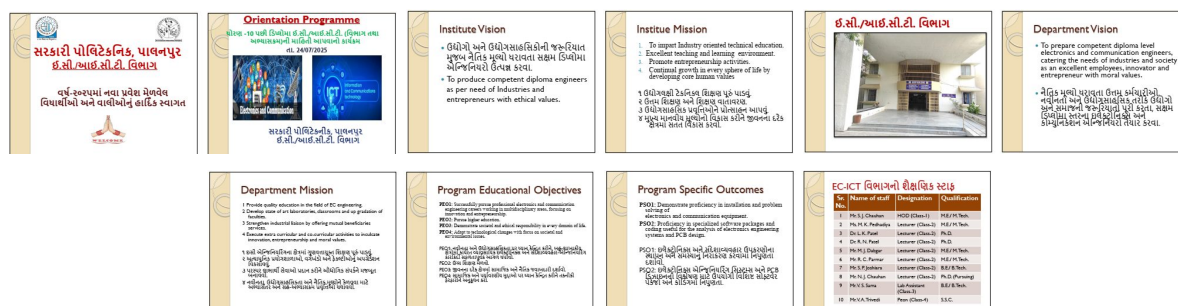


Figure 1.3.13: Disseminating Vision, Mission, PEO and PSO in the Orientation Program



Figure 1.3.14: Disseminating Vision, Mission, PEO, PSO's in Orientation Program



Figure 1.3.15: Dissemination Among Students in Classrooms

The clearest measure of the extent of that awareness is that senior students are able to present the Vision and Mission to their peers themselves, in classroom sessions conducted by the students – a demonstration of understanding rather than of exposure.



Figure 1.3.16: Students Disseminating Vision and Mission in Classrooms

Awareness among Parents

Parents are addressed directly at Parent–Teacher Meetings, where the Vision, Mission and PEOs are presented alongside student progress, so that parental support is aligned with the departmental goals and not with marks alone.



Figure 1.3.17: Disseminating Vision, Mission, PEO, PSO's in Parents Teachers Meeting



Figure 1.3.18: Disseminating Vision, Mission, PEO, PSO's in Parents Teachers Meeting

Awareness among Alumni

Alumni are the group best placed to judge whether the PEOs were actually attained, since the PEOs describe achievement a few years after graduation. The statements are therefore reviewed with alumni at every alumni meet and through continuing correspondence, and their responses on curriculum relevance and programme effectiveness are recorded and carried into the review process described in Section 1.4.

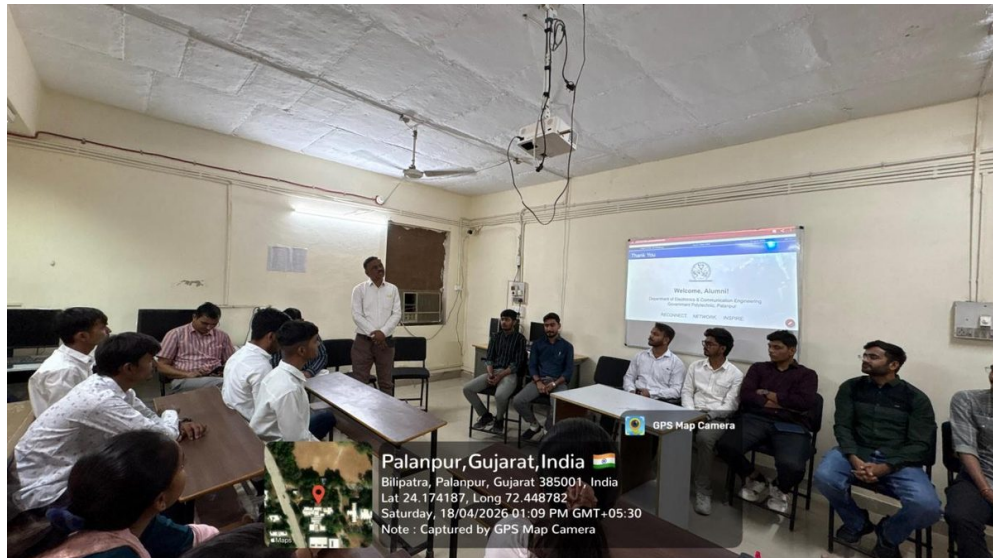


Figure 1.3.19: Dissemination Among Alumni's in Alumni Meet

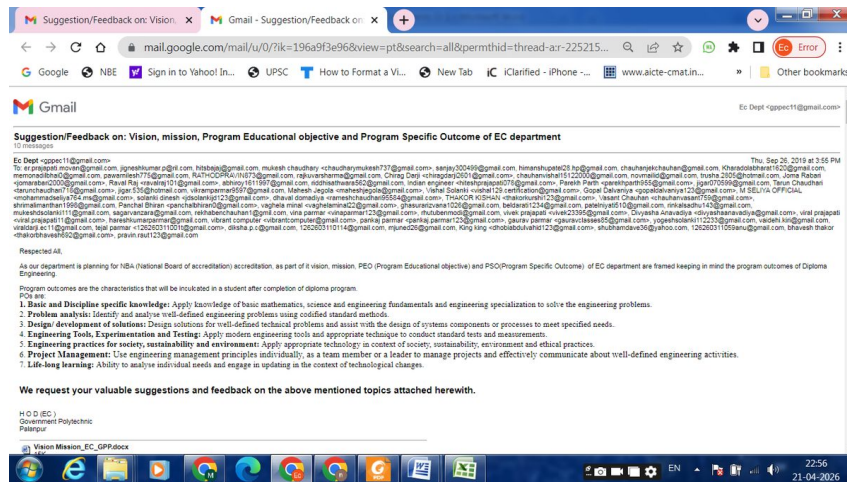


Figure 1.3.20: Feedback from alumni's Through Email

Alumni Meet 2026
Diploma in ECE | Diploma in ICT

Department of Electronics & Communication Engineering
Government Polytechnic, Palanpur

18 April 2026

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 1/21

Welcome to Alumni Meet 2026

Event Details

- **Date:** 18 April 2026
- **Organised by:** Dept of ECE, Government Polytechnic, Palanpur
- **Program:** Diploma in Electronics & Communication Engineering (ECE)
- **NBA Status:** Applying for NBA Accreditation (First Cycle)

Purpose
This alumni interaction is part of the NBA accreditation process for the Diploma in ECE program. Alumni feedback plays a vital role in demonstrating continuous improvement.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 2/21

Institute Mission

Government Polytechnic, Palanpur – Mission

- To impart industry oriented technical education.
- Excellent teaching and learning environment.
- Promote entrepreneurship activities.
- Continual growth in every sphere of life by developing core human values.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 3/21

Department Mission

Department of ECE – Mission

- Provide quality education in the field of EC engineering.
- Develop state of art laboratories, classrooms and up gradation of faculties.
- Strengthen industrial liaison by offering mutual beneficiaries services.
- Execute extra curricular and co-curricular activities to inculcate innovation, entrepreneurship and moral values.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 4/21

Program Outcomes (POs) – I

- **PO1 – Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- **PO2 – Problem analysis:** Identify and analyse well-defined engineering problems using codified standard methods.
- **PO3 – Design/development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
- **PO4 – Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 5/21

Program Specific Outcomes (PSOs)

PSOs describe what graduates are able to do specifically in their own branch/field.

- **PSO1:** Demonstrate proficiency in installation and problem solving of electronics and communication equipment.
- **PSO2:** Proficiency in specialized software packages and coding useful for the analysis of electronics engineering systems and PCB design.

In simple terms

PEOs What you will become after a few years of graduation.
POs What you are able to do when you graduate.
PSOs What you are able to do in your own branch/field.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 6/21

Agenda

- 1 Welcome
- 2 Institute & Department – Vision and Mission
- 3 Program Educational Objectives (PEOs)
- 4 Program Outcomes (POs)
- 5 Program Specific Outcomes (PSOs)
- 6 About NBA Accreditation
- 7 Alumni Interaction – FAQs
- 8 Do's & Don'ts for Alumni Interaction

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 7/21

Institute Vision

Government Polytechnic, Palanpur – Vision
To produce competent diploma engineers as per need of Industries and entrepreneurs with ethical values.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 8/21

Department Vision

Department of ECE – Vision
To prepare competent diploma level electronics and communication engineers, catering the needs of industries and society as an excellent employees, innovator and entrepreneur with moral values.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 9/21

Program Educational Objectives (PEOs)

PEOs describe what graduates are expected to attain within a few years after graduation.

- **PEO1:** Successfully pursue professional electronics and communication engineering careers working in multidisciplinary areas, focusing on innovation and entrepreneurship.
- **PEO2:** Pursue higher education.
- **PEO3:** Demonstrate societal and ethical responsibility in every domain of life.
- **PEO4:** Adapt to technological changes with focus on societal and environmental issues.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 10/21

Program Outcomes (POs) – II

- **PO5 – Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
- **PO6 – Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
- **PO7 – Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 11/21

What is NBA Accreditation?

- **NBA = National Board of Accreditation** (statutory body under AICTE).
- Evaluates programs against **Outcome-Based Education (OBE)** standards.
- Ensures graduates are **industry-ready** and meet defined outcomes.
- Requires self-assessment, peer review, and evidence of continuous improvement.
- GP Palanpur already has NBA-accredited programs in Civil, Electrical, and Mechanical Engineering.
- **Diploma in ECE** is applying for NBA accreditation for the **first time**.

(Dept of ECE, GP Palanpur) Alumni Meet 2026 18 April 2026 12/21

Figure 1.3.21: Continuous Feedback from alumni's Through Alumni Meet (Presentation)

Awareness among Industry and Employers

The Vision, Mission and PEOs are shared with industry partners during industry-institute interaction, expert lectures, industrial visits and training and placement engagements, so that employers can confirm that the department's stated objectives match the competencies they recruit for. The record of these interactions is presented in Criterion 4 (Professional Activities) and Criterion 7, and the inputs arising from them feed the review of the statements described in Section 1.4.

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (15)

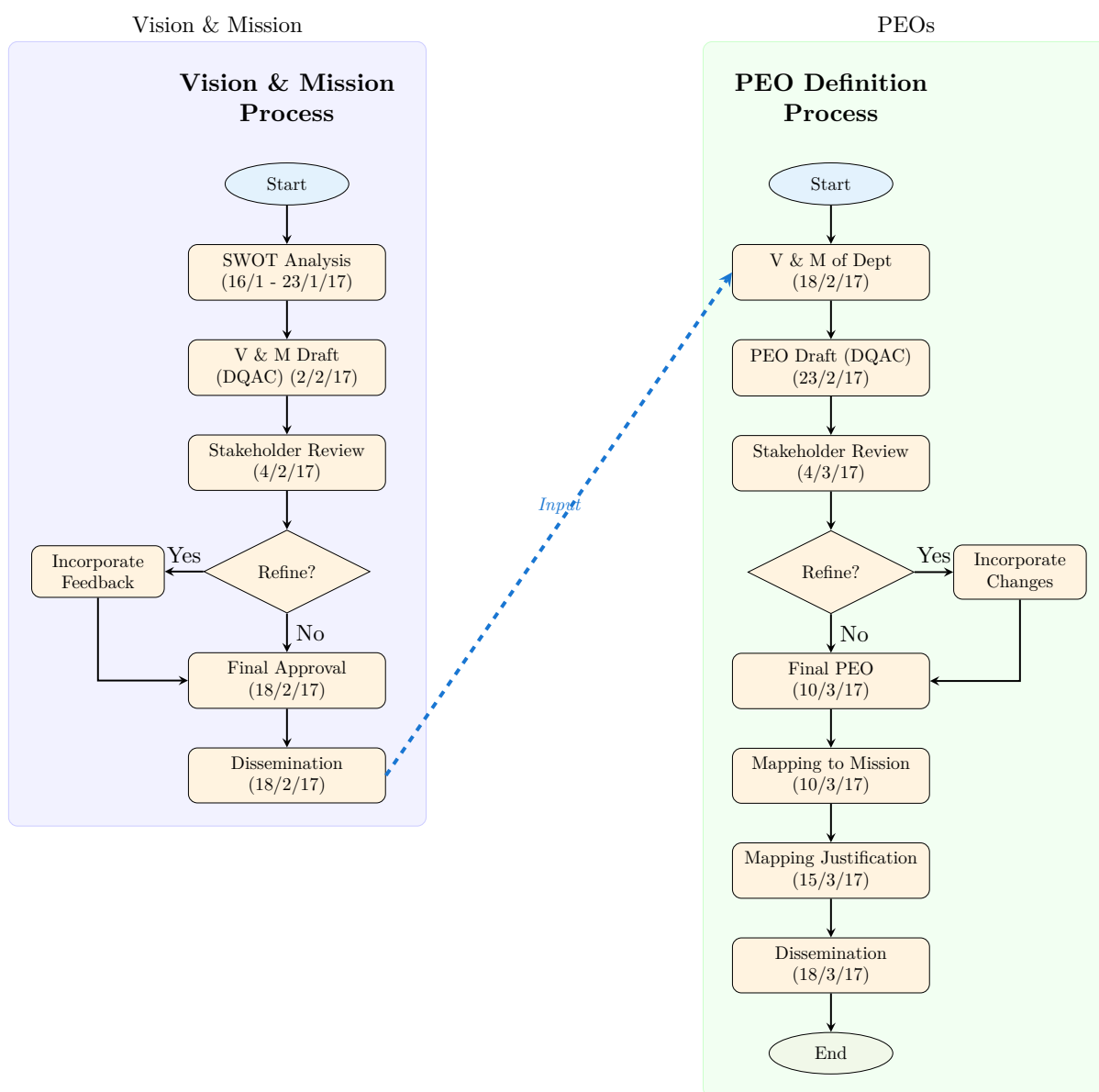


Figure 1.4.1: Systematic Process for Defining Vision, Mission & PEOs

Table 1.4.1: Timeline for Defining Vision, Mission and PEOs

Process	Date
Vision and Mission Defining Process	
Institute Vision and Mission	28/12/2016
SWOT analysis of department	16/01/2017 to 23/01/2017
Vision and Mission Draft preparation by DQAC members	02/02/2017
Review process of draft by stakeholders	04/02/2017
Feedback analysis of stakeholders input on Vision and Mission	10/02/2017

Process	Date
Finalization of Vision and Mission in the presence of stakeholders	18/02/2017
Dissemination of Vision and mission	18/02/2017
PEO and PSO's Defining process	
PEO and PSOs draft preparation by DQAC	23/02/2017
Review process of draft by stakeholders	04/03/2017
Feedback analysis of stakeholders input on Vision and Mission	09/03/2017
Finalization of PEO and PSOs in the presence of stakeholders	10/03/2017
Mapping of PEOs with Mission	10/03/2017
DQAC meeting for Justification of PEO-Mission mapping	15/03/2017
Dissemination of Vision and mission, PEO and PSOs among stakeholders	18/03/2017
Review Process of Vision, Mission, PEO and PSOs	
Review of statements considering NEP2020 by DQAC	15/09/2022
Review by stakeholders	17/09/2022
Feedback analysis of stakeholders input	23/09/2022
Finalizing reviewed Vision, mission, PEO and PSOs	01/10/2022
Dissemination among stakeholders	01/10/2022

A. Description of process for defining the Vision, Mission of the Department (07)

Process for Defining Vision and Mission

The department follows a systematic, stakeholder-driven process to define and refine the Vision and Mission statements. This process ensures alignment of departmental Vision and mission with the Institute's goals while addressing the evolving needs of the industry and society. The process for the current cycle was executed in 2017 as follows:

SWOT Analysis and Draft Formulation

The process initiated with an exhaustive SWOT analysis involving a broad spectrum of internal and external stakeholders (faculty, students, alumni, and industry experts) between January 16 and January 23, 2017. This phase focused on identifying core competencies and pedagogical gaps. On February 2, 2017, the Departmental Quality Assurance Cell (DQAC) synthesized the SWOT findings.



Figure 1.4.2: Departmental Meeting for SWOT

After healthy discussions with the stakeholders (Alumni's, Industry experts, Faculties, Students and parents) findings related to SWOT were presented.



Figure 1.4.3: Stakeholder's Meeting for SWOT Analysis

Findings from the process are as given below:

Strength of the department:

- Well Qualified and experienced faculty.
- Well-equipped laboratories.
- Adequate classrooms and infrastructure.
- Good placement support
- Strong industry–institute linkage

- Affordable education (Government institute)

Weaknesses of the department:

- Lower quality infrastructure.
- Low communication skills among students.

Opportunity for the department:

- Vast scope of employment due to government policies.
- Opportunities for start-ups and entrepreneurship

Threat to the department:

- Few electronics/telecom industries in nearby region.
- Declining interest in EC branch among students.
- Low merit students.

Considering the findings from the SWOT analysis rough draft for Vision and Mission were formulated by the DQAC committee.

The drafting process was strictly guided by:

- The Institute's Vision and Mission (to ensure vertical consistency).
- Regulatory benchmarks from AICTE, NBA, DTE and GTU.



Figure 1.4.4: DQAC Meeting for Vision and Mission

Stakeholder Consultation and Validation

The draft was presented for review by stakeholders on February 4, 2017. Feedback was gathered and analyzed to ensure the statements were measurable and achievable. If refinement was needed, feedback was incorporated, and the draft was revisited.



Figure 1.4.5: Stakeholders Meeting for Vision and Mission

Final Approval and Dissemination

A final approval meeting with stakeholders was held on February 18, 2017 to finalize the statements. Upon formal approval by the stakeholders and departmental leadership, the Vision and Mission were adopted and formally disseminated to all stakeholders.



Figure 1.4.6: Vision and Mission Final Approval Meeting with Stakeholders

Review of Vision and Mission of the department

On introduction of New Education Policy- 2020 by the Central Government and following the continuous review process of Vision and Mission and considering the valuable inputs from the stakeholders, the Vision and Mission were reviewed in 2022.

On 15th September 2022 the DQAC members reviewed the vision, mission with respect to the core values of NEP- 2020, emerging technologies, industry trends, and stakeholder expectations.



Figure 1.4.7: DQAC Committee Members Meeting to Review Vision, Mission, PEO and PSO

The stakeholders valuable inputs on existing vision, mission, PEO and PSOs were taken on 17th September 2022. In the meeting awareness about the key focus areas of NEP-2020 was given to the stakeholders. Also the industry needs considering the emerging trends were discussed with the stakeholders. Analysis about the consistency of existing vision, mission, PEO and PSOs with the NEP-2020 was done.

Key Focus Areas of NEP 2020 are:

- Holistic & multidisciplinary education
- Skill development & employability
- Innovation & entrepreneurship
- Ethical and human values
- Industry interaction & practical exposure
- Lifelong learning



Figure 1.4.8: Meeting with Stakeholders to Review Vision, Mission, PEO and PSO

On the basis of received feedback from the stakeholders, a common conclusion was drawn on 1st October 2022 in the presence of stakeholders, that the current Vision, Mission PEO and PSO statements are in line with NEP 2020 and the reviewed statements were disseminated again among the stakeholders.



Figure 1.4.9: Meeting with Stakeholders to Disseminate Reviewed Vision, Mission, PEO and PSO

The consistency of statements with the NEP-2020 is as under:

Vision Consistency with NEP 2020

Table 1.4.2: Consistency of the Department Vision with NEP 2020

Department Vision Statement	Relevant NEP 2020 Area	Justification of Consistency
To prepare competent diploma level electronics and communication engineers	Skill development & employability	NEP emphasizes competency-based education; the vision focuses on producing skilled diploma engineers aligned with industry needs.
Catering the needs of industries and society	Industry interaction & societal contribution	NEP promotes education that addresses real-world problems and societal needs.

Department Vision Statement	Relevant NEP 2020 Area	Justification of Consistency
Excellent employee, innovator and entrepreneur	Innovation & entrepreneurship	NEP strongly supports innovation, startup culture, and entrepreneurial mindset.
With moral values	Ethical and human values	NEP highlights value-based education and character building.

Mission Consistency with NEP 2020

Table 1.4.3: Consistency of the Department Mission with NEP 2020

Department Mission	NEP 2020 Alignment	Justification
Provide quality education in EC engineering	Holistic & quality education	NEP focuses on improving quality and outcome-based education.
Develop state-of-the-art labs, classrooms & faculty upgradation	Experiential learning	NEP emphasizes modern infrastructure and continuous teacher training.
Strengthen industrial liaison	Industry interaction & employability	NEP encourages internships, industry linkage, and real-world exposure.
Execute co-curricular & extra-curricular activities for innovation & values	Holistic development & ethics	NEP promotes all-round development including innovation, creativity, and moral values.

PEOs consistency with NEP 2020

Table 1.4.4: Consistency of the PEOs with NEP 2020

Program Educational Objectives (PEOs)	Relevant NEP 2020 Theme	Justification of Consistency
PEO1: Successfully pursue professional electronics and communication engineering careers in multidisciplinary areas with focus on innovation and entrepreneurship	Skill development, multidisciplinary education, innovation & entrepreneurship	NEP 2020 promotes multidisciplinary learning, employability, and innovation-driven education. This PEO ensures graduates are industry-ready and capable of entrepreneurial ventures.
PEO2: Pursue higher education	Lifelong learning & flexible education	NEP emphasizes continuous learning, academic flexibility, and progression to higher education.
PEO3: Demonstrate societal and ethical responsibility in every domain of life	Ethical values, social responsibility	NEP focuses on value-based education, ethics, and responsible citizenship.
PEO4: Adapt to technological changes with focus on societal and environmental issues	Lifelong learning, sustainability, emerging technologies	NEP highlights adaptability to technological advancements and awareness of environmental and societal challenges.

Consistency of PSOs with NEP 2020

Table 1.4.5: Consistency of the PSOs with NEP 2020

Program Specific Outcomes (PSOs)	Relevant NEP 2020 Theme	Justification of Consistency
PSO1: Demonstrate proficiency in installation and problem solving of electronics and communication equipment.	Skill development, experiential learning	NEP emphasizes hands-on learning and practical skills. This PSO ensures students gain competency in installation and troubleshooting of real systems.
PSO2: Proficiency in specialized software packages and coding useful for the analysis of electronics engineering systems and PCB design.	Digital literacy, modern tools, emerging technologies	NEP promotes the use of modern tools, coding, and simulation. This PSO aligns with industry-relevant software and PCB design skills.

B. Description of process for defining the PEOs of the program (08)

Process for Defining PEOs

The Department follows a systematic process to ensure that the PEOs are aligned with the Mission of the Department. The PEOs were defined through a structured process involving all key stakeholders.

Initial Drafting

Following the formal adoption of the Departmental Vision and Mission on February 18, 2017, the Departmental Quality Assurance Cell (DQAC) initiated the drafting of the PEOs. On February 23, 2017, an initial set of PEOs was formulated, focusing on:

- Graduates' professional career progression
- Academic pursuits and lifelong learning.
- Social responsibility and ethical practice.



Figure 1.4.10: DQAC Committee Meeting for Drafting PEO and PSO

Stakeholder Consultation and Refinement

On March 4, 2017, the draft PEOs were subjected to a rigorous review process. Feedback was collected from the stakeholders, and necessary refinements were made.



Figure 1.4.11: Stakeholders Meeting for PEO and PSO Formulation

Finalization and Mission Mapping

The PEOs were formally finalized on March 10, 2017. To ensure “Vertical Consistency,” the department performed a PEO-Mission Mapping exercise. This step verified that every Mission statement is supported by at least one PEO, ensuring a cohesive departmental strategy.



Figure 1.4.12: Stakeholders Meeting for Finalization of PEO and PSO

Justification and Dissemination

On March 15, 2017, the DQAC documented the justification for the mapping matrix, explaining the strength of the correlation between the Mission and the PEOs. On March 18, 2017, the PEOs were disseminated across all platforms.



Figure 1.4.13: Stakeholders Meeting for Final Dissemination of PEO and PSO

1.5 Establish consistency of PEOs with Mission of the Department (15)

A. Preparation of a matrix of mapping PEOs and elements of Mission statement (05)

PEO Statements:

- **PEO1:** Successfully pursue professional electronics and communication engineering careers working in multidisciplinary areas, focusing on innovation and entrepreneurship
- **PEO2:** Pursue higher education
- **PEO3:** Demonstrate societal and ethical responsibility in every domain of life
- **PEO4:** Adapt to technological changes with focus on societal and environmental issues

Mission Statements:

- **M1:** Provide quality education in the field of EC engineering
- **M2:** Develop state of art laboratories, classrooms and up gradation of faculties
- **M3:** Strengthen industrial liaison by offering mutual beneficiaries services
- **M4:** Execute extra curricular and co-curricular activities to inculcate innovation, entrepreneurship and moral values

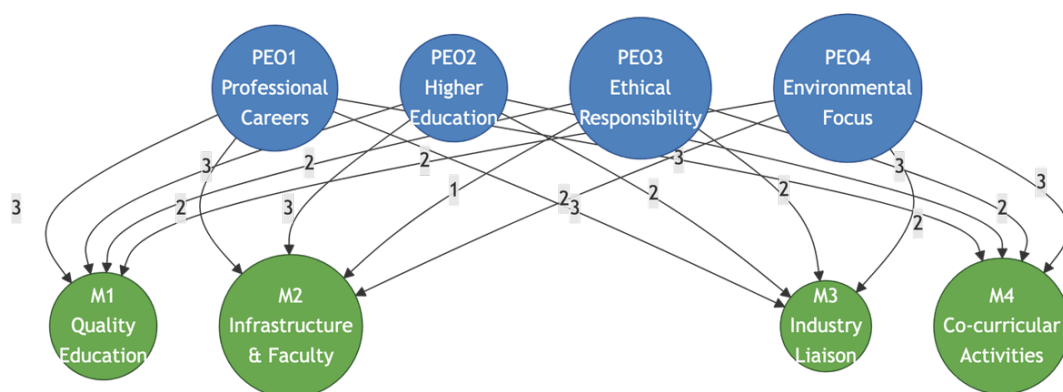


Figure 1.5.1: PEO-Mission Correlation Graph

Table 1.5.1: PEO-Mission Correlation Matrix

PEO Statements	M1	M2	M3	M4
Successfully pursue professional electronics and communication engineering careers working in multidisciplinary areas, focusing on innovation and entrepreneurship	3	2	3	3
Pursue higher education.	3	3	2	2
Demonstrate societal and ethical responsibility in every domain of life.	2	1	2	3
Adapt to technological changes with focus on societal and environmental issues.	2	2	2	3

The PEO-Mission correlation matrix is set by taking inputs from the stakeholders. The average values obtained from the mapping done by the stakeholders is set in the matrix.

B. Consistency/justification of mapping of the matrix (10)

Correlation Levels: 1 - Slight (Low), 2 - Moderate (Medium), 3 - Substantial (High), '-' - No correlation.

The following rationale explains the strength of the correlation (Substantial, Moderate, or Slight) established between the Departmental Mission and Program Educational Objectives.

Table 1.5.2: PEO-Mission Correlation Justification

PEO	M1: Provide quality education in the field of EC engineering	M2: Develop state of art laboratories, classrooms and up gradation of faculties	M3: Strengthen industrial liaison by offering mutual beneficiaries services	M4: Execute extra curricular and co-curricular activities to inculcate innovation, entrepreneurship and moral values
PEO1: Successfully pursue professional electronics and communication engineering careers working in multidisciplinary areas, focusing on innovation and entrepreneurship	This PEO highly maps with Mission 1 (M1) as strong technical education is essential for building successful professional careers in electronics and communication engineering.	This PEO moderately maps with Mission 2 (M2) as modern laboratories and faculty development help in enhancing practical and technical competencies required in professional fields.	This PEO highly maps with Mission 3 (M3) as industry interaction helps students gain multidisciplinary exposure and develop innovative solutions aligned with industry needs.	This PEO highly maps with Mission 4 (M4) as innovation and entrepreneurship skills are strongly developed through co-curricular and extra-curricular activities.
PEO2: Pursue higher education	This PEO highly maps with Mission 1 (M1) as a strong academic foundation is necessary for pursuing higher education.	This PEO highly maps with Mission 2 (M2) as laboratory facilities and faculty expertise encourage continuous learning.	This PEO moderately maps with Mission 3 (M3) as industry exposure motivates students to stay updated with emerging technologies and skills needed.	This PEO moderately maps with Mission 4 (M4) as participation in activities complement academic learning and encourage growth.
PEO3: Demonstrate societal and ethical responsibility in every domain of life	This PEO moderately maps with Mission 1 (M1) as the curriculum integrates ethical practices and societal responsibilities.	This PEO has low mapping with Mission 2 (M2) as infrastructure plays an indirect role in ethical development.	This PEO moderately maps with Mission 3 (M3) as industry exposure introduces professional ethics and societal responsibilities.	This PEO highly maps with Mission 4 (M4) as moral values and social responsibility are strongly inculcated through various activities.
PEO4: Adapt to technological changes with focus on societal and environmental issues	This PEO moderately maps with Mission 1 (M1) as engineering education includes awareness of environmental and sustainability issues.	This PEO moderately maps with Mission 2 (M2) as laboratory practices enable hands-on experience with sustainable technologies.	This PEO moderately maps with Mission 3 (M3) as industry interaction provides exposure to real-world environmental challenges.	This PEO highly maps with Mission 4 (M4) as sustainability and societal impact are strongly promoted through co-curricular and value-based activities.

Summary

The Vision, Mission, and PEOs of the Electronics & Communication Engineering department at Government Polytechnic, Palanpur are:

- **Aligned** with institute objectives and stakeholder needs
- **Defined** through structured stakeholder consultation
- **Published** across multiple channels for wide dissemination
- **Consistent** with each mission element supporting achievement of PEOs
- **Focused** on producing competent, ethical, and industry-ready diploma engineers

The strong correlation between PEOs and Mission ensures that diploma holders are equipped with technical competence, ethical values, innovation mindset, and environmental awareness needed for successful careers and societal contribution.

Criterion 2

Program Curriculum and Teaching Learning Process (200)

Total Marks: 200

Table 2.0.1: Sub-Criteria and Marks Distribution – Criterion 2: Program Curriculum and Teaching Learning Process (Total 200 Marks)

No.	Sub-Criterion	Marks
2.1	Program Curriculum	40
2.1.1	State the process used to identify extent of compliance of the curriculum for attaining the Program Outcomes (POs) and Program Specific Outcomes (PSOs) as mentioned in Annexure I. Also mention the identified curricula gaps, if any	25
A	Process used to identify extent of compliance of curriculum for attaining POs & PSOs	15
B	List the curricular gaps for the attainment of POs & PSOs	10
2.1.2	Contents beyond the Syllabus	15
A	Steps taken to get identified gaps included in the curriculum (eg. letters to Board)	2
B	Delivery details of content beyond syllabus	10
C	Mapping of content beyond syllabus with the POs & PSOs	3
2.2	Teaching Learning Process	160
2.2.1	Describe Processes followed to ensure/improve quality of Teaching & Learning based on following points	25
A	Adherence to Academic Calendar	3
B	Use of various instructional planning and delivery methods	3
C	Methodologies to support weak students and encourage bright students	4
D	Quality of classroom teaching	3
E	Conduct of experiments	3
F	Continuous Assessment in the laboratory	3
G	Student feedback of teaching learning process and action taken	6
2.2.2	Initiatives to improve the quality of semester tests and assignments	15
A	Process for Internal semester question paper setting and evaluation and effective process implementation	5
B	Question paper setting taking into account outcomes/learning levels	5
C	COs coverage in class test / mid-term tests and assignments	5
2.2.3	Quality of Experiments	15
A	Experimental methodologies	5
B	Innovative experiments including industry attached practices, virtual labs	5
C	Relevance to outcomes	5
2.2.4	Quality of Students Projects and Report Writing	35
A	Identification of projects and allocation methodology	3
B	Types and relevance of the projects and their contribution towards attainment of POs and PSOs	5
C	Process for monitoring and evaluation	5
D	Process to assess individual and team performance	5
E	Quality of deliverable, working prototypes	12

No.	Sub-Criterion	Marks
F	Papers published /Awards/ Recognition received by projects at State/ National level	5
2.2.5	Industry interaction and Community Services	30
A	Industry supported Labs	2
B	Delivery of appropriate Course work by Industry experts	5
C	Industrial visits/tours for students	3
D	Industrial training/ internship (Marks to be given proportionately i.e. 100% student attended = 05 Marks; 90% students attended = 04 Marks and so on...)	5
E	Post training/ internship Assessment	10
F	Contribution to Community related projects/activities	5
2.2.6	Information Access Facilities and Student Centric Learning Initiatives	15
A	Availability of facilities & Effective Utilization; specify the facilities, materials and scope for self-learning, Webinars, NPTEL Podcast, MOOCs etc.	10
B	Student Centric Learning Initiatives & Effective Implementation	5
2.2.7	New Initiatives for embedding Professional Skills	15
A	Employability skill enhancement Initiatives and effective implementation	8
B	Personality development related Initiatives & effective implementation	7
2.2.8	Co-curricular & Extra-Curricular Activities	10
.	Type of activities and relevance	-
Total Marks – Criterion 2		200

2.1 Program Curriculum (40)

2.1.1 State the process used to identify extent of compliance of the curriculum for attaining the Program Outcomes (POs) and Program Specific Outcomes (PSOs) as mentioned in Annexure I. Also mention the identified curricula gaps, if any (25)

A. Process used to identify extent of compliance of curriculum for attaining POs & PSOs (15)

Government Polytechnic Palanpur is affiliated with Gujarat Technological University (GTU), which provides the curriculum for the Diploma in Electronics and Communication Engineering. Each syllabus clearly outlines the course title and code, the semester in which it is offered, the teaching and examination scheme with credits, detailed course content, Weightage distribution across topics, marks allocation according to cognitive levels, expected course outcomes, laboratory experiments, required equipment, and recommended reference books.

GTU began its academic activities in 2008, and the first revised diploma curriculum was introduced in the academic year 2012–13. To strengthen and update its academic framework, GTU established the Curriculum Development Cell (CDC) in 2012. This cell was responsible for revising syllabus across all diploma engineering programs under the guidance of experts from NITTTR (National Institute of Technical Teachers Training and Research), Bhopal, along with faculty members from GTU-affiliated diploma institutes across Gujarat. The syllabus development process involved contributions from all major stakeholders, including implementers, students, faculty members, alumni, and industry professionals. After thorough consultation and review, the CDC finalized the curriculum for each course. In the academic year 2021–22, GTU once again revised the syllabus introducing the concept of the Competency Oriented Green Curriculum (COGC), as the previous curriculum had completed its ten-year cycle. The updated structure of the Electronics and Communication Engineering curriculum developed during this revision is presented in Table [2.1.1](#).

Table 2.1.1: Teaching Scheme & course Category

New Teaching Scheme and Course Category											
Course Code	Course Title	Teaching Scheme/ Week			Credit (L+T+P)	Theory Mark		Practical Mark		Grand Total	Course Category
		L	T	P		ESE	PA	ESE	PA		
SEMESTER – 1											
4300001	Mathematics	3	1	0	4	70	30	0	0	100	Basic science
4300002	Communication Skills in English	2	0	2	3	70	30	25	25	150	HS
4300005	Physics	3	0	2	4	70	30	25	25	150	Basic science
4300010	Basics of Information and Communication Technology	0	0	4	2	0	0	25	25	50	Engineering Sciences
4300015	Sports and Yoga	0	0	2	0	0	0	50	0	50	HS
4311101	Fundamentals of Electrical Engineering	3	0	2	4	70	30	25	25	150	Engineering Sciences
4311102	Fundamentals of Electronics	4	0	2	5	70	30	25	25	150	Program Core
SEMESTER – 2											
4300003	Environment and Sustainability	3	0	0	3	70	30	0	0	100	General Science
4300012	Engineering Drawing and Computer Aided Design	0	0	4	2	0	0	25	25	50	Engineering Sciences
4300016	Indian Constitution	2	0	0	0	0	0	50	0	50	HS
4320002	Engineering Mathematics	3	1	0	4	70	30	0	0	100	Basic Sciences
4321101	Electronics Workshop	0	0	4	2	0	0	25	25	50	Engineering Sciences
4321102	Digital Electronics	3	0	2	4	70	30	25	25	150	Program Core
4321103	Electronic Circuits & Applications	3	0	2	4	70	30	25	25	150	Program Core
SEMESTER – 3											
4330001	Summer Internship-I	0	0	2	1	0	0	25	25	50	Summer Internship-1 (2 Weeks) after sem-2
4331101	Electronic Circuits & Networks	3	0	2	4	70	30	25	25	150	Program Core

New Teaching Scheme and Course Category											
Course Code	Course Title	Teaching Scheme/ Week			Credit (L+T+P)	Theory Mark		Practical Mark		Grand Total	Course Category
		L	T	P		ESE	PA	ESE	PA		
4331102	Electronic Measurements & Instruments	3	0	2	4	70	30	25	25	150	Program Core
4331103	Industrial Electronics	3	0	2	4	70	30	25	25	150	Program Core
4331104	Principle of Electronic Communication	3	0	2	4	70	30	25	25	150	Program Core
4331105	Programming In C	2	0	2	3	70	30	25	25	150	Program Core
SEMESTER - 4											
4340003	Integrated Personality Development Course	2	0	0	2	70	30	25	25	150	Program elective
4341101	Microprocessor & Microcontroller	3	0	2	4	70	30	25	25	150	Program Core
4341102	Digital Communication	3	0	2	4	70	30	25	25	150	Program Core
4341107	Consumer Electronics and Maintenance	3	0	2	4	70	30	25	25	150	Program elective
4341104	Circuit Design Tools	0	0	2	1	0	0	25	25	50	Program Core
4341105	Linear Integrated Circuit (Analog Electronics	3	0	2	4	70	30	25	25	150	Program Core
4341106	Antenna & Wave Propagation	2	0	2	3	70	30	25	25	150	Program Core
SEMESTER - 5											
4300021	Entrepreneurship and Start-ups	3	0	0	3	70	30	0	0	100	Program Core
4351102	Embedded System	3	0	2	4	70	30	25	25	150	Program Core
4351103	Microwave and Radar Communication	3	0	2	4	70	30	25	25	150	Program elective
4351104	Mobile & Wireless Communication	3	0	2	4	70	30	25	25	150	Program Core
4351105	Software Practices	0	0	2	1	0	0	25	25	50	Program Core
4351106	Summer Internship-II	0	0	6	3	0	0	50	50	100	Program Core
4351107	Electronics and Communication Engineering Project-I	0	0	2	1	0	0	50	50	100	Program Core

New Teaching Scheme and Course Category											
Course Code	Course Title	Teaching Scheme/ Week			Credit (L+T+P)	Theory Mark		Practical Mark		Grand Total	Course Category
		L	T	P		ESE	PA	ESE	PA		
4351108	OOPS & Python Programming	2	0	2	3	70	30	25	25	150	Program elective
SEMESTER - 6											
4361101	Computer Networks & Data Communication	3	0	2	4	70	30	25	25	150	Program Core
4361102	VLSI	3	0	2	4	70	30	25	25	150	Program Core
4361103	Electronics & Communication Engineering Project-II	0	0	2	1	0	0	25	25	50	Program Core
4361104	Android App Development	0	0	4	2	0	0	50	50	100	Program Core
4361106	Renewable Energy & Emerging Trends in Electronics	2	0	2	3	70	30	25	25	150	Program elective

Semester wise Credit distribution and Weightage

Table 2.1.2: Credit distribution and its Weightage Semester wise

Sr. No	Semester	Credit	Weightage
1	First	22	18.33%
2	Second	19	15.83%
3	Third	20	16.67%
4	Fourth	22	18.33%
5	Fifth	23	19.17%
6	Sixth	14	11.67%
	Total	120	100%

Table 2.1.3: Percentage Weightage of course and credit distribution

Sr. No.	Components	Credit	No. of courses	% Weightage of course	% Weightage of course credit
1	HS – Humanities & Social Science Courses	3	3	7.50%	2.50%
2	BS – Basic Science	12	3	7.50%	10.00%
3	GS – General science	3	1	2.50%	2.50%
4	ES – Engineering Science Course	10	4	10.00%	8.33%
5	PC – Program Core Course	75	23	57.50%	62.50%
6	PEC – Program Elective Course	16	5	12.50%	13.33%
7	Internship	1	1	2.50%	0.83%
	Total	120	40	100%	100%

Identification of Compliance of curriculum for attaining POs and PSOs

The process of mapping of course outcome with POs and PSOs for each course is described in Criteria-3 in detail with justification.

Program Articulation Matrix

The Program Articulation Matrix (PAM) is a vital component of Outcome-Based Education (OBE), serving as a systematic tool to map the relationship between Course Outcomes (COs) and the broader Program Outcomes (POs) as well as Program Specific Outcomes (PSOs). Within the framework of the National Board of Accreditation (NBA), this mapping plays a crucial role in demonstrating how each course within a curriculum contributes to the attainment of well-defined program objectives. The PAM offers a clear and structured visual representation of this

alignment, ensuring that the intended learning outcomes of every course are meaningfully linked to—and support the achievement of—the overall diploma graduate attributes represented by the POs and PSOs.

The Program Articulation Matrix (PAM) is a powerful tool for:

- Ensuring systematic curriculum-outcome alignment
- Identifying areas of improvement within the curriculum
- Addressing curricular gaps through targeted interventions
- Providing evidence of outcome-based education implementation to NBA
- Supporting continuous improvement for educational quality assurance

The program articulation matrix indicates the extent each course helps to attain program outcomes.

Table 2.1.4: Program Articulation Matrix

Sr. No.	Course Code	Code ID	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
1	4300001	C111	Mathematics	3	1.25	1	-	-	-	1	-	-
2	4300002	C112	Communication Skills in English	1.75	-	-	-	-	2	1.8	-	-
3	4300005	C113	Physics	3	1	1	2	1	-	1	1.6	-
4	4300010	C114	Basics of Information and Communication Technology	2.8	2	2	2	1.25	2	2.4	2.5	2.5
5	4300015	C115	Sports and Yoga	2.4	-	-	-	1	-	2	-	-
6	4311101	C116	Fundamentals of Electrical Engineering	3	2	-	1	3	1	2	3	1
7	4311102	C117	Fundamentals of Electronics	3	1.2	1.6	2.2	1.67	1.25	1	3	1
8	4300003	C121	Environment and Sustainability	2	1.8	1.6	1	1.8	1.25	1.4	2	-
9	4300012	C122	Engineering Drawing and Computer Aided Design	3	1.5	2.75	2.5	2	2	2	-	1
10	4300016	C123	Indian Constitution	-	1	1	-	2	1	2	-	-
11	4320002	C124	Engineering Mathematics	3	1	1	-	-	-	1	-	-
12	4321101	C125	Electronics Workshop	2.6	2.2	2.4	2.8	1.6	1.4	2.2	2.6	2.6
13	4321102	C126	Digital Electronics	3	1.8	1.8	1.8	2	1.8	1.2	2.6	1
14	4321103	C127	Electronic Circuits & Applications	3	2.2	2.4	2.4	1.5	2.8	1.6	2.2	2.6
15	4330001	C231	Summer Internship-I	1.4	1	1.5	1.2	1	1	1	1.5	1
16	4331101	C232	Electronic Circuits & Networks	3	2.8	2.6	2.2	1.6	1.8	2.2	3	2
17	4331102	C233	Electronic Measurements & Instruments	3	2	2.5	2.8	2	1	1.2	3	1.33
18	4331103	C234	Industrial Electronics	3	2	2	2.4	1.66	2.4	1.4	2.8	2.6
19	4331104	C235	Principle of Electronic Communication	2.8	2	1.6	2.2	1.6	1	2.6	1.6	1
20	4331105	C236	Programming In C	2.6	2.25	2	2.4	1.6	1.6	2.2	-	3
21	4340003	C241	Integrated Personality Development Course	1	1	1	-	2.67	2.33	2.8	-	-
22	4341101	C242	Microprocessor & Microcontroller	3	2	2.2	2.2	1	2.2	2.4	2.5	1.8
23	4341102	C243	Digital Communication	3	1.4	1.4	2.4	1.6	1.8	2.6	2.8	2.6
24	4341107	C244	Consumer Electronics and Maintenance	3	2.2	2	2.6	2.6	1.8	3	3	1

Sr. No.	Course Code	Code ID	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
25	4341104	C245	Circuit Design Tools	2.5	2.67	2.67	3	1.67	1	1.25	3	2.5
26	4341105	C246	Linear Integrated Circuit (Analog Electronics)	3	2.6	2.4	2.2	2	2.8	2.4	2.6	2.8
27	4341106	C247	Antenna & Wave Propagation	3	2.8	2.6	2.2	1.6	1.8	2.2	3	1.4
28	4300021	C351	Entrepreneurship and Start-ups	2.8	2	1.8	1.25	1.25	2.4	2.6	2	2
29	4351102	C352	Embedded System	3	2.4	2	2	1.67	2.2	2.4	2.2	2
30	4351103	C353	Microwave and Radar Communication	2.2	1.6	2.2	2	2	2	1.8	2.4	2.2
31	4351104	C354	Mobile & Wireless Communication	2.8	2	1.8	2	1.6	2	2.4	3	2.33
32	4351105	C355	Software Practices	3	2.2	2	2.4	1	1.33	3	-	3
33	4351106	C356	Summer Internship-II	1.6	2	1.8	1.2	2.2	1.6	2	2.4	2.33
34	4351107	C357	Electronics and Communication Engineering Project-I	3	2	1.4	1.6	1.8	1.4	3	2	2.2
35	4351108	C358	OOPS & Python Programming	2.25	2	2	1.75	-	1.25	2.5	-	3
36	4361101	C361	Computer Networks & Data Communication	3	2.2	1.8	1.6	1.4	2.2	2.8	2.4	2.8
37	4361102	C362	VLSI	2.6	2.4	2	2.2	2.67	2.33	2.2	2.4	2.5
38	4361103	C363	Electronics & Communication Engineering Project-II	3	1	2.33	1.8	2	2	2	2.2	2
39	4361104	C364	Android App Development	2.2	2.4	3	2.4	1.6	1.4	1	1	2
40	4361106	C365	Renewable Energy & Emerging Trends in Electronics	3	2	2	2	1.75	2	2.75	3	3
			Average Attainment	2.67	1.89	1.92	2.05	1.73	1.75	2.01	2.44	2.07

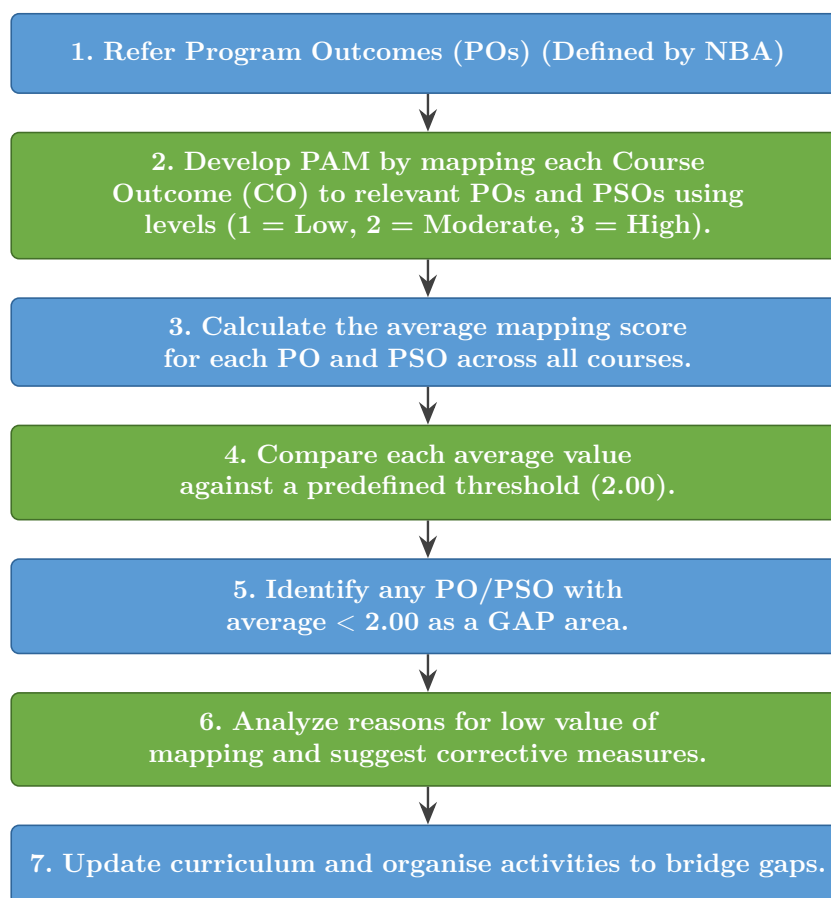
Process for Finding Curricular Gaps:**Flowchart:**

Figure 2.1.1: Process to Identify Gaps in Curriculum

The Entire Process of Finding Curricular Gaps Focuses On Program Articulation Matrix:

The basic steps for gap analysis include:

1. Mapping Outcomes through PAM:

- The Program Assessment Matrix (PAM) serves as a critical tool to systematically link Course Outcomes (COs) to Program Outcomes (POs) and Program Specific Outcomes (PSOs).
- Each course offered in the curriculum is analyzed for its contribution to the attainment of POs and PSOs.
- The strength of mapping is usually quantified using levels (e.g., 1 – low, 2 – moderate, 3 – high), showing how strongly each course outcome supports specific program outcomes.
- This mapping provides a consolidated overview of how well the curriculum aligns with the intended program-level educational objectives.

2. Identifying Gaps:

- Once the PAM is developed, gap identification involves a detailed analysis of the distribution and strength of mappings across all CO-PO and CO-PSO relationships.
- Gaps are identified when:
 - Certain POs or PSOs are not addressed or are mapped at a very low level (e.g., Level 0 or 1) across the entire program.
 - Some outcomes are underrepresented or overly dependent on a limited number of courses.
 - There is imbalanced mapping, where some POs are addressed excessively while others are neglected.
- It ensures that the curriculum's contribution to program goals is comprehensive and evenly distributed, without over-reliance on a few courses.

3. Addressing the Identified Gaps:

- The insights derived from PAM directly inform stakeholders to take corrective actions.
- This may include updating syllabus or organizing seminar, workshops, expert lectures, and industrial visit where specific POs/PSOs are lacking.

Step 1: Define Program Outcomes (POs) (Defined by NBA)

Program Outcomes (POs) are specific competencies that students are expected to achieve upon completion of diploma. These are derived from the NBA. Clearly defining POs helps in aligning course objectives with broader educational expectations and ensures uniformity in curriculum planning and delivery.

Step 2: Develop PAM by mapping each Course Outcome (CO) to relevant POs and PSOs using levels (1 = Low, 2 = Moderate, 3 = High)

The *Program Articulation Matrix (PAM)* is a structured tool where each Course Outcome (CO) is mapped against Program Outcomes (POs) and Program Specific Outcomes (PSOs). The mapping is based on the extent to which a course supports each outcome:

- **Level 1:** Low contribution
- **Level 2:** Moderate contribution
- **Level 3:** High contribution

Step 3: Calculate the average mapping score for each PO and PSO across all courses

Once the matrix is filled, calculate the *average score* for each PO and PSO by aggregating the mapping levels across all relevant courses. This score gives an overall view of how strongly the curriculum supports each outcome and helps quantify program effectiveness.

Step 4: Compare each average value against a predefined threshold (2.00)

A benchmark or threshold (commonly set at **2.00**) is used to assess adequacy. Each PO and PSO's average score is compared to this threshold:

- If the average is ≥ 2.00 , the outcome is considered adequately addressed.
- If it is < 2.00 , there is a shortfall that must be investigated.

This numerical comparison adds objectivity to the evaluation process.

Step 5: Identify any PO/PSO with average < 2.00 as a GAP area

Any Program Outcome or Program Specific Outcome with an average score below the threshold is flagged as a *curricular gap*. These gaps indicate that students may not be adequately achieving certain competencies or skills and highlight areas in need of academic attention.

Step 6: Analyze reasons for low value of mapping and suggest corrective measures

Conduct a *root cause analysis* to identify why certain POs/PSOs are underachieved. Possible reasons may include:

- Insufficient course content addressing that PO/PSO
- Lack of practical exposure or contextual learning
- Misalignment of assessments with intended outcomes.
- Based on the analysis, formulate actionable recommendations to address the root causes.

Step 7: Update curriculum and organize activities to bridge gaps.

Based on the identified gaps and their causes, implement curriculum changes such as:

- Organising expert lecture, workshops, seminars, industrial visit to fill the gap
- Introducing interdisciplinary learning
- Updating curriculum

This step is crucial for closing the loop in the Continuous Quality Improvement (CQI) process.

Based on the provided Program Articulation Matrix, the curricular gaps can be identified as below:

Curricular Gap Analysis

Table 2.1.5: PO/PSO Mapping Summary and Gap Identification

PO/PSO		Average mapping	Gap Identified (Threshold < 2.00)
PO1	Basic & Discipline specific knowledge	2.67	No
PO2	Problem Analysis	1.89	Yes
PO3	Design/Development of Solutions	1.92	Yes
PO4	Engineering Tools, Experimentation and Testing	2.05	No
PO5	Engineering practices for Society, Environment and Sustainability	1.73	Yes
PO6	Project Management	1.75	Yes
PO7	Life-long Learning	2.01	No
PSO1	Demonstrate proficiency in installation and problem solving of electronics and communication equipment.	2.44	No
PSO2	Proficiency in specialized software packages and coding useful for the analysis of electronics engineering systems and PCB design.	2.07	No

Detailed Gap Analysis

PO2 – Problem Analysis

Reasons for Gap in PO2:

As the major courses in diploma level EC curriculum emphasize conceptual understanding and awareness rather than analytical problem-solving or systematic evaluation of engineering problems.

Suggested Actions to Bridge PO2 Gap:

- Organize project competitions.
- Arrange Industrial Visits, expert lectures, workshops.

PO3 – Design/Development of Solutions

Reasons for Gap in PO3:

As the major courses in diploma level EC curriculum do not include design-oriented activities or open-ended problem-solving tasks requiring solution development.

Suggested Actions to Bridge PO3 Gap:

- Organize workshops/project hackathons focused on design innovation.
- Arrange Industrial Visits, expert lectures, workshops.

PO5 – Engineering practices for Society, Environment and Sustainability*Reasons for Gap in PO5:*

Societal, environmental, ethical, and sustainability aspects receive limited coverage in the major courses of the diploma level EC curriculum.

Suggested Actions to Bridge PO5 Gap:

- Motivate students to prepare Projects focused on this Program outcome.
- Arrange Industrial Visits, expert lectures, workshops.

PO6 – Project Management*Reasons for Gap in PO6:*

Major technical core subjects include micro-projects, but few subjects do not incorporate project management component.

Suggested Actions to Bridge PO6 Gap:

- Promote collaborative projects and presentations to strengthen leadership and communication.
- Include group assignments with defined roles, timelines, and deliverables.

B. List the curricular gaps for the attainment of POs & PSOs (10)**Curricular Gaps from Program Articulation Matrix**

Table 2.1.6: Curricular Gaps from the Program Articulation Matrix

Program Outcome	Average Mapping	Gap Identified	Appropriateness of the Gap
PO2 - Problem Analysis	1.89	Yes	The average mapping score for PO2 falls below the benchmark level of 2.00, reflecting inadequate development of students' analytical and problem-analysis skills. This shortfall indicates a need for more structured problem-solving activities and application-oriented case studies within the curriculum. Strengthening these components will help students effectively identify, formulate, and analyze engineering problems using established methodologies.
PO3- Design/ Development of Solutions	1.92	Yes	With an average score below 2.00, PO3 indicates that students are not acquiring sufficient exposure to the development of design and solution-oriented skills. This may be attributed to a scarcity of design-focused assignments and limited opportunities for interdisciplinary project work. Addressing this gap will foster greater innovation, creativity, and a stronger emphasis on solution-based learning among students.

Program Outcome	Average Mapping	Gap Identified	Appropriateness of the Gap
PO5-Engineering practices for Society, Environment and Sustainability	1.73	Yes	This gap highlights the limited emphasis on integrating environmental, ethical, and societal considerations within the curriculum. An average mapping score of 1.73 suggests that students may not fully appreciate the broader societal implications of technological solutions. Strengthening this Program Outcome will help prepare students to become socially responsible and ethically aware engineers.
PO6-Project Management	1.75	Yes	The PO6 score indicates that students have limited exposure to applying project management principles in academic activities. As a result, essential skills such as leadership, communication, and resource planning—critical to professional engineering practice—are not sufficiently developed. This gap underscores the need to incorporate structured project-based learning and dedicated management-oriented workshops into the curriculum.

The process of finding curricular gaps from the Program Articulation Matrix is crucial for meeting NBA accreditation criteria 2.1.2, which focuses on the attainment of Program Outcomes and Program Specific Outcomes.

Justification of the process to find curricular gap:

1. **Threshold Selection:** The threshold of 2 for average attainment is chosen based on the common practice in outcome-based education. On a scale typically ranging from 1 to 3, a value of 2 represents satisfactory accomplishment. Anything below this indicates a need for improvement.
2. **Comprehensive Evaluation:** By calculating the average mapping for each PO and PSO across all courses, we get a holistic view of how well the curriculum is addressing each outcome.
3. **Objective Identification of Gaps:** Comparing each average mapping to the threshold provides an objective method to identify areas where the curriculum may be falling short. This removes subjectivity from the process.
4. **Alignment with NBA Requirements:** NBA criteria 2.1.2 specifically asks for the identification of curricular gaps concerning the attainment of POs and PSOs. This process directly addresses this requirement.
5. **Basis for Improvement:** Identifying these gaps provides a clear starting point for curriculum enhancement. It allows the institution to focus its efforts on the most critical areas needing improvement.
6. **Continuous Improvement:** This process supports the principle of continuous improvement, which is a key aspect of NBA accreditation. By regularly assessing and addressing curricular gaps, the program can evolve and better meet the needs of students and industry.

In conclusion, this process offers a systematic, objective, and comprehensive method for identifying curricular gaps in alignment with NBA accreditation Criteria 2.1.2. It helps institutions accurately pinpoint areas that require enhancement within the curriculum, thereby strengthening overall educational quality and improving student learning outcomes.

2.1.2 Contents beyond the Syllabus (15)

A. Steps taken to get identified gaps included in the curriculum (eg. letters to Board) (02)

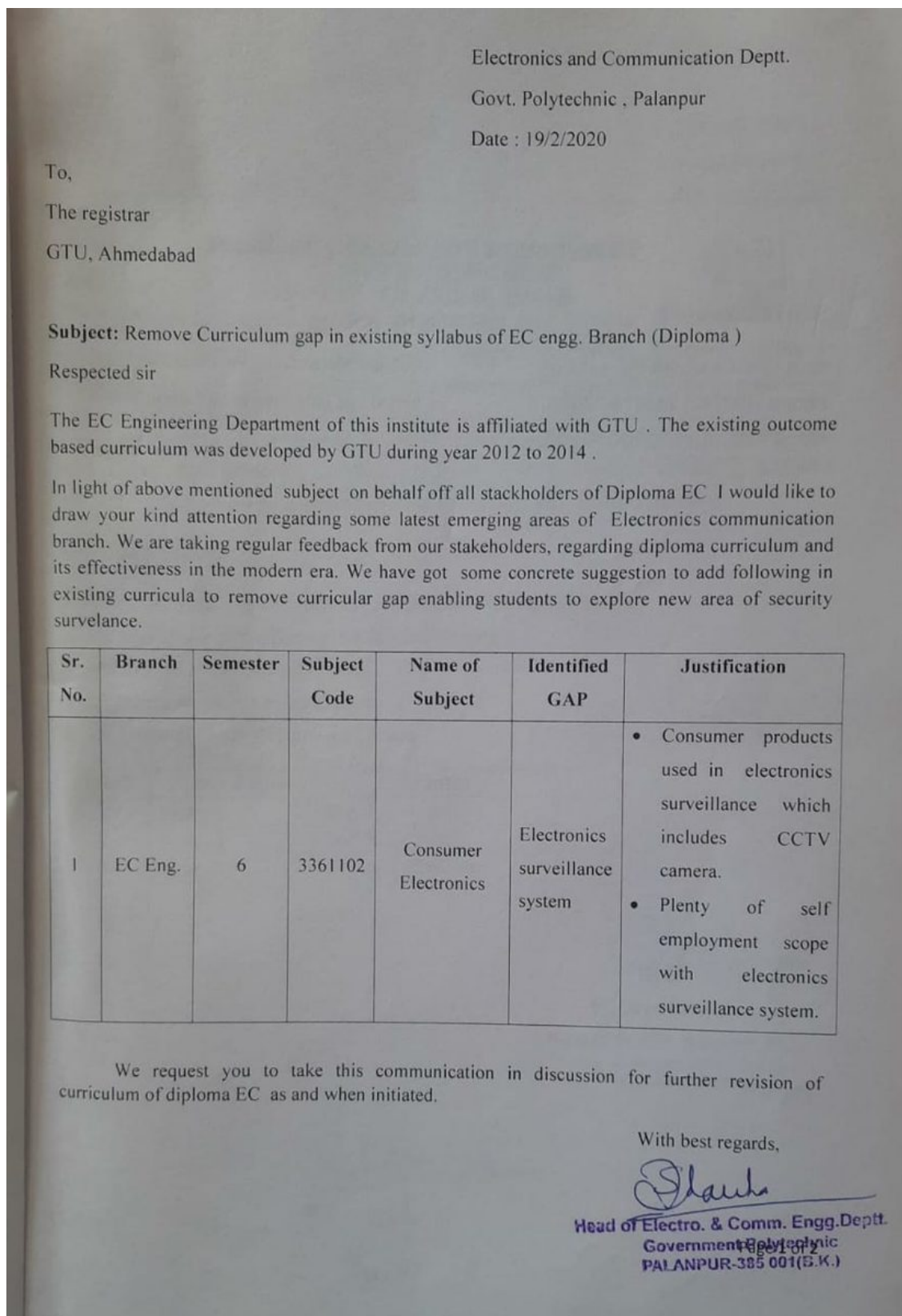


Figure 2.1.2: Communication-1 to University on Identified Curriculum Gaps

Electronics and Communication Deptt.
Govt. Polytechnic , Palanpur
Date : 2/12/2025

To,
The registrar
GTU, Ahmedabad

Subject: Regarding Curriculum gap in existing syllabus of EC Engg. Branch (Diploma)

Respected sir

The EC Engineering Department of this institute is affiliated with GTU .
Currently there is ongoing curriculum's revision at University level. Upto 4th semester curriculum of various subject of Diploma EC has been published.

We would like to draw your kind attention regarding some latest emerging areas of Electronics communication branch. We are taking regular feedback from our stakeholders, regarding diploma curriculum and its effectiveness in the modern era.

Kindly consider following suggestions to incorporate/Update following areas in existing curricula to remove curricular gap enabling students to explore new area of electronics and communication.

Sr. No.	Semester Subject Code	Name of Subject	Identified GAP	Justification	Remark
1	4th DI04011031	Consumer Electronics	Concept of AUTO electronics	All cars now days equipped with electronic control module controlling all operations of a car.	Curriculum just published. Update before study start from 22/12/2025
			Air fryer	Oil free cooking in a Kitchen	
			(Inverter home Usage specific)	Solar rooftop plant uses Inverter	
			Electronic Weighing scale	Used in Kitchen as well.	
			Induction cooking stove	Electronic heating process based on power electronics and electromagnetic induction.	
2	6th	Internship	Industry Specific knowledge	Industrial internship is a bridge between education and employment. For a diploma final year student, it is an essential step to	To be incorporated as per guidelines of NEP 2020.

Figure 2.1.3: Communication-2 to University on Identified Curriculum Gaps (Page 1)

				become industry-ready and successful in their career.	
3	3rd EC DI03011011	Programmi ng in C	Introduction about debugging tools, version control and modern IDEs	Industrial requirements is that students must know Code debugging, version control using GitHub etc. and modern IDEs like VS code	These may be included in practical where in Online GDB, VS code with extensions and project management in Git hub may be introduced
4	4th EC DI04000121	Embedded System	ARM processors, ESP32, PIC controllers	As the course focuses only on AVR, students will have lack of exposure to modern controllers, reducing employability in IoT, automotive, consumer electronics, and industrial automation.	Advance controllers overview with a comparative study may be added in unit 1. Wireless modules like ESP32 may be added in unit 5 as an application.
5	<u>Topic of</u> Wave propagation	To be included	Yet not incorporated in syllabus.	Forms the backbone of communication systems Builds practical and troubleshooting skills Increases employability in telecom and electronics industries	Not included in 3rd Semester of Subject "Principle of Electronic Communication". However Antenna is included but this wave propagation topic is omitted despite of its importance.
6	In subjects pertaining to electronics and communication ,uptil now no weightage is given to Suggested Activities for Students. So it is neglected by students yielding no gain in hands on practice for project work related to that subject. So it should be made compulsory part in Progressive assessment (Practical) from semester 3 onwards.				

We request you to take this communication in discussion for further revision of curriculum of diploma EC as and when initiated.
With best regards,

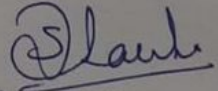

 Head of Electro. & Comm. Engg. Dept
 Government Polytechnic
 PALANPUR-385 001(B.K.)

Figure 2.1.4: Communication-2 to University on Identified Curriculum Gaps (Page 2)

B. Delivery details of content beyond syllabus (10)

Table 2.1.7: Delivery details of the content beyond the syllabus

Sr. No.	Event Type	Year	Date	Event Name
1	Expert Lecture by Mr. Dhananjay Pathak	2019-20	02/01/2020	CCTV Installation
2	Industrial Visit	2019-20	15/02/2020	Rudraksh Electronics
3	Webinar by Mr. L K Patel	2020-21	27/09/2020	Entrepreneurship
4	Webinar by Dr. Urvashi P. Shukla	2020-21	19/03/2021	Digital Communication Basics Realization With MATLAB
5	Industrial Visit	2021-22	26/03/2022	Community Radio Station, Palanpur
6	Industrial Visit	2021-22	29/03/2022	Samsung Care, Palanpur
7	Expert Lecture by Mr. Sagar Hajare	2022-23	31/03/2023	Cyber Security
8	Expert Lecture by Mr. Sehjad Pathan	2022-23	01/06/2023	Consumer Electronics Equipments
9	Industrial Visit	2023-24	16/03/2024	PCB Power Pvt. Ltd., Gandhinagar
10	Industrial Visit	2023-24	16/03/2024	MCBS Pvt. Ltd., Gandhinagar
11	Industrial Visit	2024-25	25/09/2024	Railway Station, Palanpur
12	Industrial Visit	2024-25	05/10/2024	Banas Dairy
13	Industrial Visit	2024-25	16/10/2024	Community Radio Station, Palanpur
14	Expert Lecture by Dr. V K Thakar	2024-25	22/10/2024	Internet of Things
15	Expert Lecture by Mr. Krishna Panchal	2024-25	10/11/2024	Career Guidance For EC Engineers
16	Workshop by Mr. Yuvrajsinh Rajput	2024-25	15/02/2025	Drone Technologies
17	Industrial Visit	2025-26	20/09/2025	NETRAM (Command and Control Centre) Palanpur
18	Expert Lecture by Mr. Rishabh Prajapati	2025-26	07/10/2025	IOT Application with ESP-32, NOD-MCU, Raspberry Pi
19	Industrial Visit	2025-26	17/11/2025	Community Radio Station, Palanpur
20	Scratch Coding Competition	2025-26	16/12/2025	Scratch Coding Competition
21	Expert Lecture by Dr. Vijay K. Patel	2025-26	09/03/2026	Semiconductor Manufacturing Technology
22	Expert Lecture by Mr. Jaimin Rami	2025-26	12/03/2026	Emerging Mobility Trends For Engineers

C. Mapping of content beyond syllabus with the POs & PSOs (03)

PO-PSO Coverage analytics report

Table 2.1.8: PO-PSO Coverage analytics report

PO/PSO	Description	Event Count
PO2	Problem Analysis	13
PO3	Design/Development of Solutions	12
PO5	Engineering practices for Society, Environment and Sustainability	12

PO/PSO	Description	Event Count
PO6	Project Management	10

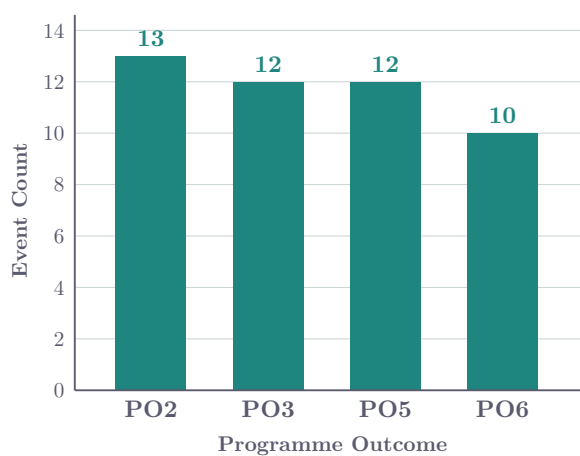


Figure 2.1.5: PO-PSO Coverage Analytics Chart

Table 2.1.9: PO-PSO Coverage analytics report yearwise

PO/PSO	Description	Event Count	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
PO2	Problem Analysis	13	2	1	1	2	2	2	3
PO3	Design/Development of Solutions	12	1	1	1	1	2	2	4
PO5	Engineering practices for Society, Environment and Sustainability	12	1	0	1	1	2	5	2
PO6	Project Management	10	1	1	1	0	2	4	1

Table 2.1.10: Mapping of content beyond syllabus with the POs & PSOs

Sr No.	Event Name	Year	PO/PSO Mapping	Justification/Appropriateness of mapping
2019-20				
1	Expert Lecture on CCTV Installation	2019-20	PO2, PO3, PO5	PO2: Enhances Problem Solving and Systematic evaluation of engineering problems. PO3: Improves the capabilities to solve open ended problems. PO5: Provides engineering practices to the societal needs.
2	Industrial Visit at Rudraksh Electronics	2019-20	PO2, PO6	PO2: Equips students to analyze problems through hands on experiences. PO6: Provides exposure to planning and implementing basic projects.
2020-21				
3	Expert Lecture on Entrepreneurship	2020-21	PO6	PO6: Develops communication and leadership for project management.
4	Expert Lecture on Digital Communication Basics Realization With MATLAB	2020-21	PO2, PO3	PO2: Enhances Problem Solving using MATLAB codes and Simulink. PO3: Enabling students to translate theoretical concepts into practical design outcomes.
2021-22				
5	Industrial Visit at Community Radio Station, Palanpur	2021-22	PO3	PO3: Gains exposure to real-world system design and proposed practical solutions for broadcasting operations.
6	Industrial Visit at Samsung Care, Palanpur	2021-22	PO2, PO5, PO6	PO2: Strengthens understanding of systematic diagnosis and analysis of faults in consumer electronic devices such as smart phones. PO5: Encourages for safe handling of electronic components, proper disposal of e-waste, repair-over-replacement approaches, and adherence to safety and quality standards. PO6: Provides exposure to planning and implementing wirelesscommunication projects.
2022-23				
7	Expert Lecture on Cyber Security	2022-23	PO2	PO2: Identifies, analyzes, and evaluates cybersecurity problems and vulnerabilities.
8	Expert Lecture on Consumer Electronics Equipments	2022-23	PO2, PO3, PO5	PO2: Enhances Problem Solving and Systematic evaluation of engineering problems. PO3: Improves the capabilities to solve open ended problems. PO5: Provides engineering practices to the societal needs.
2023-24				

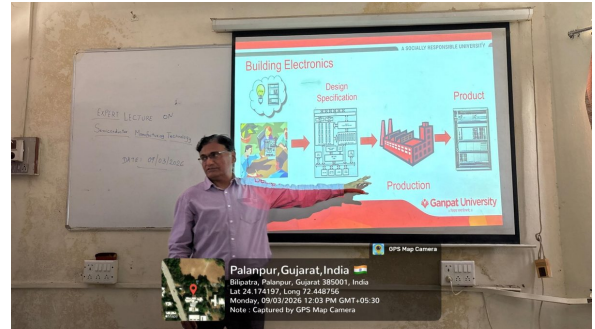
Sr No.	Event Name	Year	PO/PSO Mapping	Justification/Appropriateness of mapping
9	Industrial Visit at PCB Power Pvt. Ltd., Gandhinagar	2023-24	PO2, PO3, PO5, PO6	PO2: Gained an understanding of manufacturing defects, process challenges, and troubleshooting methods adopted in industry, thereby enhancing their ability to analyze practical engineering problems. PO3: Involves design of PCB for various electronic gadgets. PO5: Enhanced their awareness of sustainable engineering practices and the societal impact of reliable electronic manufacturing. PO6: Gained insight into industrial planning, production scheduling, inventory management, quality control, workflow coordination, and resource utilization involved in PCB manufacturing, thereby understanding the importance of project planning.
10	Industrial Visit at MCBS Pvt. Ltd., Gandhinagar	2023-24	PO2, PO3, PO5, PO6	PO2: Identify practical engineering problems, analyze process constraints, and understand troubleshooting techniques adopted in industrial practice. PO3: Involves design of communication devices for various electronic gadgets. PO5: Gained awareness of industrial safety practices, environmental protection measures, efficient resource utilization, waste management, and sustainable manufacturing practices adopted by the company. PO6: Manages learning tasks in a team.
2024-25				
11	Industrial Visit at Railway Station, Palanpur	2024-25	PO5, PO6	PO5: Observes ethical and sustainable engineering practices. PO6: Manages learning tasks in a team
12	Industrial Visit at Banas Dairy	2024-25	PO2, PO3, PO5, PO6	PO2: Gained an understanding of operational challenges, quality control measures, and problem-solving techniques adopted to ensure product safety and efficiency. PO3: Exposed students to automated dairy processing systems, process optimization, hygienic plant design, and quality assurance practices. PO5: Enhanced their awareness of the role of engineering in ensuring environmental sustainability and providing safe, nutritious dairy products to society. PO6: Gained exposure to production planning, supply chain management, inventory control, maintenance scheduling, quality management,
13	Industrial Visit at Community Radio Station, Palanpur	2024-25	PO5	PO5: Understood the role of community radio in disseminating educational, agricultural, healthcare, and disaster management information.
14	Expert Lecture on Internet of Things	2024-25	PO3, PO5, PO6	PO3: Gained knowledge of IoT architecture, sensor integration, embedded systems, cloud platforms, and communication technologies. PO5: understood how IoT contributes to sustainable development, efficient resource utilization, and improved quality of life. PO6: Gained an understanding of project planning, resource management, cost considerations, teamwork, and lifecycle management involved in developing IoT-based systems.

Sr No.	Event Name	Year	PO/PSO Mapping	Justification/Appropriateness of mapping
15	Expert Lecture on Career Guidance For EC Engineers	2024-25	PO6	PO6: Manages learning tasks in a team.
16	Expert Lecture on Drone Technologies	2024-25	PO2, PO5	PO2: Enhances ability to analyze technical challenges in drone systems. PO5: Understands the societal, environmental, and ethical implications of drone applications
2025-26				
17	Industrial Visit at NETRAM (Command and Control Centre) Palanpur	2025-26	PO2, PO3	PO2: Analyze how real-time monitoring and integrated systems solve urban management and emergency response problems. PO3: Exposed students to the design and implementation of smart monitoring systems, communication networks, IoT-based devices, data integration platforms, and control room operations
18	Expert Lecture on IOT applications	2025-26	PO3, PO5, PO6	PO3: Covers the design and implementation of IoT applications using ESP32, NodeMCU, and Raspberry Pi. PO5: Highlighted the role of IoT applications in energy management, environmental monitoring, smart agriculture, healthcare services, and efficient resource utilization. PO6: Provides exposure to planning and implementing IoT-based projects.
19	Industrial Visit at Community Radio Station, Palanpur	2025-26	PO5	PO5: Understood the role of community radio in disseminating educational, agricultural, healthcare, and disaster management information.
20	Scratch Coding Competition	2025-26	PO2, PO3	PO2: Enhances analytical thinking and problem-solving by developing coding solutions. PO3: Encourages students to design games, animations, and interactive applications using Scratch.
21	Expert Lecture on Semiconductor Manufacturing Technology	2025-26	PO2	PO2: Analyze manufacturing challenges such as defects, yield improvement, and process optimization.
22	Expert Lecture on Emerging Mobility Trends For Engineers	2025-26	PO3	PO3: Understand the integration of engineering concepts to develop innovative mobility solutions.

Event Photographs



a. Emerging Mobility Trends for Engineers (2025-26)



b. Semiconductor Manufacturing Technology (2025-26)



c. IoT Application with ESP-32, NOD-MCU, Rasberry Pi (2025-26)



d. Community Radio Station, Palanpur (2025-26)



e. Cyber Crime Awareness and Crime Detection (2025-26)



f. NETRAM (Command and Control Centre) Palanpur (2025-26)

Figure 2.1.6: Event Photographs — 2025-26 (1 of 3)



a. Community Radio Station, Palanpur (2025-26)



b. HAM Radio Workshop (2024-25)



c. Internet of Things (2024-25)



d. Embedded -IoT and AI-ML: a NEW ERA of Future (2024-25)



e. Community Radio Station, Palanpur (2024-25)



f. Banas Dairy (2024-25)

Figure 2.1.7: Event Photographs — 2025-26 and 2024-25 (2 of 3)



a. Railway Station, Palanpur (2024-25)



b. Bajarang Paper Products, Palanpur (2024-25)



c. Web Development Technologies and Embedded System (2023-24)



d. SEMICON India-2023 Exhibition (2023-24)



e. Bajarang Paper Products, Palanpur (2023-24)



f. PCB Power and MCBS PVT LTD, Gandhinagar (2023-24)

Figure 2.1.8: Event Photographs — 2024-25 and 2023-24 (3 of 3)

2.2 Teaching Learning Process (160)

2.2.1 Describe Processes followed to ensure/improve quality of Teaching & Learning based on following points (25)

A. Adherence to Academic Calendar (03)

To maintain a structured and effective teaching-learning process, the department adheres to a three-tier academic calendar framework, implemented sequentially at the University, Institute, and Department levels.

1. GTU Calendar: Gujarat Technological University (GTU) declares the academic calendar before the start of every term. It includes the start and end dates of the semester, tentative exam schedules, internship periods, and official vacation/holiday lists.
2. Institute Calendar: Based on GTU's academic calendar, Government Polytechnic, Palanpur prepares its institutional calendar. It incorporates term duration, internal examinations, industrial visits, expert lectures and holidays.
3. Department Calendar – Electronics and Communication Engineering: The department prepares a comprehensive academic calendar aligned with both GTU and institute calendars. It serves as the backbone for planning and implementing all departmental academic and co-curricular activities. It includes:
 - Term start and end dates for each semester
 - Class Test schedules
 - Remedial exam periods and submission timelines
 - Industrial/site visits, seminars, expert lectures, webinars and co-curricular activities
 - Parent-teacher meetings and weak student support sessions
 - Government-declared holidays and official vacations

Key Attributes of Calendar Adherence:

- Smooth functioning of the teaching-learning process
- Clarity of all scheduled events across the campus
- A structured and well-organized academic environment
- Avoidance of clashes between various institutional activities
- Equal opportunity for students to participate in co-curricular and extracurricular activities
- Fair planning window for faculty to deliver the syllabus effectively

The academic calendar is published on departmental notice boards and through electronic media at the beginning of each term. This layered adherence enhances coordination, discipline, and overall academic quality at the department level.

GUJARAT TECHNOLOGICAL UNIVERSITY
(Established Government of Gujarat under Gujarat Act No. : 20 of 2007)
(Accredited with A+ Grade by NAAC)
ગુજરાત ટેકનોલોજીકલ યુનિવર્સિટી
(ગુજરાત સરકારના ગુજરાત અધિનિયમ ક્રમાંક : ૨૦/૨૦૦૭ દ્વારા સ્થાપિત)

Ref./GTU/Academic Calendar/2025-26/Even/2025/૧૦૬૭ Date:01-12-2025

ACADEMIC CALENDAR FOR A.Y. 2025-26 (EVEN TERM)

Sr. No.	Program Name	Sem	Start Date	End Date	Tentitive Exam Start Date	Tentitive Exam End Date	Tentitive Result Date
1	PG Diploma in Data Science (PGDDS)	2	08-01-2026	14-05-2026	28-05-2026	10-06-2026	04-08-2026
2	Diploma in Engineering	2	02-02-2026	05-06-2026	18-06-2026	10-07-2026	07-09-2026
3	Diploma in Engineering /DE (Working Professionals)	4	22-12-2025	29-04-2026	13-05-2026	30-05-2026	24-07-2026
4	Diploma in Engineering /DE (Working Professionals)	6	22-12-2025	29-04-2026	12-05-2026	16-06-2026	10-08-2026
5	Diploma in Engineering	8	11-12-2025	17-04-2026	28-04-2026	16-05-2026	10-07-2026
6	Bachelor of Engineering	2	12-01-2026	16-05-2026	11-06-2026	03-07-2026	17-08-2026
7	Bachelor of Engineering / BE (Working Professionals)	4	01-01-2026	06-05-2026	19-05-2026	12-06-2026	27-07-2026
8	Bachelor of Engineering / BE (Working Professionals)	6	01-01-2026	06-05-2026	20-05-2026	09-07-2026	23-08-2026
9	Bachelor of Engineering / BE (Working Professionals)	8	01-01-2026	06-05-2026	18-05-2026	26-05-2026	10-07-2026
10	Bachelor of Engineering (Part Time)	6	01-12-2025	06-04-2026	24-04-2026	13-05-2026	27-06-2026
11	Bachelor of Engineering (Part Time)	8	01-12-2025	06-04-2026	23-04-2026	01-05-2026	15-06-2026
12	Master of Engineering (ME)	2	22-01-2026	28-05-2026	09-06-2026	04-07-2026	18-08-2026
13	Master of Engineering (ME)	4	11-12-2025	17-04-2026	01-05-2026	22-05-2026	06-07-2026
14	PG Diploma in Digital Marketing (PGDDM)	2	29-12-2025	04-05-2026	19-05-2026	26-05-2026	10-07-2026
15	PG Diploma in Hospital Management (PGDHM)	2	29-12-2025	04-05-2026	19-05-2026	26-05-2026	10-07-2026
16	Bachelor of Business Administration (Honours/ Honours with Research)	2	22-12-2025	28-04-2026	20-05-2026	26-05-2026	10-07-2026
17	Bachelor of Business Administration	4	11-12-2025	17-04-2026	01-05-2026	14-05-2026	28-06-2026
18	Bachelor of Business Administration	6	01-12-2025	06-04-2026	17-04-2026	27-04-2026	11-06-2026

Winner of : "4 Star rating in GSIRF (Gujarat State Institutional Rating Framework) Published by KCG, Dept. of Education Govt. of Gujarat" ♦ "GTU Ranked 71 in Pharmacy Category in NIRF-2023" ♦ "Green University" ♦ "Rank Among All Universities in Gujarat 2020 by Uni Rank" ♦ "Accreditation in Platinum Ranking for 2021-2023" ♦ "1st Rank Among All Universities in Gujarat 2020 by Uni Rank"

Head Office : GTU Campus, Nr. Visat Three Road, Visat-Gandhinagar Road, Chandkheda, Ahmedabad-382424, Gujarat, India.
Ph : +91 079-23267521/570 e-mail : info@gtu.ac.in Website : www.gtu.ac.in

Figure 2.2.1: GTU Academic Calendar

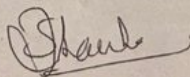
Government Polytechnic Palanpur		VISION
Academic Calendar : 2024-25 (Odd Term)		To produce competent diploma engineers as per need of industries and entrepreneurs with ethical values.
Date / Duration	Activity / Event	MISSION
21-06-2024	International Yoga Day	To impart,
27-06-2024 to 25-10-2024	5th Semester Term	• Industry oriented technical education.
27-06-2024 to 25-10-2024	3rd Semester Term	• Excellent teaching and learning environment.
22-07-2024 to 07-12-2024	1st Semester Term	• Promote entrepreneurship activities.
22-07-2024 to 04-08-2024	1st Sem Induction Programme	• Continual growth in every sphere of life by developing core human values.
15-08-2024	Independence Day Celebration	
09-09-2024 to 13-09-2024	3rd and 5th Sem PA-1	
14-10-2024	Navraatri Celebration "Garaba"	
17-10-2024 to 22-10-2024	3rd and 5th Sem PA-2	
17-10-2024 to 22-10-2024	1st Sem PA	
23-10-2024 to 25-10-2024	3rd and 5th Sem submission etc.	
27-10-2024 to 16-11-2024	Diwali Vacation	
02-12-2024 to 07-12-2024	1st Sem remedial, submission etc.	



Figure 2.2.2: Institute Academic Calendar

Government Polytechnic, Palanpur								
Academic Calendar - Odd Term – 2025-26								
Information and Communication Technology								
Electronics & Communication Engineering Department								
Activity	SEMESTER-1		SEMESTER-3		SEMESTER-5		Vision	
	From	To	From	To	From	To	To produce competent diploma engineers as per need of Industries. Entrepreneurs with ethical values	
Academic activity								
Term Date	24/07/25	30/12/25	30/08/25	24/11/25	24/05/25	17/10/25	Mission • Industry oriented technical education • Excellent teaching and learning environment • Promote entrepreneurship activities • Continual growth in every sphere of life by developing core human values	
Attendance review-1	19/09/25	--	30/08/25	--	30/08/25	--		
Prog. Assessment-1	1/12/25	06/12/25	13/10/25	17/10/25	01/09/25	06/09/25		
PA-1 Result Display	12/12/25		17/10/25		10/09/25			
Parents Meeting	20/09/25		20/09/25		20/09/25			
Remedial Classes	10/11/25	30/12/25	10/11/25	24/11/25	10/09/25	17/10/25		
Attendance review-2	17/11/25		06/10/25		06/10/25			
Prog. Assessment-2	22/12/25	26/12/25	17/11/25	21/11/25	13/10/25	17/10/25		
PA-2 Result Display	29/12/25		21/11/25		07/12/25			
Term work submission	22/12/25	26/12/25	17/11/25	21/11/25	13/10/25	17/10/25		
GTU practical exam	As per GTU		As per GTU		As per GTU		Department Vision To prepare competent diploma engineers of Information and communication technology, catering the needs of industries and society as an excellent employee, innovator and entrepreneur with moral values.	
GTU-Theory End Semester Examination	As per GTU		As per GTU		As per GTU			
Project (Sem 5)								
Project Review-1	--		--		---			
Final Project Presentation	--		--		--			
Students feedback on faculty performance								
Feedback 1	24/11/25	28/11/25	06/10/25	10/10/25	25/08/25	29/08/25	Department Mission • Provide quality education in the field of ICT engineering • Develop state of art laboratories, classrooms and up gradation of faculties. • Strengthen industrial liaison by offering mutual beneficiaries services • Execute extracurricular and co-curricular activities to inculcate innovation, entrepreneurship and moral values	
Feedback 2	22/12/25	26/12/25	17/11/25	21/11/25	13/10/25	17/10/25		
Industrial Visits								
Banas Dairy, Palanpur	05/10/2025							
FM Radio, Palanpur	05/08/2025		27/09/2025					
Police control room			4/10/2025					
Railway control room	--		--		26/9/2025			
Expert Lectures								
Workshop on Embedded system	18/09/2025							
Seminar on Cyber security	19/09/2025							
International/ National day celebration								
International Yoga Day	21/07/2025							
Independence Day celebration	15/08/2025							
Teachers' Day celebration	05/09/2025							
Mahatma Gandhi Jayanti	02/10/2025							
Navratri celebration	03/10/2025							
Diwali Vacation	17/10/2025- 6/11/2025							





Head of Electro. & Comm. Engg.Deptt
Government Polytechnic
PALANPUR-385 001(B.K.)



Head of Electro. & Comm. Engg. Deptt
Government Polytechnic
PALANPUR-385 001(B.K.)

Figure 2.2.3: EC Department Academic Calendar

B. Use of various instructional planning and delivery methods (03)

Effective teaching–learning requires a mix of different instructional planning and delivery methods. The Department of Electronics and Communication uses a variety of teaching methods to ensure better understanding, active learning, and deeper engagement of students.

Below are the key teaching–learning methods adopted by the department:

Traditional Black board and Chalk method

This is the most widely used teaching method where faculty teach using a blackboard (or green/white board) and chalk (or marker pens).



Figure 2.2.4: Traditional Black (Green) Board and Chalk Method

Importance

- Simple and effective for concept explanation
- Real-time interaction between faculty and students
- Immediate doubt solving and feedback
- Easy monitoring of student understanding
- Helps maintain classroom discipline and focus

Multimedia method

Faculty members use various ICT tools like Powerpoint presentations, video lectures, animations, and simulation software to explain complex concepts in an interactive way.



Figure 2.2.5: Multimedia Teaching

Importance

- Learning is more effective and interesting
- Easy understanding of topics
- Students may get additional knowledge of topics.
- Video lecture provide practical application of knowledge to industries.

Demonstration method

The demonstration of equipment / instrument is one of the practical methods to explain concept to students. Various models and charts in different subjects in department are useful to clear the concepts of topics.



Figure 2.2.6: Demonstration Teaching Method

Importance

- Improves conceptual clarity through hands-on learning
- Encourages active participation of students

- Builds confidence and interest in subjects
- Enhances practical skills and real-time observation

Seminars / Presentation

Students are assigned topics from the curriculum or related fields. They research, prepare, and present in front of peers and faculty.



Figure 2.2.7: Seminar/Presentation Teaching Method

Importance

- Improves understanding of topics in depth
- Enhances communication and presentation skills
- Builds self-confidence and teamwork
- Promotes self-learning and research attitude

Flipped Classroom technique:

In few Classes we use this techniques where instead of introducing new concepts during classroom lectures, students first engage with learning materials—such as video lectures, reading content, or recorded presentations before coming to class. Classroom time is then utilized for discussions, problem-solving, collaborative activities, case studies, and doubt clarification.

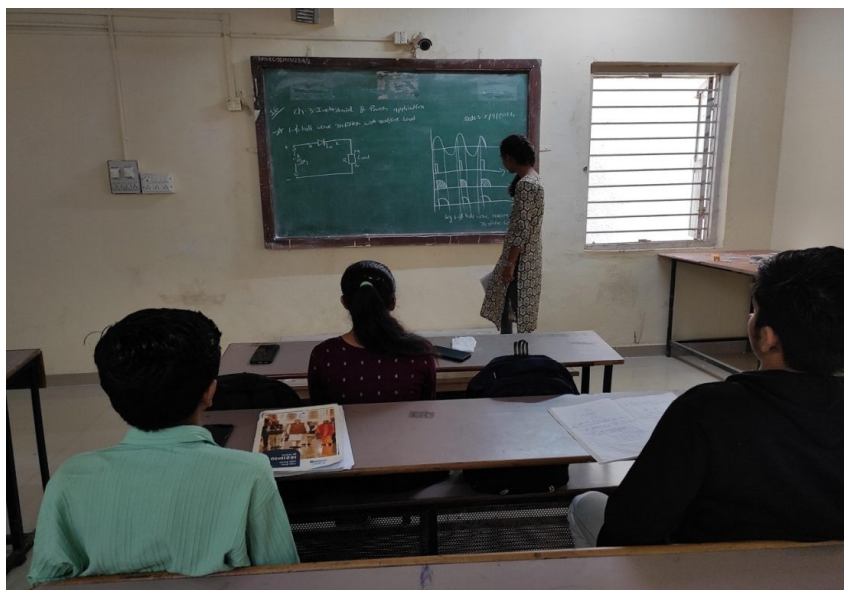


Figure 2.2.8: Flipped Classroom Method

Importance

- Enhances conceptual understanding
- Promotes active learning
- Improves student engagement
- Supports diverse learners
- Effective use of classroom time
- Develops self-learning skills

Teaching through online Platform

During the COVID-19 pandemic, the Department of Electronics and Communication adopted Microsoft Teams as the primary platform for conducting online classes. It enabled faculty members to deliver lectures, conduct assessments, and interact with students effectively during lockdown periods. Microsoft team was used for following aspects:

- Live online classes with screen sharing and digital whiteboard
- Conducting quizzes, unit tests, and viva exams
- Maintaining subject-wise channels for better class management
- Organizing parent-teacher meetings and online mentoring
- Sharing of lecture recordings for revision

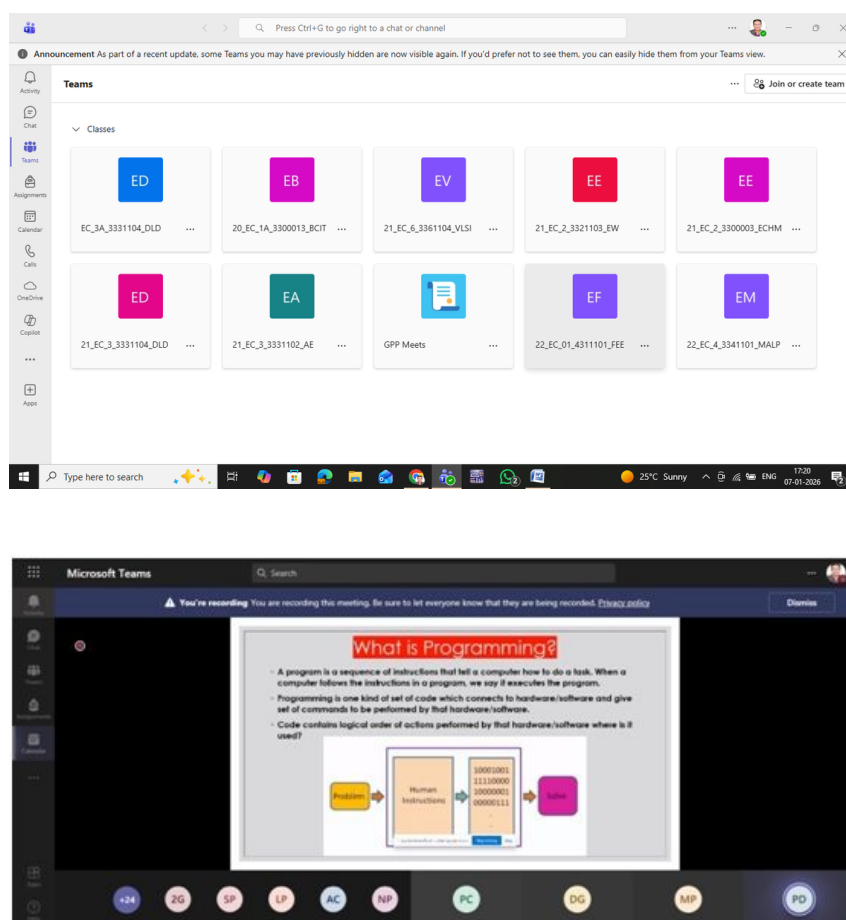


Figure 2.2.9: Microsoft Team Online Teaching

However, post-pandemic, the department has transitioned to using Google Classroom as the primary online platform for supporting academic activities, and it continues to be used effectively even in the current academic sessions. Google classroom is used for following aspects.

- Uploading of study materials, notes, and recorded video lectures
- Sharing of assignments, question banks, and lab manuals
- Collection of written submissions such as assignments and practical journals
- Continuous communication between faculty and students outside classroom hours

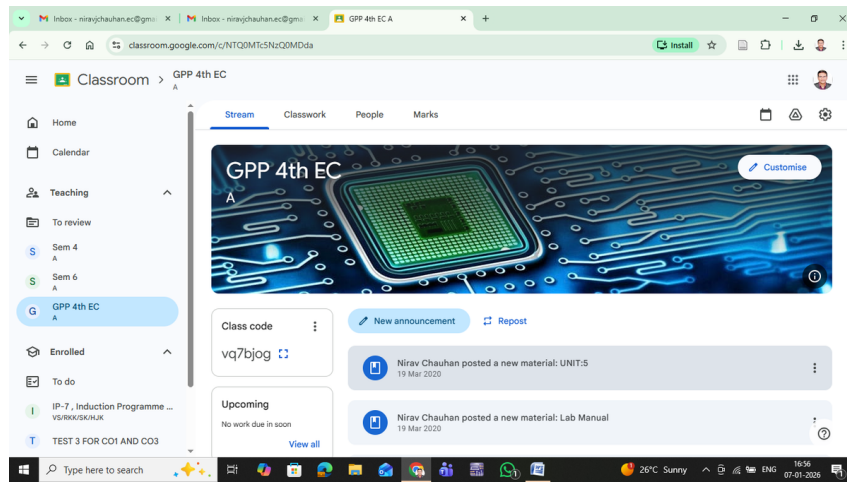


Figure 2.2.10: Google Classroom Online Teaching

Importance

- Supports blended learning with a mix of online and offline resources
- Students can access content anytime, aiding revision and self-paced learning
- Encourages the habit of independent and responsible learning
- Provides a structured digital environment for academic content management
- Bridges the gap in case of student absenteeism or special needs

Use of Models, Charts, and Posters

Models and wall charts are placed in classrooms and labs to give visual support to theoretical topics.



Figure 2.2.11: Chart/Poster in Laboratory

Importance

- Enhances memory retention through visual aids
- Encourages students' interest in the subject
- Helps in quick revision and referencing during practicals.
- Aids in better classroom environment and decorum

Conclusion:

The department consistently implements innovative instructional planning and delivery strategies to enhance the effectiveness of the teaching-learning process. By integrating traditional pedagogical approaches with modern, technology-enabled methods, the department ensures comprehensive conceptual understanding, practical application of knowledge, and the development of professional competence among students.

C. Methodologies to support weak students and encourage bright students(04)

Students enrolling in diploma programs demonstrate varied academic backgrounds and learning paces. While some learners require additional academic support to strengthen their understanding of fundamental concepts, others show advanced capabilities and seek opportunities beyond the prescribed curriculum. To address these diverse needs and ensure inclusive learning, the department has established a structured policy for the identification and mentoring of *weak students (slow learner)* as well as the encouragement and advancement of *bright students (fast learner)*. This initiative enhances overall academic performance, promotes equitable development, and cultivates a balanced, performance-oriented learning environment.

Weak Students (slow learner) – Identification

Weak students (slow learners) are identified through:

- Academic performance: Scoring less than 40% in Progressive Assessment-1.
- Conceptual clarity: Difficulty in grasping basic topics, requiring repeated explanations.
- Class engagement: Low participation in discussions, hesitation in asking doubts.

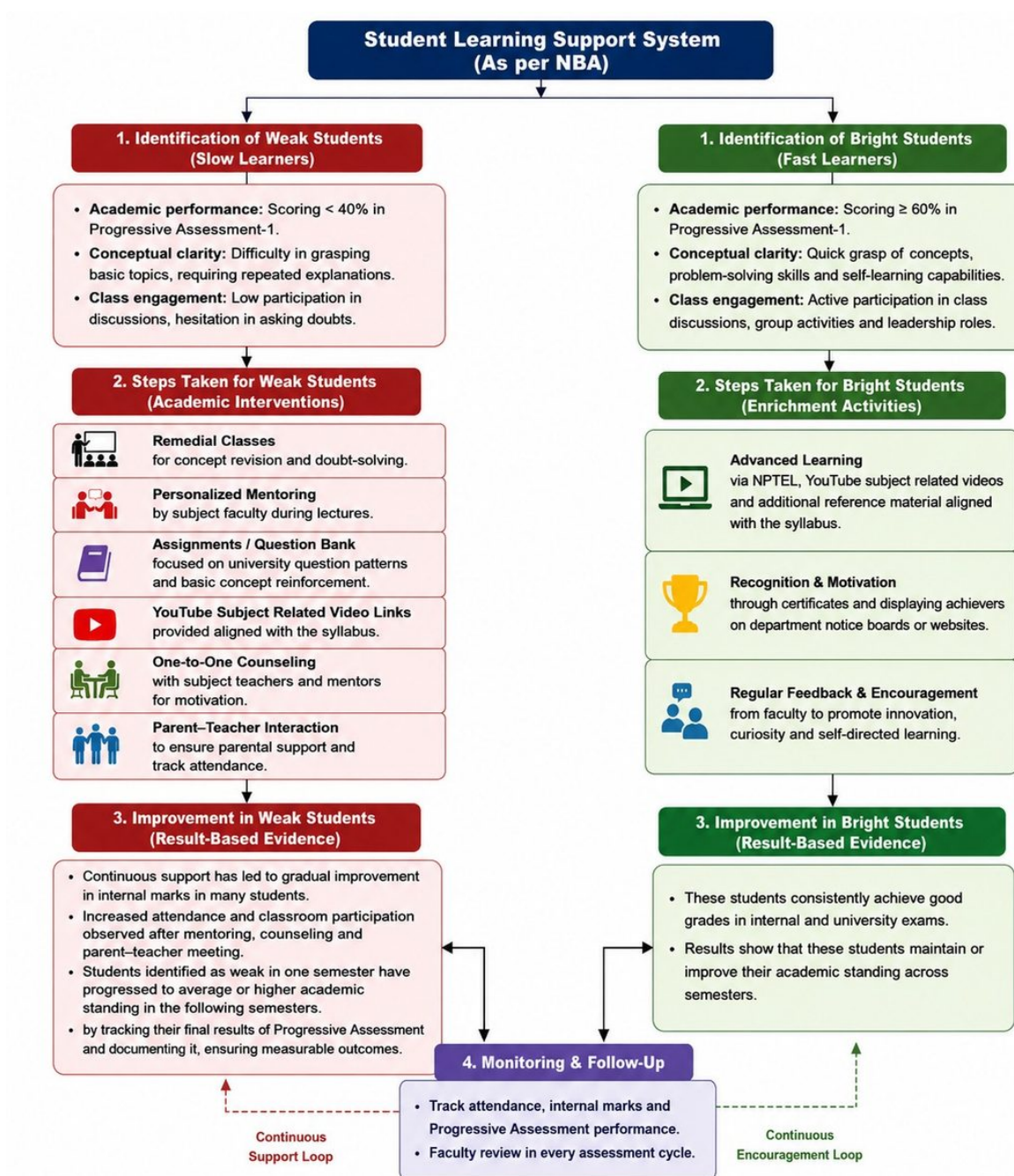


Figure 2.2.12: Student Learning Support System

Steps Taken for Weak Students (slow learners)

To support weak students, the department implements structured academic interventions such as:

- Remedial Classes for concept revision and doubt-solving.
- Personalized Mentoring by subject faculty during lectures.
- Assignments/question bank is provided focused on university question patterns and basic concept reinforcement.

- Parent-Teacher Interaction to ensure parental support and track attendance.



Figure 2.2.13: Parents Teacher Meeting

Improvement in Weak Students (slow learners) (Result-Based Evidence)

- Continuous support has led to gradual improvement in internal marks in many students.
- Students identified as weak in one semester have progressed to average or higher academic standing in the following examinations.
- Tracking their final results of Progressive Assessment and documenting it, ensuring measurable outcomes.

Bright Students (fast learner) – Identification

Bright students are identified based on:

- Scoring more than or equal to 60% in Progressive Assessment-1.
- Quick grasp of concepts, problem-solving skills, and self-learning capabilities.
- Active participation in class discussions, group activities, and leadership roles.

Steps Taken for Bright Students

To encourage high performers, the department offers:

- Advanced Learning via NPTEL videos and YouTube subject related videos and additional reference material aligned with the syllabus.
- Recognition & Motivation by certificate/appreciation to Topper students among fast learners.
- Regular Feedback and encouragement from faculty to promote innovation, curiosity, and self-directed learning.

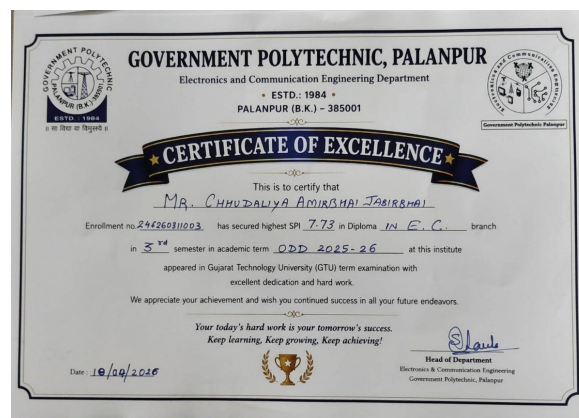


Figure 2.2.14: Topper Student Certificate/Appreciation

Improvement in Bright Students (Result-Based Evidence)

- These students consistently achieve good grades in internal and university exams.
- Results show that these students maintaining or improving their academic standing across semesters.

Conclusion

The effective implementation of this policy has substantially enhanced students' academic performance and holistic development. By emphasizing early identification, need-based academic planning, and continuous monitoring, the policy successfully addresses learning gaps and supports progressive improvement. This initiative aligns with the principles of outcome-based education and clearly demonstrates the department's commitment to student-centric teaching-learning practices and academic excellence.

D. Quality of classroom teaching (03)

The Electronics & Communication Engineering Department emphasizes effective and engaging classroom teaching to ensure attainment of Course Outcomes (COs) and foster deep learning among diploma students.

1. Academic Planning & Preparedness

The department strictly follows the academic calendar issued by GTU and the institute. Subject allotment is done well in advance before the commencement of each semester, enabling faculty members to prepare:

- Lesson plans
- Laboratory plans
- PowerPoint presentations / study materials/ lecture notes

This ensures that teaching aligns with the academic schedule and individual faculty timetables approved by the Head of Department (HOD).

2. Course File Preparation

Each subject coordinator, along with associated faculty members, prepares a comprehensive **Course File** which includes:

- Faculty Timetable
- University syllabus
- Teaching Scheme
- Course Outcome
- Reference Books
- Lesson/Lab Plan
- Student Attendance sheets
- Assignments
- Tutorials
- CO-PO-PSO Mapping for Program Articulation Matrix
- PA / Midsem Exam question papers
- PA Marksheets (CO wise)
- Course Exit Survey
- Lecture Notes
- Lab Manual with Rubrics

This documentation ensures transparency and structured delivery of curriculum.

3. Teaching Methodology

Faculty members adopt a variety of instructional methods to cater to diverse learning needs:

- Whiteboard and chalk method
- Multimedia teaching (PowerPoint, videos, animations)
- Demonstration-based teaching
- Flipped Classroom technique
- Seminar and discussion method

At the end of every session, students are encouraged to summarize key points, ask questions, and clarify doubts, which enhance interactive learning.

4. Learner-Centric Approach

The teaching approach promotes a positive and conducive environment for active participation. Faculty members frequently use question-answer techniques, brainstorming, and problem-solving sessions to test and reinforce student understanding.

5. Assessment of Learning

Various internal assessment tools are implemented to evaluate the learning outcomes:

- Class/Mid (Progressive Assessment) test (Internal)
- Practical, viva

These assessments are mapped with COs to ensure proper monitoring of learning objectives.

6. Industry Interaction & Exposure

To bridge the gap between industry and academics, the department regularly organizes:

- Expert talks and seminars on emerging technologies
- Industrial visits to enhance practical understanding and real-world relevance
- MOUs with industries

Table 2.2.1: Industry Interaction Activity Summary

Sr. No	Activities	2021-22	2022-23	2023-24	2024-25	2025-26
1	Industrial Visits	4	3	3	4	3
2	Workshop/ Expert Lectures	2	4	3	4	4
3	MOU Details	0	0	1	1	1

7. Faculty Development & Up-gradation

The department places strong emphasis on continuous faculty development to ensure high-quality teaching and subject expertise. Faculty members actively participate in Faculty Development Programs (FDPs), MOOCs, Workshops, and Short-Term Training Programs (STTPs) to upgrade their technical knowledge and pedagogical skills.

In addition to this:

- Two faculty members have successfully earned their Ph.D. degrees.
- One faculty member has completed her Master's degree.
- One faculty member is currently pursuing his Ph.D.
- One faculty member has completed AICTE QIP PG Certificate in Deep Learning.
- One faculty member is currently pursuing his B.S. in Data Science and applications (Completed till Level- Diploma in Programming, Diploma in Data Science).
- These academic pursuits enhance the subject depth, research orientation, and overall teaching quality of the department.

This continuous focus on faculty up-skilling ensures that students receive updated, industry-relevant, and research-backed instruction.

Table 2.2.2: Faculty Training Details

Sr. No.	Faculty Name	No. of Training Taken
1	Mr. S J Chauhan	11
2	Ms. M K Pedhadiya	10
3	Dr. L K Patel	7
4	Dr. R N Patel	6
5	Mr. M J Dabgar	7
6	Mr. R C Parmar	2
7	Mr. S P Joshiara	4
8	Mr. N J Chauhan	7

8. Monitoring and Feedback

The EC Department follows a structured mentoring system to provide continuous academic, personal, and career guidance, supporting the overall development of students throughout their diploma program.

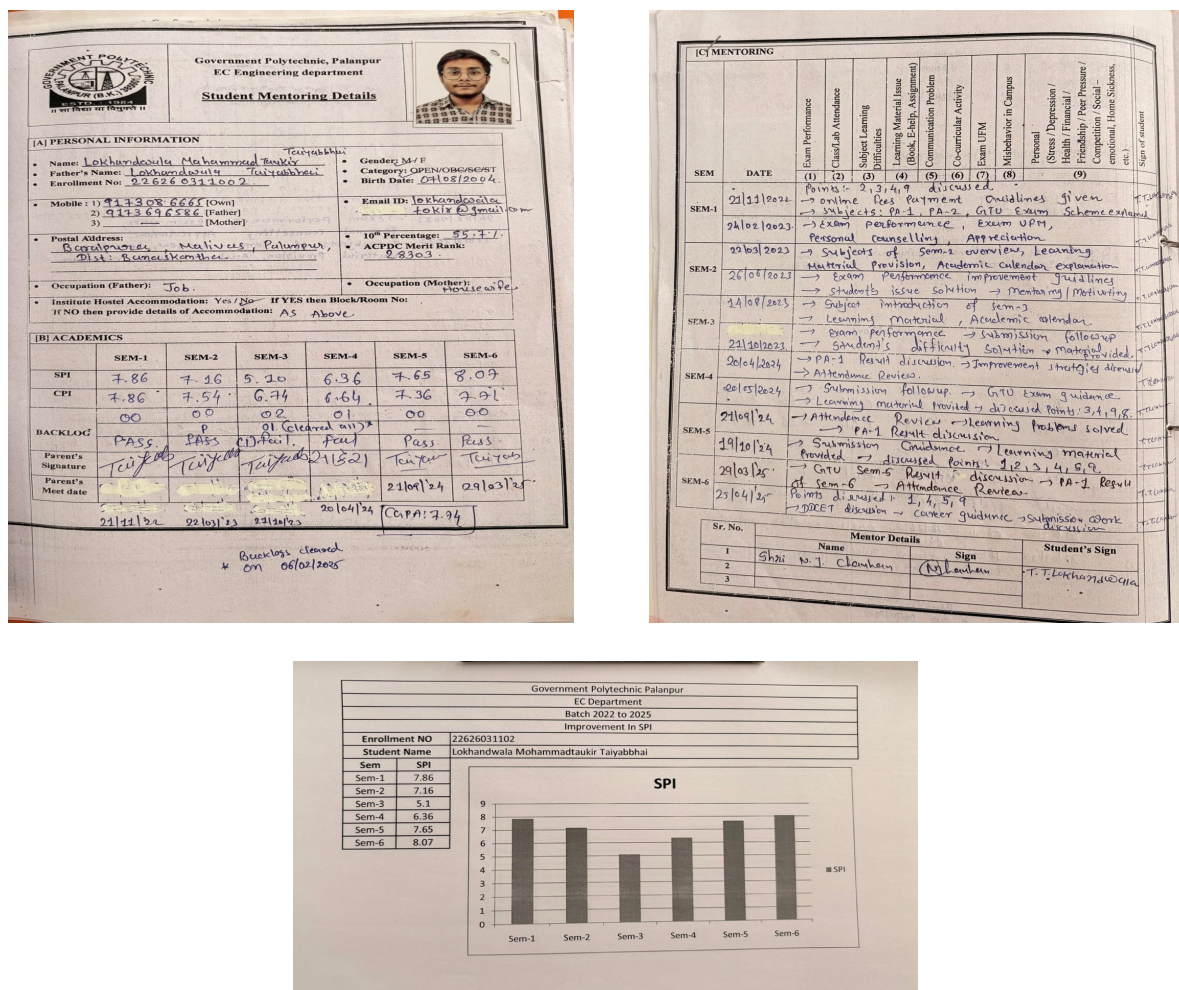


Figure 2.2.15: Student Mentoring

- The HOD conducts surprise classroom and lab visits to verify coverage of lesson plans, proper resource utilization, and teaching effectiveness.
- Feedback from students is periodically collected and analyzed. Based on this, HOD provides constructive suggestions for continuous improvement in teaching quality.

Electronics and Communication /ICT Engineering Department
GP Palanpur

Date : 20/03/2026

LOG Book - Academic Monitoring (Visit of Live Academic Session)

Date : 20/03/2023 (22/12/2025 to 29/04/2026)

ster/ Div : 4th Name of Present Faculty : Mr. R. C. Parmar

Lecturer Timing : 3:00 PM to 4:00 PM Classroom / Laboratory Room No : B-101

Microwave & its Application - D104011011

General Observation

Lecturer/ Laboratory	Routine Lecture-Lab / Proxy lecture-Lab / Extra Lecturer-lab			
Give detail if Proxy arrangement				
% Presence of student in a class	Present	Absent	Total	%
	07	01	08	87.5 %
Punctuality of teacher to attend student				
Coverall cleanliness of this Room	Good			

Teaching Learning Process

Chapter No./Experiment Number	13
Topic Name/ Name of experiment	To measure VSWR & Reflection coefficient at $\lambda/4$ line.
Is it found as per lesson planning ?	Yes/ No
Strategy of teaching (For Lecture)	Chalk : Board/White Board/ Multimedia
Languages used by teacher	
Content delivery to student	Good / very Good/ Excellent
Interaction with student	
Name of Books used by teacher	Lab manual

3 HOD 's Remarks if any

Instructions given to student	Always have a photograph clicked of M.Wave bench setup in every practical to understand better and to compare with other Practi
Instructions given to faculty	- Nicely maintained Microwave bench setup since I am so many years. - Allow students for joint M.W. content



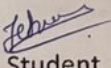
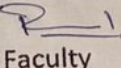
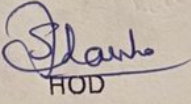
 Student
  Faculty
  HOD

Figure 2.2.16: Academic Monitoring Form

Table 4: Subject Analysis

Sub Code	Subject	Subject Name	Faculty	Score
4361101	CNDC	Computer Networks & Data Communication	SPJ	4.95
4361102	VLSI	VLSI	MKP	4.98
4361103	ECEP	Electronics & Communication Engineering Project-II	MJD	4.97
4361104	AAD	Android-App Development	MJD	4.88
4361106	REETE	Renewable Energy & Emerging Trends in Electronics	SJC	4.72
4361106	REETE	Renewable Energy & Emerging Trends in Electronics	NJC	4.80
4340003	IPDC	Integrated Personality Development Course	MKP	4.23
4341101	MM	Microprocessor & Microcontroller	MJD	4.33
4341102	DC	Digital Communication	RNP	4.95
4341104	CDT	Circuit Design Tools	MKP	3.18
4341105	LIC	Linear Integrated Circuit	RCP	4.37
4341106	AWP	Antenna & Wave Propagation	RNP	4.92
4341107	CEM	Consumer Electronics & Maintenance	SJC	4.18
4340003	IPDC	Integrated Personality Development Course	LKP	3.83
4343201	DDC	Digital & Data Communication	RNP	3.92
4343202	CN	Computer Networking	SPJ	3.39
4343202	JP	Java Programming	MJD	4.30
4343204	ES	Embedded System	MKP	4.33
4343205	WT	Web Technologies	MKP	3.83
4300003	ES	Environment and Sustainability	MMS	3.97
4300003	ES	Environment and Sustainability	JVK	4.33
4300012	EDCAD	Engineering Drawing and Computer Aided Design	RLC	4.17
4300012	EDCAD	Engineering Drawing and Computer Aided Design	DPJ	4.33
4300016	IC	Indian Constitution	CSP	4.30
4320002	EM	Engineering Mathematics	CPG	4.29
4320002	EM	Engineering Mathematics	IJC	4.04
4321101	EW	Electronics Workshop	RNP	3.76
4321102	DE	Digital Electronics	NJC	4.21
4321103	ECA	Electronic Circuits & Applications	RCP	3.32
1323201	EWICT	Electronics Workshop for ICT	RCP	4.20
1323202	EDC	Electronics Devices & Circuits	RCP	4.11
1323203	PP	Python Programming	LKP	4.35
4300003	ES	Environment and Sustainability	KAP	3.91
4320001	AM	Applied Mathematics	CPG	4.04
4320001	AM	Applied Mathematics	IJC	4.11
4300003	ES	Environment and Sustainability	MJV	3.24
4300005	P	Physics	BBM	4.65

Figure 2.2.17: Student Feedback Analysis

Government polytechnic Palanpur
Electronics and communication Department
Faculty Feedback Summary

Faculty name: Smt. M K Pedhadia

Academic Year	Points under consideration	HoD - Review
2023 winter	(last 3-Points having less marks) - Q2(4.15): Topics Beyond Syllabus: Has the Teacher covered relevant topics beyond? - Q5(4.24): Hands-on Training: Support for development of skill (Hands-on) - Q7(4.29): Communication Skills: Effectiveness in Communication skills	HoD - Review (comparing two terms) -
2024 summer	- Q5(3.89): Hands-on Training: Support for development of skill (Hands-on) - Q4(3.96): Practical Demo: Support for development of skill (Practical) - Q8(4.06): Doubt Clarification: Clarity of expectation	Hands on Train Permit student to do exp at their own other points improved
2024 winter	- Q11 (4.40): Helpfulness: Willingness to offer help - Q9(4.44): Use of Teaching Tools: Use of teaching aids - Q10 (4.46): Motivation: Motivation and inspiration	Improved
2025 summer	- Q12 (4.43): Student Progress: Feedback on student's progress - Q7(4.46): Communication Skills: Effectiveness in Communication skills - Q9(4.51): Use of Teaching Tools: Use of teaching aids	Improved exam use of teaching tools Use ICT-tools
2025 winter	- Q9(4.05): Use of Teaching Tools: Use of teaching aids - Q7(4.14): Communication Skills: Effectiveness in Communication skills - Q4(4.18): Practical Demo: Support for development of skill (Practical)	Increase usage of ICT tools. Improvement in student progress.
2026 summer	- Q9: Use of Teaching Tool (4.13) - Q7 (4.15): Commu skill - Q11 (4.18): Helpfulness	Q-4 improved. Q7, Q9 needs to be improved

* I have received the feedback of previous years. Based on the feedback received I'll work on improving upon the my weak points by increasing use of ICT tools. I agree with comments given by respected HoD sir and will improve by implementing the suggestions.

Hitar

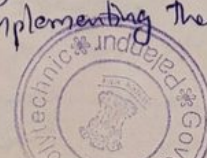


Figure 2.2.18: Faculty Feedback Summary with HoD Suggestions for Improvement

9. Infrastructure Support

The campus is Wi-Fi enabled, facilitating access to digital content and online learning resources during classroom sessions.



Figure 2.2.19: Departmental Wi-Fi Facility

Conclusion:

The department ensures high-quality classroom teaching through planning, varied instructional methods, regular assessments, industry-academia linkage, and continuous monitoring. These initiatives collectively aim to enhance student learning, achieve COs, and maintain academic excellence.

E. Conduct of experiments (03)

The Electronics and Communication Engineering Department places strong emphasis on the systematic conduct of laboratory experiments to enhance students' practical understanding and application of theoretical concepts. These laboratory activities are carefully structured and aligned with Course Outcomes (COs) to effectively assess and measure student learning.

1. Planning of Practical Sessions

The **Subject Coordinator** prepares a detailed list of experiments and laboratory manual as per the GTU-prescribed syllabus, which also clearly outlines the intended learning outcomes and their mapping with Course Outcomes (COs). A course file is maintained which includes:

- List of experiments
- Weekly laboratory planning
- Lab manuals
- Assessment rubrics

2. Common Laboratory Manuals

- From the academic year 2021-22, the Director of Technical Education (DTE) has implemented a standardized approach by introducing common laboratory manuals for each subject.
- This initiative ensures uniformity in experiment delivery, evaluation, and alignment with learning outcomes across all polytechnics.

3. Hands-on Learning Environment

- Practical sessions are conducted in well-equipped laboratories, where students perform experiments in small groups to ensure better individual attention and learning.
- Faculty members provide detailed explanation and demonstration before allowing students to perform the experiments, ensuring that students understand both theory and application.

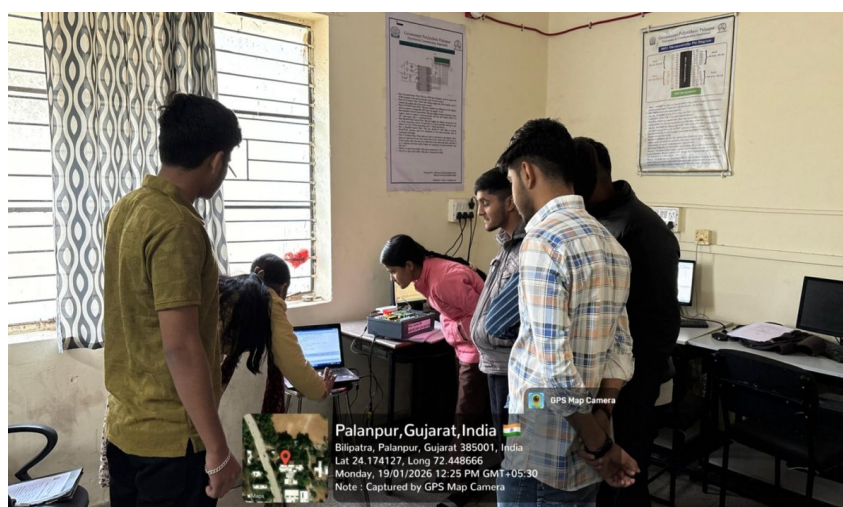


Figure 2.2.20: Lab Experiment

4. Alternative Learning Resources

In case of non-availability of specific equipment or trainers, the department adopts alternative strategies to ensure continuity in practical learning, such as:

- Simulation software
- Mobile applications
- Virtual laboratories (Govt. of India initiatives)
- YouTube video lectures and animations

5. Assessment of Practical Outcomes

- Faculty members use rubrics-based evaluation at the end of each practical session to assess the student's performance and achievement of learning outcomes.
- Regular feedback is given to students to improve their practical skills and understanding.
- A practical examination is conducted at the end of each semester as per GTU norms, which further ensures attainment of the practical component of the curriculum.

Conclusion:

The department ensures that practical sessions are systematically planned, effectively delivered, and appropriately assessed through a balanced integration of physical and virtual resources. A strong emphasis on hands-on learning, standardized laboratory manuals, and continuous evaluation supports the holistic development of technical competencies among diploma students.

F. Continuous Assessment in the laboratory (03)

A well-defined *continuous assessment system* is implemented across all laboratory courses to ensure consistent and fair evaluation of student performance throughout the semester.

- **Regular Evaluation:**

Students are assessed in each lab session based on their participation, performance, sincerity, and timely submission of assigned work.

- **Assessment Approach:**

Continuous assessment is carried out by the concerned subject faculty using pre-decided assessment parameters. The criteria are designed to suit the nature of the subject and the type of laboratory (e.g., software-based, hardware-based, etc.).

- **End-Semester Practical Examination:**

Practical examinations are conducted at the end of each semester.

- For Semesters 5 and 6, evaluations are conducted by external examiners appointed by Gujarat Technological University (GTU).
- For Semesters 1 to 4, the departmental faculty conducts the examination as per institute and university norms.

This structured approach ensures that students are continuously monitored, guided, and evaluated throughout the semester.

VLSI (4361102)

N. Assessment-Rubrics

The following rubric will be used in grading all Verilog source code submitted for this course. There are four categories under which your programs will be graded including functionality, readability, documentation, Design testing. Each category will be assigned a specific rubric score (1-5).

Excellent = 5-4, Very good = 3, Good = 2, Fair = 1 Max 25 marks

Assessment criterion	Excellent 5 or 4 marks	Very Good 3 or 2 marks	Good 1 or 0 mark	Fair	Marks
Program Completeness/ Correctness	Code is completely functional	Code is completely functional with minor implementation issues	Code is marginally functional with multiple errors and/or incomplete code sections.	Code is minimally functional with significant portion of the code missing or incomplete	5
Readability	Code is extremely well organized, properly formatted and easy to follow. Related code sections are logically grouped.	Code is reasonably easy to follow with logically grouped codes. Minor formatting problems.	Code is readable with significant efforts. Significant problems with code organization.	Code is poorly organized with little to no consistency in formatting and logical grouping.	5
Design testing	All the test cases are covered with proper simulation results	Reasonable test cases are covered with issues in very few test cases	Testing of the code with very few test cases.	Test case design is erroneous or inconsistent with the code.	5
Efficiency	Code is efficient without sacrificing readability and understanding	Code is mostly efficient with a scope to improve by selection of different constructs or modelling	Code is marginally efficient with significant scope to improve by changing coding styles and constructs.	Code unable to achieve the result with an irrelevant patched coding	4
Documentation/ Presentation	Code is well documented with related comments and design details. No typos/grammatical errors	Code is well documented with minor formatting issues. Minimal typing mistakes and grammatical errors	Significant portions of the code are undocumented or poorly documented	Major portion of the code is not documented or is with wrong/irrelevant comments.	4
Total marks					23

P
25/3/25
Sign with Date

Figure 2.2.21: Sample Practical Rubrics of the Course: VLSI (4361102)

G. Student feedback of teaching learning process and action taken (06)

The institute follows a defined policy to collect, analyze, and act upon student feedback to continuously improve the teaching-learning process (TLP). Feedback is taken with transparency, confidentiality, and without hurting their progress.

1. Feedback Collection Process.

a) Direct feedback

- A well-defined process is implemented at department level.
- All students are encouraged to submit feedback.
- Feedback is collected once each semester, either offline or online, coordinated by the Head of Department (HOD) / department coordinator.
- The questionnaire covers key aspects of TLP (content knowledge, delivery, communication, punctuality/regularity, interaction, response to queries, prerequisite coverage, real-life examples, and learning support).
- Responses are recorded on a five points scale (Excellent/ Very good/Good/Fair/Satisfactory).
- Data confidentiality is maintained; only consolidated results are shared.

Academic Year 2023-24

Feedback Analysis Report

1 Overview

1.1 Report Overview & Term Details

This Comprehensive Feedback Analysis Report provides an in-depth evaluation of the academic feedback collected for Summer 2024. It synthesizes data across various dimensions—Faculty, Subjects, Branches, and Semesters—to offer actionable insights for academic enhancement.

Table 1: Academic Details

Academic Year	Term	GTU Exam	Branch	Semester	Term Start Date	Term End Date
2023-24	Even	Summer 2024	EC	2	01/02/24	25/05/24
2023-24	Even	Summer 2024	EC	4	01/02/24	25/05/24
2023-24	Even	Summer 2024	EC	6	05/01/24	30/04/24
2023-24	Even	Summer 2024	ICT	2	01/02/24	25/05/24
2023-24	Even	Summer 2024	ICT	4	01/02/24	25/05/24
2023-24	Even	Summer 2024	IT	2	01/02/24	25/05/24

1.2 Assessment Parameters & Rating Scale

1.2.1 Assessment Parameters

The feedback is collected based on the following 12 key parameters, designed to comprehensively assess teaching effectiveness:

- Q1 : Syllabus Coverage: Has the Teacher covered the entire syllabus?
- Q2 : Topics Beyond Syllabus: Has the Teacher covered relevant topics beyond?
- Q3 : Pace of Teaching: Pace at which contents were covered?
- Q4 : Practical Demo: Support for development of skill (Practical)
- Q5 : Hands-on Training: Support for development of skill (Hands-on)
- Q6 : Technical Skills: Effectiveness in Technical skills
- Q7 : Communication Skills: Effectiveness in Communication skills
- Q8 : Doubt Clarification: Clarity of expectations
- Q9 : Use of Teaching Tools: Use of teaching aids
- Q10 : Motivation: Motivation and inspiration
- Q11 : Helpfulness: Willingness to offer help
- Q12 : Student Progress: Feedback on student's progress

1.2.2 Rating Scale

Feedback is quantified using a 5-point Likert scale:

- 5 - Excellent : Outstanding performance/Strongly Agree.
- 4 - Very Good : Above average performance/Agree.
- 3 - Good : Average performance/Neutral.
- 2 - Average : Below average performance/Disagree.
- 1 - Poor : Needs significant improvement/Strongly Disagree.

2 Feedback Analysis (Overall)

This section provides a high-level summary of feedback scores aggregated by Branch, Semester, Subject, and Faculty.

3



Figure 2.2.22: Student Feedback System

b) Indirect feedback

- HOD conducts periodic campus/classroom interactions with students regarding academics, laboratories, and support services.

- *Course Exit Survey* (for each course) and *Program Exit Survey* (for pass-out students) are administered every semester/year to capture attainment against course/program outcomes.

Government Polytechnic, Palanpur
Electronics and Communication Department
Course Exit Survey

Course: Linear Integrated Circuit (Analog Electronics) [4341105]

Enrollment Number: 226260311022 Date: 28/5/2022

- How would you rate your ability to understand the key parameters (like gain and bandwidth) of negative feedback amplifier?
 1.Excellent 2.Very Good 3.Good ☒ 4.Average 5.Poor
- How would you rate your ability to measure the frequency, amplitude, and waveform shape of oscillator outputs?
 1.Excellent 2.Very Good 3.Good ☒ 4.Average 5.Poor
- How would you rate your ability to describe the advantages and disadvantages of each type of power amplifier in practical applications?
 1.Excellent ☒ 2.Very Good 3.Good 4.Average 5.Poor
- How would you rate your ability to observe the output waveform of different circuits developed using IC 741 operational amplifier?
 1.Excellent ☒ 2.Very Good 3.Good 4.Average 5.Poor
- How would you rate your ability to design multivibrator circuits (astable, monostable, bistable) using the 555 timer IC?
 1.Excellent ☒ 2.Very Good 3.Good 4.Average 5.Poor

Head of Electro. & Comm. Engg. Dept
 Government Polytechnic
 PALANPUR-385 001 (E.K.)

Figure 2.2.23: Course Exit Survey



Government Polytechnic, Palanpur

Electronics and Communication Department

Program Exit Survey



Enrollment Number: 226260311004 Date: 29/4/2025

- 1) PO1- Have you attained the ability to apply knowledge of basic mathematics, science and engineering fundamentals and Electronics and Communication specialization to solve engineering problems? (Basic and discipline specific knowledge).

1.Excellent	☒ 2.Very Good	3.Good	4.Average	5.Poor
-------------	---	--------	-----------	--------
- 2) PO2 - Will you be able to identify and analyze well-defined engineering problems using codified standard methods? (Problem analysis).

1.Excellent	2.Very Good	☒ 3.Good	4.Average	5.Poor
-------------	-------------	--	-----------	--------
- 3) PO3 - Will you be able to design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs? (Design and development of solutions).

1.Excellent	2.Very Good	☒ 3.Good	4.Average	5.Poor
-------------	-------------	--	-----------	--------
- 4) PO4 - Will you be able to apply modern engineering tools and appropriate technique to conduct standard tests and measurements? (Engineering Tools, experimentation and testing).

1.Excellent	2.Very Good	☒ 3.Good	4.Average	5.Poor
-------------	-------------	--	-----------	--------
- 5) PO5 - Will you be able to produce technical solution in global and societal context and get an understanding of professional and ethical responsibilities and act accordingly in all situations? (Engineering practices for society, sustainability and environment)

1.Excellent	2.Very Good	☒ 3.Good	4.Average	5.Poor
-------------	-------------	--	-----------	--------
- 6) PO6 - Will you be able to function effectively as an individual, as a team member, and in multidisciplinary environment teams? (Project Management).

1.Excellent	☒ 2.Very Good	3.Good	4.Average	5.Poor
-------------	---	--------	-----------	--------
- 7) PO7 - Would be able to improve Self through continuous professional development, and independent and lifelong learning in the context of technological changes? (Life-long learning).

1.Excellent	☒ 2.Very Good	3.Good	4.Average	5.Poor
-------------	---	--------	-----------	--------
- 8) PSO1 - Are you able to develop Developed proficiency in Installation, maintenance and troubleshooting of electronics and communication systems?

1.Excellent	2.Very Good	☒ 3.Good	4.Average	5.Poor
-------------	-------------	--	-----------	--------
- 9) PSO2 - Are you able to customized solution of real-life problems using hardware and software?

1.Excellent	☒ 2.Very Good	3.Good	4.Average	5.Poor
-------------	---	--------	-----------	--------



(Signature)
 Head of Electro. & Comm. Engg. Deptt
 Government Polytechnic
 PALANPUR-385 004 (B.K.)

Figure 2.2.24: Program Exit Survey

2. Data Analysis & Reporting

- Department compiles the received feedback, prepares consolidated analysis reports, and identifies strengths and areas for improvement at course and faculty levels.
- Reports are discussed by HOD with concerned faculty members.

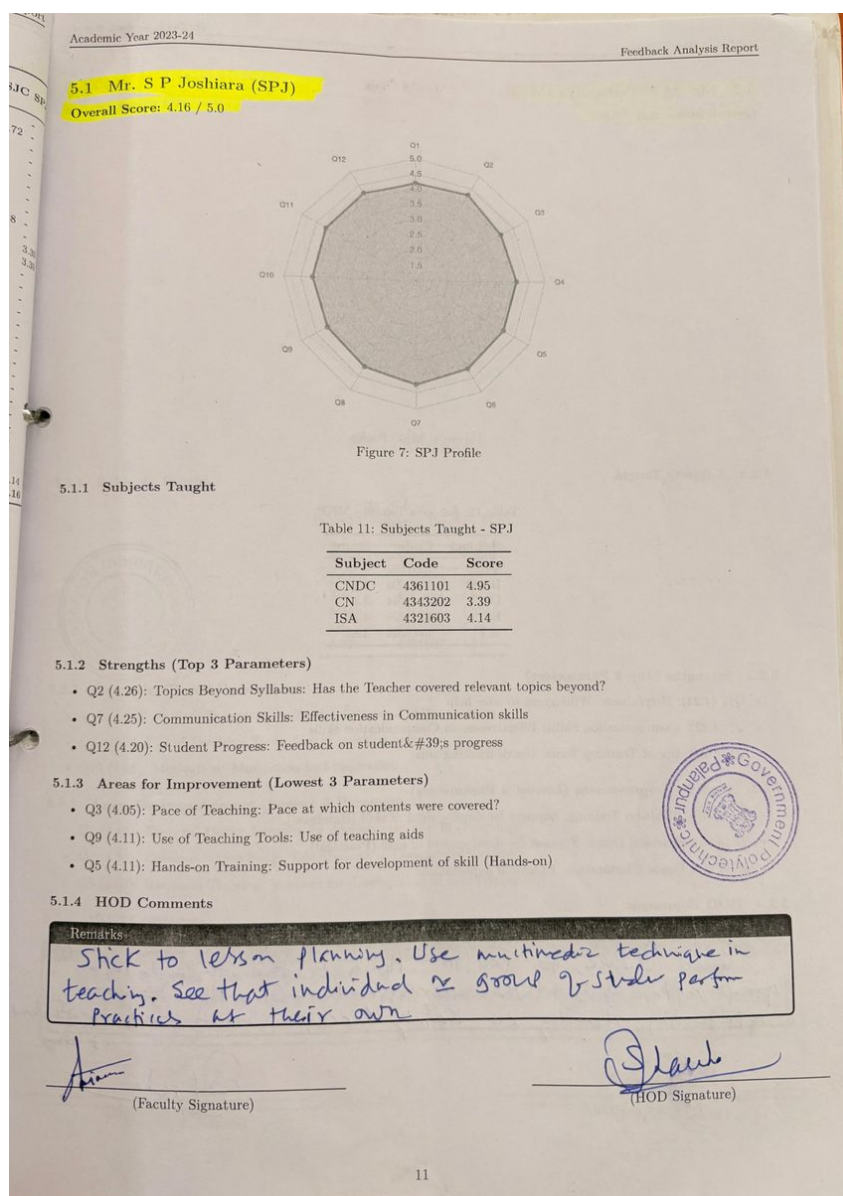


Figure 2.2.25: Feedback Data Analysis and Reporting

3. Action Taken Mechanism

- The HOD may suggest and guide faculty as per the feedback, which may include:
 - Participation in FDPs and workshops for pedagogy enhancement.
 - Adjustments in lesson planning, pace of delivery, and learner engagement methods.
 - Additional tutorials, remedial sessions, lab demonstrations and YouTube videos.
 - Improvement/addition of learning resources (notes, PPTs, manuals, question banks).

- **Appreciation/Motivation:** Faculty showing consistently high or improved feedback receive appreciation certificates from the department.



Figure 2.2.26: Faculty Appreciation Certificate

Effectiveness

- Improvements are monitored in the subsequent feedback cycle(s) and reflected through better consolidated scores, increased student satisfaction, and improved CO/PO attainment trends.
- Continuous review effectively closes the feedback loop and sustains the quality of the teaching-learning process.

Government polytechnic Palanpur
Electronics and communication Department
Faculty Feedback Summary

Faculty name: Smt. M K Pedhadia

Academic Year	Points under consideration	
2023 winter	(last 3-Points, having less marks) • Q2(4.15): Topics Beyond Syllabus: Has the Teacher covered relevant topics beyond? • Q5(4.24): Hands-on Training: Support for development of skill (Hands-on) • Q7(4.29): Communication Skills: Effectiveness in Communication skills	HOD- Review (comparing two terms) —
2024 summer	• Q5(3.89): Hands-on Training: Support for development of skill (Hands-on) • Q4(3.96): Practical Demo: Support for development of skill (Practical) • Q8(4.06): Doubt Clarification: Clarity of expectation	Hands on Training Permit student to do exp at their own other points improved
2024 winter	• Q11 (4.40): Helpfulness: Willingness to offer help • Q9(4.44): Use of Teaching Tools: Use of teaching aids • Q10 (4.46): Motivation: Motivation and inspiration	Improved
2025 summer	• Q12 (4.43): Student Progress: Feedback on student's progress • Q7(4.46): Communication Skills: Effectiveness in Communication skills • Q9(4.51): Use of Teaching Tools: Use of teaching aids	Improved example use of teaching tools Use ICT-tools
2025 winter	• Q9(4.05): Use of Teaching Tools: Use of teaching aids • Q7(4.14): Communication Skills: Effectiveness in Communication skills • Q4(4.18): Practical Demo: Support for development of skill (Practical)	Increase Usage of ICT tools. Improvement in Student Progress.
2026 summer	• Q9 : Use of Teaching Tool (4.13) • Q7 (4.15): Commu skill • Q11 (4.18): Helpfulness	Q-4 improved. Q7, Q9 needs to be improved

* I have received the feedback of previous years. Based on the feedback received I'll work on improving upon the my weak points by increasing use of ICT tools. I agree with comments given by respected HoD sir and will improve by implementing the suggestions.

Hittai

Figure 2.2.27: Faculty Feedback Summary and Improvements in Points Under Consideration

2.2.2 Initiatives to improve the quality of semester tests and assignments (15)

A. Process for Internal semester question paper setting and evaluation and effective process implementation (05)

Internal assessment for each course is conducted through class tests. The following structured process is followed for question paper setting, evaluation, and implementation to ensure transparency and academic effectiveness:

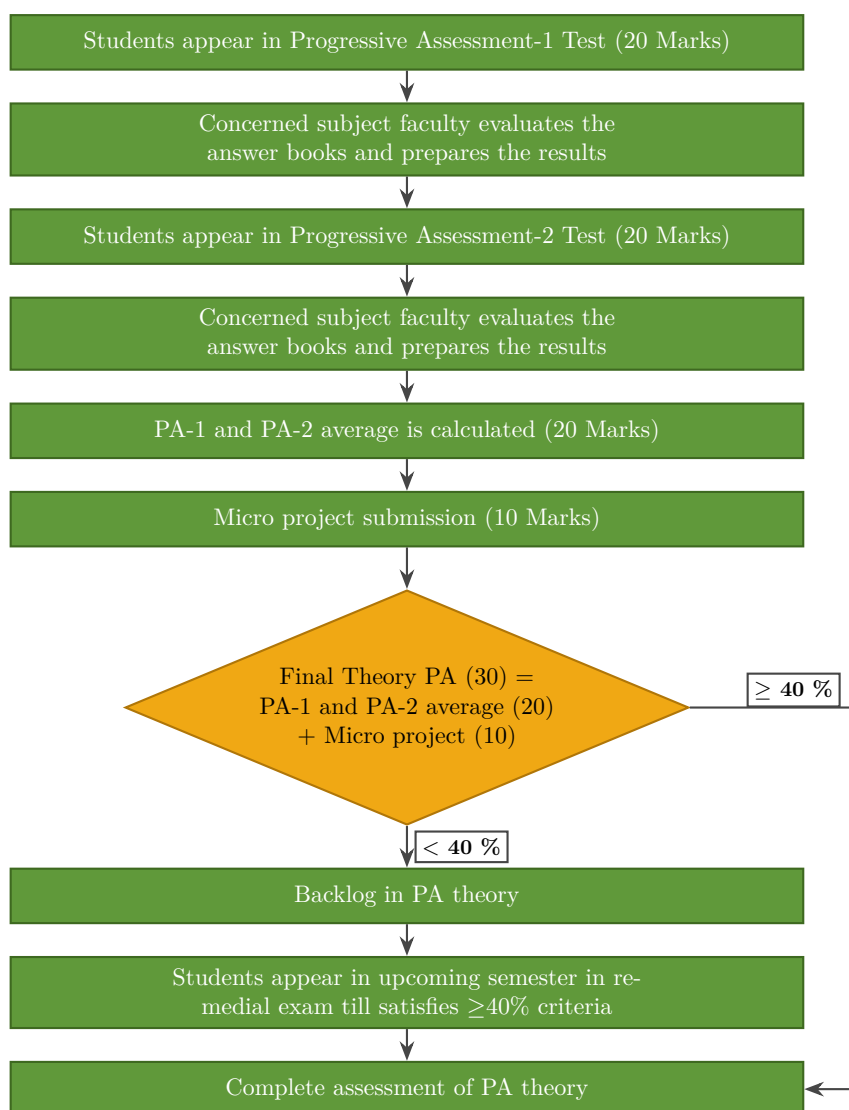


Figure 2.2.28: Assessment for PA Theory Component (Competency-focused Outcome-based Green Curriculum)

- The **Head of Department (HOD)** appoints a **subject coordinator** for each course, responsible for setting the class test paper and evaluating student performance.
- The subject coordinator, in consultation with the subject coordinator, defines the syllabus coverage for the class test and informs students in advance.
- The question paper is designed by the subject in-charge with clear mapping to Course Outcomes (COs). Questions are framed as per Bloom's Taxonomy levels, ensuring inclusion

of various cognitive domains (R/U/A) as per suggestion provided by the Departmental IQAC Committee/ Head of Department.

- The question papers are submitted to the Department GTU Coordinator for smooth conduction of the test.
- Students are briefed regarding the question paper format, evaluation scheme, and syllabus coverage. Seating arrangements and test schedules are displayed on the department notice board and/or digital media.
- After the test, answer sheets are evaluated by the subject faculty. Marks and performance are declared as per the scheduled timeline.
- Result analysis is carried out by the subject in-charge to identify slow learners. Remedial measures such as counselling and remedial classes are conducted to support their improvement.
- During COVID-19 pandemic, the same procedure was followed through online platforms, maintaining consistency and academic integrity in internal assessments.

B. Question paper setting taking into account outcomes/learning levels (05)

For internal assessment through Progressive assessment tests, question paper setting is carried out systematically with a clear focus on Course Outcomes (COs) and student learning levels.

- The subject coordinator prepares the question paper by mapping each question to the appropriate Course Outcome (CO) and Revised Bloom's Taxonomy level, ensuring coverage of different cognitive domains such as knowledge, comprehension and application.
- The question paper also reflects the learning level expected from students based on the syllabus and academic progression of the course.
- Once the paper is prepared, the subject coordinator provides the test paper to the departmental GTU coordinator for the smooth conduct of the Progressive assessment tests.
- During the CO-wise assessment review, the following key aspects are verified for each question paper:
 - **Type of exam** (PA-1 Test or PA-2 Test)
 - **Revised Bloom's Taxonomy level addressed** (e.g., Remember, Understand, Apply)
 - **Weightage of each CO** as per the course assessment scheme

This structured approach ensures that question papers are not only academically sound but also outcome-based and student-centric.

C. COs coverage in class test / mid-term tests and assignments (05)

To ensure proper alignment of internal assessments with Course Outcomes (COs), a structured assessment plan is prepared and implemented for each subject.

- At the beginning of the semester, the subject coordinator prepares the assessment plan (a part of the lesson plan).

- The assessment plan clearly outlines the CO-wise mapping for each evaluation method and covers the following elements:
 - Course COs assessment is done by Progressive assessment tests.
- This systematic approach ensures continuous and outcome-based evaluation throughout the semester.
- A standard Progressive assessment test format is used across all subjects, as shown in the sample provided below. The format includes:
 - Mapping of each question with the corresponding CO
 - Indication of cognitive level (Remembering / Understanding / Applying, i.e., R/U/A)
 - Marks distribution for each question
 - Structured layout with optional and compulsory sections, ensuring coverage of the entire CO range

This process ensures transparency and uniformity while facilitating effective tracking of CO attainment across all subjects and assessments.

Government Polytechnic, Palanpur
EC/ICT Department

Progressive Assessment - 1 (April-2024) Sem - 2

Sub Name & Code: Digital Electronics (4321102)

Time: 11:30am to 12:30pm

Date: 03/04/2024

Total Marks: 20

Q-1 Answer Following Questions

[6] CO1

(a)	Convert: $(46)_{10} = (\quad)_2 = (\quad)_8 = (\quad)_{16}$	[3]	A
	OR		
	Convert: $(110111)_2 = (\quad)_{10} = (\quad)_8 = (\quad)_{16}$		A
(b)	(i) Subtract using 2's Complement method: $(1110)_2 - (1000)_2$ (ii) Perform: $(11101101)_2 + (10101000)_2$	[3]	U

Q-2 Answer Following Questions

[10] CO2

(a)	Explain Logic Gates: AND, NOR, NOT, EX-OR with their symbol, truth table and equation.	[4]	R, U
	OR		
	Name the Universal Gates. Draw circuit of AND, OR, NOT gate using NAND Gate.		R, U
(b)	Simplify the following Boolean function using K-map: $f(A,B,C,D) = \sum m(0,3,4,6,8,11,12)$	[3]	A
	OR		
	Simplify using Boolean Algebra: $Y = AB + A'B + A'B' + AB'$		A
(c)	State De-Morgan's theorems and prove it.	[3]	U

Q-3 Answer Following Questions

[4] CO3

(a)	Draw the logic circuit of Full Adder and explain its working.	[4]	U
	OR		
	Draw the logic circuit of half Subtractor and explain its working.		U

Course Outcomes:

CO	Code	Statement
CO1	4321102.1	Interpret various number systems and their conversions with binary arithmetic operations.
CO2	4321102.2	Implement simplified Boolean equations using logic gates.
CO3	4321102.3	Test different types of combinational logic circuits.
CO4	4321102.4	Test different types of sequential logic circuits.
CO5	4321102.5	Classify various memories and logic families.

Note: R=Remember, U=Understand, A=Apply and above (Revised Bloom's taxonomy)

All the Best

Figure 2.2.29: Sample Progressive Assessment-1 Test Paper

Government Polytechnic, Palanpur
EC/ICT Department

Progressive Assessment - 2 (May-2024) Sem - 2

Sub Name & Code: Digital Electronics (4321102)

Time: 11:30am to 12:30pm

Date: 22/05/2024

Total Marks: 20

Q-1 Answer Following Questions

[4] CO3

(a)	Describe 8:1 Multiplexer with truth table, equation and circuit diagram. OR Explain 3:8 Decoder with truth table and circuit diagram.	[4]	U
			U

Q-2 Answer Following Questions

[10] CO4

(a)	Describe JK flip flop with truth table and circuit diagram. OR Explain SR flip flop with truth table and circuit diagram.	[4]	R, U
			R, U
(b)	Classify Shift Registers with the help of Block diagram. OR Explain SISO shift registers in detail.	[3]	U
			U
(c)	Describe 4-bit Asynchronous UP Counter with truth table and circuit diagram.	[3]	U

Q-3 Answer Following Questions

[6] CO5

(a)	Define: Fan in, Fan out, Noise margin OR Compare SRAM and DRAM.	[3]	R, U
			R, U
(b)	Classify different Logic Families.	[3]	A

Course Outcomes:

CO	Code	Statement
CO1	4321102.1	Interpret various number systems and their conversions with binary arithmetic operations.
CO2	4321102.2	Implement simplified Boolean equations using logic gates.
CO3	4321102.3	Test different types of combinational logic circuits.
CO4	4321102.4	Test different types of sequential logic circuits.
CO5	4321102.5	Classify various memories and logic families.

Note: R=Remember, U=Understand, A=Apply and above (Revised Bloom's taxonomy)

All the Best

Figure 2.2.30: Sample Progressive Assessment-2 Test Paper

2.2.3 Quality of Experiments (15)

A. Experimental methodologies (05)

- In Electronics & communication department we have allotted all courses in Nine (09) different laboratories. Details of laboratories are given in below table.
- Laboratory experiments for all courses are designed in accordance with the experiment list prescribed in the GTU curriculum.
- Batch size for laboratory session is decided as per guideline of Directorate of Technical Education.
- The laboratory sessions are conducted as per time table approved by Head and Principal.
- The procedure/theory/learning outcome is explained by faculties in prior to performance of experiment.
- Groups of 4 to 5 students are allowed to perform the practical for hands-on practice under the supervision of faculties and supporting staff.
- Students are encouraged to perform practical on bread board in courses where experiments kits are not available.
- Students are encouraged to design and develop circuits on PCB in courses like Electronics Workshop and Project for testing and troubleshooting.
- Students complete laboratory manual during course work which is continuously evaluated by concern faculty.
- Laboratory-in charge is allocated for each laboratory, to take care of laboratory.
- Equipment utilization register is maintained by lab assistant for each laboratory and it is duly signed by faculty.
- Experiments are performed on equipment or trainer kit. Some subjects are having computer related experiment so those are performed on computer lab.
- If there is no equipment or trainer kit available then that practical is performed either with simulation software or with virtual labs.



Figure 2.2.31: Hands on Practical in VLSI Lab

Features of laboratory manual/ file

- Laboratory manuals for all courses are available with the department in hard copy/ soft copy.
- The list of experiment is prepared as per the suggested list of experiment by GTU in curriculum.
- DTE provides standardized common lab manuals for all subjects to ensure uniform practical training across all polytechnic institutes. These manuals help maintain consistency in laboratory work and assessments.
- Each title of the experiment is mapped with relevant course outcome of the course.
- Sample laboratory manual of each course with reading and observation is available to refer and verify the respective experiment data.

Availability of adequate and well-equipped workshops, Laboratories

- The Electronics and Communication Engineering Department of Government Polytechnic Palanpur has a sufficient number of well-equipped laboratories and workshops to conduct various laboratory sessions.
- All laboratories are equipped with efficient equipment, enabling students to engage in hands-on activities and experiential learning during practical sessions as well as during flexible time slots based on their interests
- Equipments are stored at designated locations with appropriate tagging to ensure easy accessibility.
- Our laboratories consist of a comprehensive array of instruments and facilities, providing ample resources to support experimentation endeavours.
- All laboratories are provided with adequate display boards/Charts for necessary information to students and sufficient furniture facilities.
- The laboratories slots are provided as per curriculum requirement.

Table 2.2.3: Name of Laboratory and in charge

SR. NO	ROOM NO.	LAB NAME	NAME OF LAB INCHARGE
1	B002	Computer Lab-1	Ms. M.K. Pedhadiya
2	B008	Computer Lab-2	Dr. L.K. Patel
3	B009	Computer Lab-3	Mr. M.J. Dabgar
4	B014	Computer Lab-4	Mr. S.P. Joshiara
5	B010	Electronics Lab-1	Mr. N.J. Chauhan
6	B013	Electronics Lab-2	Mr. R.C. Parmar
7	B106	Electronics Lab-3	Mr. N.J. Chauhan
8	B101	Communication Lab-1	Dr. R.N. Patel
9	B105	Communication Lab-2	Dr. R.N. Patel

B. Innovative experiments including industry attached practices, virtual labs (05)

- Across many courses, innovative practices are adopted to actively engage students with emerging technologies. The department faculty consistently strive to introduce innovative laboratory experiments.
- In addition to curriculum-prescribed experiments, students are assigned micro-projects aligned with current industry requirements and emerging trends, thereby enhancing their simulation and practical skills.

Table 2.2.4: Sample copy of ICT Tools and Software

SR. NO.	SEMESTER	SUBJECT	TOOL	DETAIL
1	6	VLSI	Quartus Free version SPARTAN 6 tool kit	Hardware implementation of various projects
2	6	VLSI	Virtual Lab	Test bench simulations
3	6	RE&ETE	Machine Learning for Kids	Integrated Digital Environment
4	5	ES	eXtreme Burner	Development interface for AVR
5	2	DE	Virtual Lab	Simulation

C. Relevance to outcomes (05)

- For all the courses, laboratory experiments to be performed are mapped with CO.
- DTE provides standardized common lab manuals for all subjects to ensure uniform practical training across all polytechnic institutes.
- The assessment is done based on rubrics for performance-based courses.
- Maximum COs are included in the list of experiments to be performed.
- The remaining COs are assessed through CO-wise examinations and other activities suggested by course coordinator.

Practical Outcome - Course Outcome matrix : Course Outcomes (COs): Microwave and Radar Communication) (4351103) a) CO1 Distinguish Electromagnetic wave propagation through reflections from voltage and Current transmission b) CO2 Analyze performance of microwave components from a field point of view. c) CO3 Maintain microwave components and Set up of microwave bench for optimum Operation. d)CO4 Maintain microwave semiconductor devices used to realize amplifiers and Oscillators. e)CO5 Maintain SONAR and RADAR systems as microwave applications.						
S. No.	Practical Outcome/Title of experiment	CO1	CO2	CO3	CO4	CO5
1	Demonstrate Transmission line and its parameters.	✓				
2	Identify various microwave components in the microwave circuit.		✓			
3	Test different control functions of GUNN power supply and draw V/I characteristics.		✓	✓	✓	
4	Set the microwave bench for optimum operation.		✓	✓		
5	Measure the frequency generated by source and different wavelength in rectangular waveguide for TE _{1,0} mode		✓	✓		
6	Measure VSWR for given microwave loads		✓	✓		
7	Measurement of attenuation of a given fixed attenuator.		✓	✓		
8	Study of Power division in Directional coupler and its characteristics.		✓	✓		
9	Study circulator and its characteristics		✓	✓		
10	Study of Power division in Magic Tee and its characteristics.		✓	✓		
11	Calibration of given variable attenuator		✓	✓		
12	Introduction to RADAR .					✓
13.	Measure VSWR and reflection coefficient for given length of transmission line.	✓				

Figure 2.2.32: Sample Copy of Laboratory Experiments Mapped with CO

Consumer Electronics & Maintenance - 4341107

O. Practical related Questions

(1) What types of electronic sensors can be found in an automatic washing machine?

- > water level sensor
- > Temperature sensor
- > motor speed sensor
- > pressure sensor
- > for door/lid sensor
- > Drum rotation sensor
- > Drainage sensor.

(2) What is the function of a water level sensor in a washing machine?

-> It senses the ^{inner} water level when filling the drum and emptying the drum by water.

(3) Why is it necessary to unplug the washing machine before opening it?

-> To Avoid electrical current to us. if outer body is not given earthing wire supply

(4) What role does a motor speed sensor play in controlling the spin cycle?

-> It senses the speed of drum to a microcontroller. to maintain a constant speed while in rinse and spinning the clothes.

(5) What precautions should be taken before opening the washing machine?

-> unplug the machine

-> empty the tank inner

P. Assessment-Rubrics

Sr. No.	Criteria (Marks)	Assessment Weightage (%)	Marks obtained
1	Prepare of experimental setup (Out of 5 Marks)	20	5
2	Operate the equipment setup or circuit (out of 5 Marks)	20	5
3	Follow safety measures and practices (out of 7.5 Marks)	30	5
4	Record observations correctly (out of 3.75 Marks)	15	3
5	Interpret the result and conclude (out of 3.75 Marks)	15	3
		Total marks out of 25	21

Date: 05-04-2024

Sign: [Signature]

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Figure 2.2.33: Sample Copy of Laboratory Experiments Rubrics

This is a sample copy; rubrics for practical examinations and records for other subjects are maintained in the respective faculty members' course files.

2.2.4 Quality of Students Projects and Report Writing (35)

A. Identification of projects and allocation methodology (03)

The Electronics & Communication Department at Government Polytechnic, Palanpur, affiliated with Gujarat Technological University (GTU), offers project work to students in designated groups during the 5th and 6th semesters (Final Year), as per the university's curriculum structure.

Under the GTU curriculum introduced in September 2012, final-year project work carried a total of 10 credits and was divided into two parts:

- Project-1 (*Course Code: 3351107*) in the 5th semester – 4 credits, with Internal Evaluation: 60 marks and External Evaluation: 40 marks, Total: 100 marks.
- Project-2 (*Course Code: 3361109*) in the 6th semester – 6 credits, with Internal Evaluation: 100 marks and External Evaluation: 200 marks, Total: 300 marks.

(GTU Website Reference for Diploma Program – Project: Circular dated 13.08.2012, available at: https://s3-ap-southeast-1.amazonaws.com/gtusitecirculars/circulars/12Aug/13082012_03.pdf)

With the implementation of the Competency-focused Outcome-based Green Curriculum-2021 (COGC-2021), the curriculum was restructured to introduce mandatory summer internships alongside project work. The summer internships aim to provide practical, industry-focused exposure, guided by AICTE recommendations.

As a result, the allocation of credits and structure for project courses was revised to accommodate these internships in the final year. With the GTU revised curriculum implemented from 2021, the final-year project credit distribution was reduced to a total of 2 credits, as follows:

- E&C Project-1 (*Course Code: 4351107*) in the 5th semester – 1 credit, with Internal Evaluation: 50 marks and External Evaluation: 50 marks, Total: 100 marks.
- E&C Project-2 (*Course Code: 4361103*) in the 6th semester – 1 credit, with Internal Evaluation: 25 marks and External Evaluation: 25 marks, Total: 50 marks.

Also, since 2021, GTU's revised diploma curriculum (COGC-2021), Competency-focused Outcome-based Green Curriculum-2021, includes a 10-mark micro/mini project in the mid-semester internal evaluation. These micro/mini, application-oriented projects (14–16 hrs/semester) promote hands-on, competency-based learning, teamwork, documentation, and presentation skills.

This change is aligned with NEP 2020, which emphasizes experiential and industry-linked education, integrating theory with practice.

Project Identification Process

- Final-year diploma projects, usually undertaken in Semesters 5 and 6, focus on addressing real-world problems, often drawn from industry, research institutions, government agencies, or broader socio-technical challenges.
- Shodh-Yatra: After completing the 4th semester, students embark on a “Shodh-Yatra,” a problem-identification journey aimed at discovering potential project ideas from industry or relevant organizations. This exploration is usually completed before or shortly after the beginning of the 5th semester.

- Each student or project group is required to submit their problem definition to the departmental project guide within the timeline prescribed by GTU, through their assigned faculty guide.

Guide Allocation

- Each student or group is assigned a faculty guide responsible for reviewing, mentoring, and monitoring project progress throughout the academic year.
- The guide evaluates the problem definition and determines feasibility and relevance.
- An industry mentor may also be involved in guidance and evaluation, especially during final presentations and evaluations.
- The final allocation and confirmation process is managed by the concerned department HOD and communicated as per university guidelines.

Key Points to be considered

- Projects must align with a student's chosen electives or branch specialization.
- Regular evaluations and reviews by guides are mandatory, and involvement of industry mentors is encouraged for practical/vocational relevance.
- Strict timelines are set for project identification, title submission, and evaluation stages, usually within the first three weeks of the 5th semester.

Guidelines for Students

A. Team Formation

- Team Size: 3 to 4 students per group
- Each group must be assigned to a faculty Guide
- Guide will evaluate progress weekly and maintain a Project Progress Record

B. Project Selection Guidelines

1. Must address a real-world problem or innovative application.
2. Ideas may originate from:
 - Industry visits
 - Faculty suggestions
 - Student research
 - Community needs (NGO/MSME/Smart City)
3. Projects should integrate both hardware and software components.
4. Projects with SSIP/startup potential are highly encouraged.

B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs (05)

- Every EC diploma project in fifth and sixth semester should be clearly classified (application/product/research/review), selected after evaluating environment, safety, ethical, cost, and standards aspects, and mapped to relevant POs/PSOs.
- Most students opt for UDP (User Defined Projects), and industry mentors provide guidance mainly for selected project titles as per department project guide suggestions.
- Most projects are UDPs with optional industry mentor input for title selection and implementation guidance. This structured approach aligns with both GTU curriculum and Outcome based education requirements for quality assurance and outcome-based education.

Mapping with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

- Projects must demonstrate contributions to the solution of engineering problems, design and development, teamwork, communication, ethics, societal/environmental impact, life-long learning.
- Also, in line with the application of electronics/communication engineering concepts, tools, and processes for real-world problem solving and innovation.

Project List Year 2025-26

Table 2.2.5: Student Project List – Year 2025-26

Project Title	Type	Mapping to POs/PSOs	Guide Name
Smart auto-positioning chair system	Hardware+Software	PO1, PO2, PO3, PO4, PO6, PSO1, PSO2	Mr. M J Dabgar
Health Monitoring system	Hardware+Software	PO1,PO2, PO3, PO4, PO5,PO6, PO7, PSO1, PSO2	Mr. M J Dabgar
WET, DRY AND METAL WASTE SEGREGATION PROJECT	Hardware+Software	PO1,PO2, PO3, PO4, PO5,PO6, PSO1, PSO2	Mr. M J Dabgar

Project List Year 2024-25

Table 2.2.6: Student Project List – Year 2024-25

Project Title	Type	Mapping to POs/PSOs	Guide Name
IoT Based Home Automation	Hardware+Software	PO1,PO2, PO3, PO4, PO5,PO6, PO7, PSO1, PSO2	Mr. N J Chauhan
The Smart Dustbin	Hardware+Software	PO1,PO2, PO3, PO4, PO5,PO6, PSO1, PSO2	Mr. N J Chauhan

Project Title	Type	Mapping to POs/PSOs	Guide Name
Smart Attendance System	Hardware+Software	PO1,PO2, PO3, PO4, ,PO6, PSO1, PSO2	Mr. N J Chauhan

Project List Year 2023-24

Table 2.2.7: Student Project List – Year 2023-24

Project Title	Type	Mapping to POs/PSOs	Guide Name
Smart Trolley using Arduino	Hardware+Software	PO1,PO2, PO3, PO4, PO5,PO6, PSO1, PSO2	Mr. M J Dabgar
Smart Juice Vending Machine	Hardware+Software	PO1,PO2, PO3, PO4, PO5,PO6, PO7, PSO1, PSO2	Mr. M J Dabgar

C. Process for monitoring and evaluation (05)**1. Weekly Monitoring & Progress Reporting**

- Each project group meets their assigned faculty guide once every week for structured progress monitoring.
- Guides record observations in a weekly progress report, covering work done, issues faced, corrective actions suggested, and alignment with POs/PSOs.

2. Continuous Assessment by Faculty Guide

- Evaluation includes technical progress, design quality, adherence to safety, ethical practices, cost management, and compliance with relevant standards.
- Industry mentors (for selected UDP projects) provide suggestive inputs on title selection and technical improvements when required.

3. Individual & Group Performance Tracking

- Contributions of each student are tracked through the progress reports, interim presentations, and mentor feedback.
- Rubrics aligned to NBA criteria assess problem-solving, innovation, teamwork, communication, and ethical/environmental considerations.

4. Mid-Term & Final Review

- Mid-term review assesses ~50% project completion status; corrective measures are taken if required.
- Final review and evaluation (internal + external) involve prototype demonstration, viva-voce, and documentation quality check.

5. Documentation & Feedback

- All weekly progress reports, rubric sheets, mentor comments, and evaluation summaries are maintained for NBA SAR evidence.
- Feedback is used for improving project execution processes in subsequent batches.

Legends: R = Remembrance; U = Understanding; A = Application and above levels (Revised Bloom's taxonomy)

Project Presentation Rubrics (Course Code: 4351107)

Table 2.2.8: Project Presentation Rubrics – Course Code 4351107

Activity	Technical Content of project (Innovative/ Project Complexity/ Quality of Build and Components /Recent trends /Expansion etc.)	Status of Hardware/ Coding	PPT content/style	Communication skill (Verbal/Non verbal)	Question Answer/ Discussion
Weightage	0to 4Marks	0to4Marks	0 to 4 Marks	0to 4Marks	0to 4Marks
Presentation-1 (20-Marks)					
Presentation-2 (20-Marks)					

Documentation/Project Report Rubrics: (Course Code: 4351107)

Table 2.2.9: Project Report Documentation Rubrics – Course Code 4351107

Activity	Report as per University format	Report Contents (Sequence. Bibliography, Resources etc.)	Presentation of Block diagram/Circuit/Flow Chart	Submission of weekly Progress Report	Overall Quality of Report
Weightage	0to2Marks	0 to 2Marks	0to 2Marks	0to 2Marks	0to 2Marks
Documentation (10-Marks)					

Project Presentation Rubrics (Course Code: 4361103)

Table 2.2.10: Project Presentation Rubrics – Course Code 4361103

Activity	Technical Content of project (Innovative/ Project Complexity/ Quality of Build and Components /Recent trends /Expansion etc.)	Status of Hardware/ Coding	PPT content/style	Communication skill (Verbal/Non verbal)	Question Answer/ Discussion
Weightage	0to 4Marks	0to4Marks	0 to 4 Marks	0to 4Marks	0to 4Marks
Presentation-1 (20-Marks)					
Presentation-2 (20-Marks)					

Documentation/Project Report Rubrics: (Course Code: 4361103)

Table 2.2.11: Project Report Documentation Rubrics – Course Code 4361103

Activity	Report as per University format	Report Contents (Sequence. Bibliography, Resources etc.)	Presentation of Block diagram/Circuit/Flow Chart	Submission of weekly Progress Report	Overall Quality of Report
Weightage	0to2Marks	0 to 2Marks	0to 2Marks	0to 2Marks	0to 2Marks
Documentation (10-Marks)					

D. Process to assess individual and team performance (05)**1. Individual Assessment**

- Each student's contribution is tracked through weekly progress reports and guide observations during meetings and presentations.
- Peer feedback and individual viva sessions evaluate understanding, skills, and communication.

2. Team Evaluation

- Overall project progress, collaboration, and quality of outcomes are assessed by faculty guides and external examiners.
- Industry mentors provide input on team coordination and practical implementation for relevant projects.

3. Assessment Methods

- Structured rubrics aligned with NBA criteria cover technical content, teamwork, innovation, ethics, and environmental aspects.
- Both ongoing monitoring and final evaluations are used to gauge performance.

4. Feedback and Improvement

- Timely feedback is shared with students and teams to promote learning, accountability, and teamwork enhancement.

This streamlined process ensures fair and effective evaluation of both individuals and teams while meeting NBA accreditation standards and supporting our department and university guidelines.

The following competencies broadly needs to be developed in students:

1. Co-creation & Interpersonal abilities
2. Analysis Test and Troubleshooting skills
3. Programming/simulation/ debugging skills
4. PCB fabrication/ soldering skills/ modeling skill
5. Documentation & Presentation skill

Government Polytechnic Palanpur

Department of Electronics & Communication Engineering

Project Selection and Guide Allocation Form

Academic Year: 2024-25
Semester: 5th

1. Student Details

Sr. No.	Name of Student	Enrollment No.
1	Pratyapati Kundan H.	226260311008
2	Vagdojiya Shubham R.	226260311011
3	Shah Shivam S.	216260311019
4		

2. Project Details

Proposed Project Title: IOT based Home Automation

Project Domain/Area:

☐ Embedded Systems
☒ IOT
☐ Communication
☐ Robotics
☐ VLSI
☐ Power Electronics
☒ Automation
☐ Other: _____

Problem Statement / Objective:

To design an efficient, secure and user friendly IOT based home automation system that enables users to monitor and control house hold appliances through Internet.

Project Type

☐ Hardware Based
☐ Software Based
☒ Hardware + Software

Software/Tools Required:

Arduino IDE / Blynk IOT platform

Hardware Components Required:

Node MCU, Light Bulbs, 4-channel Relay, Jumper wires, Bulb holders.



Figure 2.2.34: Sample of Project Selection Process, Weekly Progress & Evaluation (1 of 3)

Government Polytechnic Palanpur

Department of Electronics & Communication Engineering

Project Progress Report (Course Code: 4351107-Weekly-Group wise)

Name of Project: IOT based Home Automation

Name of students: Kundan, Shubham, ghivam

Enrollment Nos. : 226260311008, 226260311011, 216260311019.

DATE	DETAILS OF PROJECT RELATED WORK CARRIED OUT	SIGNATURE OF GUIDE
12/08/24	Project-1 Teaching scheme wise Title discussion.	
19/08/24	Team formation	
31/08/24	Project-1 Team & Title Finalisation.	
02/09/24	Hardware ! Components Identification	
09/09/24	Hardware! Components Purchase	
21/09/24	Block-diagram and Circuit diagram	
23/09/24	Block diagram and circuit diagram	
30/09/24	Software: Programming & Dlynk App	
05/10/24	Software programming concepts.	
07/10/24	Debugging & Software development	
09/10/24	Hardware Preparation (Partial)	
14/10/24	Presentations.	
22/10/24	Reports & documentation	
25/10/24	Reports & documentation	

Guide N. J. Chavhan

HOD

Figure 2.2.35: Sample of Project Selection Process, Weekly Progress & Evaluation (2 of 3)

Government Polytechnic Palanpur

Department of Electronics & Communication Engineering

Project Progress Report (Term end- Student wise)

Name of Project: IoT based Home Automation

Name of student: Vagdejiya shubham R.

Enrollment No. : 226260311011

39
50

Project Presentation Rubrics (Course Code: 4351107)

Activity	Technical Content of project (Innovative/ Project Complexity/ Quality of Build and Components /Recent trends /Expansion etc.)	Status of Hardware/ Coding	PPT content/style	Communication skill (Verbal/Non verbal)	Question Answer/ Discussion
Weightage	0 to 4 Marks	0 to 4 Marks	0 to 4 Marks	0 to 4 Marks	0 to 4 Marks
Presentation-1 (20-Marks)	3	3	3	3	3
Presentation-2 (20-Marks)	4	3	3	3	3

Documentation/Project Report Rubrics: (Course Code: 4351107)

Activity	Report as per University format	Report Contents (Sequence. Bibliography, Resources etc.)	Presentation of Block diagram/Circuit/Flow Chart	Submission of weekly Progress Report	Overall Quality of Report
Weightage	0 to 2 Marks	0 to 2 Marks	0 to 2 Marks	0 to 2 Marks	0 to 2 Marks
Documentation (10-Marks)	2	2	2	1	1

Guide: M Chaitan



Figure 2.2.36: Sample of Project Selection Process, Weekly Progress & Evaluation (3 of 3)

E. Quality of deliverable, working prototypes (12)

- Completed projects and working prototypes are evaluated rigorously for functionality, innovation, and adherence to project objectives.
- Quality parameters include reliability, robustness, safety, ethical considerations, cost-effectiveness, and compliance with relevant standards.
- Projects are expected to demonstrate practical applicability and relevance to real-world problems, especially in line with UDP guidelines and industry input where applicable.
- Documentation quality—including design specifications, test results, and user manuals—is reviewed to ensure completeness and clarity.
- Final assessment involves faculty guides and external examiners who verify prototype working condition, effectiveness, and the student's understanding during demonstration and viva.
- The evaluation results are mapped with Program Outcomes (POs) and Program Specific Outcomes (PSOs) as evidence for NBA accreditation.

Some Glimpse of completed projects

Figure 2.2.37: Sample Project Photos

F. Papers published /Awards/ Recognition received by projects at State/ National level (05)***Student Startup and Innovation Policy (SSIP) support***

- During the academic year 2024-2025 and 2025-26, students of EC department received funding through the SSIP Cell at the institute level. Under this support, the team developed a Proof of Concept (PoC), showcasing innovation, practical application, and potential societal impact.
- The details of projects supported from SSIP is as follows:

2024-25

Table 2.2.12: Projects Supported under SSIP – Year 2024-25

Sr no	Title	Student Name	Approved Fund
1	Smart Attendance System	Suthar Bharat Vishanubhai	25000/-
2	Smart Dustbin	Prajapati Harshad S	16792/-

2025-26

Table 2.2.13: Projects Supported under SSIP – Year 2025-26

Sr no	Title	Student Name	Approved Fund
1	Smart chair positioning system	Dave Falguni J	25,200/-

Recognition received by projects under New Palanpur for New India event at institute level

During the academic year 2023-24, 2024-2025 and 2025-26, students of EC department got cash prize for their projects in NPNI (New palanpur for New India) event organized by our institute.

Table 2.2.14: Recognition received by projects

Year	Name of students	Event Name	Amount
2023-24	Suthar Bharat Vishanubhai	NPNI 2.0	1500/-
2023-24	Prajapati Harshad S	NPNI 2.0	1000/-
2024-25	Patel Akshar, Panchal Shubh, Suthar Bharat	NPNI 3.0	1500/-
2024-25	Panchal Jitendra, Lokhandwala Taukir, Prajapati Harshad	NPNI 3.0	1000/-
2025-26	Shrimali Hiten & Mali Paresh	NPNI 4.0	1500/-



Figure 2.2.38: Sample of Recognition Received

2.2.5 Industry interaction and Community Services (30)

A. Industry supported Labs (02)

We have established an industry supported lab in collaboration with BeeRobokids innovations pvt ltd with Title: “Advanced controller and processor laboratory”

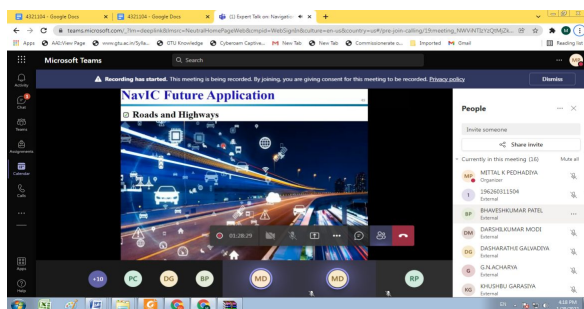


Figure 2.2.39: Industry Supported Lab

B. Delivery of appropriate Course work by Industry experts (05)

- The delivery of coursework by industry experts adopts a holistic approach that blends real-world perspectives with practical experience and professional expertise.

- By inviting specialists from diverse fields to lead guest lectures and workshops, classrooms are enriched with authentic industry insights.
- Learners gain valuable exposure through direct interaction with professionals who share their experiences, offer practical guidance, and provide actionable insights.
- Additionally, industry experts support students in bridging the gap between theory and practice by demonstrating the real-world application of academic concepts.



a. 2022-23 NAVIC and Its Applications



b. 2023-24 Embedded System Expert Lecture

Government Polytechnic Palanpur

HAM RADIO WORKSHOP

ORGANISED BY EC DEPARTMENT

13 FEBRUARY 2025
10.30 TO 05.30 PM
ROOM NO. 009 (BADP)

Expert :
SHREE N.B.NADODA
Senior Lecturer-EC
GGP Ahmedabad

Coordinator
Dr. R.N.PATEL
Lecturer- EC Department

Convenor
SHREE S.J.CHAUHAN
Head EC Department

Patron
SHREE S.D.DABHI
Principal

Topics:

- Evolution of Radio
- Introduction of HAM Radio
- Basics of antenna
- Use of radio in emergency communication
- Practical demonstration of HF/VHF/UHF transmission

c. 2024-25 HAM Radio Workshop

Government Polytechnic Palanpur

Organized By
Department of Electronics and Communication Engineering
Government Polytechnic Palanpur
(Under Directorate of Technical Education, Gujarat)

Expert Talk On
Cyber Crime Awareness and Crime Detection

12 September 2025
11:00 AM Onwards

Venue: EC Department

Coordinator:
Mr. N.J. Chauhan,
(Lecturer in EC,
GP Palanpur)

Facilitator:
Mr. S. J. Chauhan
(HoD, Dept. of EC,
GP Palanpur)

Patrons:
Mr. S.D. Dabhi
(Principal, GP Palanpur)

Contact:
Email id –
gnpec11@gmail.com

Prof. Manish S. Chauhan
Assistant Professor
(GES Class-2) at
Government Engineering College,
Modasa

Prof. Manish S. Chauhan is M.Tech. in Digital Communication, Assistant Professor (GES Class-2) in Government Engineering College, Modasa (Having 8 Years of teaching Experience). Ex. PSD(Wireless) at ITS Gujarat and Local Crime Branch, Cyber Crime, Palanpur(R.K.) (8 Years of Experience in Field also). Expertise in Crime detection, Cyber Crime, Digital system Design, Linear Circuits like Op-amp, Optical Communication and more.

Expected Participants: Electronics and Communication & Information and Communication Technology

d. 2025-26 Cyber Crime Expert Lecture

Figure 2.2.40: Course Work Delivered by Industry Experts

Table 2.2.15: Expert lecture detail

Sr. No	Topic	Name of Expert	Expert's Designation	Expert's institute/Company	Date	No Of beneficiary students
2021-22						
1	Importance of Programming	Mr. Pranav Dave	Associate Consultant	TCS, Gandhinagar	09/08/2021	39
2	NAVIC and its applications	Dr. Mehulkumar	Lecturer EC	GPG Surat	29/01/2022	29
2022-23						
1	Consumer Electronics Equipments	Mr. Sahejad Pathan	Service Engineer	Vardhan insys Pvt.	01/06/2023	31
2	Future of Electronics in industries	Mr. Prakash Darji	Design Engineer BE EC	Google Bangalore	06-08-2022	34
3	Importance of Communication in industries	Mr. Jaimin Rami	Station Controller ME EC	JMRC Ahmedabad	08-09-2022	05
4	Cyber Security	Mr. Sagar Hajare	Security Expert	Bank of America	03-31-2023	94
2023-24						
1	SEMICON INDIA-2023 Exhibition	Mahatma Mandir, Gandhinagar	Mahatma Mandir	Gandhinagar	23/07/2023	27
2	Embedded System	MR. VISHAL VADHER	AAST. MANAGER TRAININGB.E.E.C.	SOFCO INDIAPVT LTD	13/03/2024	74
3	Web development technologies	MR. VISHAL VADHER	AAST. MANAGER TRAINING B.E.E.C.	SOFCO INDIAPVT LTD	13/03/2024	74
2024-25						
1	AI-ML: A NEW ERA OF FUTURE	MR. VISHAL VADHER	AAST. MANAGER TRAININGB.E.E.C.	SOFCO INDIAPVT LTD	30/09/2024	91
2	Embedded -IOT	MR. VISHAL VADHER	AAST. MANAGER TRAINING B.E.E.C.	SOFCO INDIAPVT LTD	30/09/2024	91
3	INTERNET OF THINGS	DR. V K THAKAR	DEAN INDRASHILUNIVERSITYPH.D.	INDRASHILUNIVERSITY	22/10/2024	81
4	HAM Radio Workshop	Mr. N. B. Nadoda	Senior Lecturer	GGP, Ahmedabad	14/02/2025	54
2025-26						
1	Cyber Crime Awareness	Mr. Manish S Chauhan	Assistant Professor	GEC Modasa	12/09/2025	50
2	IoT Applications with NodeMCU& Raspberry Pi	Mr. Rishabh Prajapati	Co-Founder	Bee-Robokids Innovation Private Limited	07/10/2025	21

Sr. No	Topic	Name of Expert	Expert's Designation	Expert's institute/Company	Date	No Of beneficiary students
3	Semiconductor Manufacturing Technology	Dr. Vijay K. Patel	Professor	Ganpat Uni.	09/03/2026	55
4	Emerging Mobility Trends For Engineers	Mr. Jaimin Rami	Station Controller ME EC	JMRC Ahmedabad	12/03/2026	53

C. Industrial visits/tours for students (03)

- Industrial tours and field visits provide students with valuable practical exposure by demonstrating the real-world application of their academic studies.
- Organizing regular industry visits allows students to experience the actual working environment of organizations related to their field of study. These visits enable students to observe theoretical concepts in practice, helping them better understand how classroom knowledge translates into real-world scenarios.
- Through industrial exposure, students gain insights into industry-specific practices, standards, and regulations that may not be fully addressed in textbooks. Such experiences enhance student engagement with coursework, as learners can directly connect theory with practical applications.
- Additionally, industrial visits support students in the design, simulation, and implementation phases of their academic projects by providing real-world context and inspiration.

Table 2.2.16: Industrial visit details

Sr. No.	Date	Name of Industry	Semesters	No. of Participants	Name of Faculty
Year 2021-22					
1	26/03/2022	COMMUNITY RADIO STATION, PALANPUR	4,6	14	Mr. M.J.Dabgar Mr. N.M.Patel
2	29/03/2022	SAMSUNG CARE, PALANPUR	4	15	Dr. R.N.Patel Mr. S.P.joshiara
3	12/04/2022	SAHAJANAND LASER TECH, GANDHINAGAR	4	4	Mr. M.J.Dabgar
4	02/05/2022	J K INDUSTRIES, CHANDISAR	2	14	Mr.N.J.Chauhan Mr. N.M.Patel
Year 2022-23					
1	21/09/2022	BAJARANG PAPER PRODUCTS, PALANPUR	1	23	Mr. N.J.Chauhan
2	04/05/2023	SAMSUNG SERVICE CENTRE, PALANPUR	2 &4	17	Mr. S P Joshiara& Dr. R N Patel
3	10/05/2023	COMMUNITY RADIO STATION, PALANPUR	4	12	Mr. S J Chauhan & Mr. M J Dabgar
Year 2023-24					
1	01/08/2023	BAJARANG PAPER PRODUCTS, PALANPUR	1	51	Mr. S J Chauhan & Mr. M J Dabgar
2	16/03/2024	PCB POWER PVT LTD, GANDHINAGAR	2,4,6	56	Mr. L K Patel, Mr. N J Chauhan, Ms. M K Pedhadiya
3	16/03/2024	MCBS PVT LTD, GANDHINAGAR	2,4,6	56	Mr. L K Patel, Mr. N J Chauhan, Ms. M K Pedhadiya

Sr. No.	Date	Name of Industry	Semesters	No. of Participants	Name of Faculty
Year 2024-25					
1	02/08/2024	BAJARANG PAPER PRODUCTS, PALANPUR	1	33	Mr. M J Dabgar
2	25/09/2024	RAILWAY STATION, PALANPUR	3,5	49	Mr. N J Chauhan, Ms. M K Pedhadiya
3	05/10/2024	BANAS DAIRY	3,5	37	Dr. R N Patel, MJD, Mr. S P Joshiara
4	16/10/2024	COMMUNITY RADIO STATION, PALANPUR	4	24	Dr. R N Patel, Mr. S P Joshiara
Year 2025-26					
1	05/08/2025	COMMUNITY RADIO STATION, PALANPUR	1	30	R C Parmar, Mr. N J Chauhan
2	19/09/2025	NETRAM (Command and Control Centre) Palanpur	3,5	49	Mr. M J Dabgar&, S P Joshiara
3	17/11/2025	COMMUNITY RADIO STATION, PALANPUR	3	14	Mr. L K Patel, Ms. M K Pedhadiya



a. 2023-24 PCB Power PVT LTD,
Gandhinagar



b. 2024-25 Railway Station, Palanpur



c. 2025-26 Community Radio Station,
Palanpur

Figure 2.2.41: Industrial Visit Photographs

At the conclusion of the industry visit, students were encouraged to share their reflections on the experience. Based on their feedback, the following key benefits were identified:

- Observing theoretical concepts in real-world applications helped students better correlate academic knowledge with practical scenarios.
- Students gained valuable insights into industry-specific practices, standards, and regulatory frameworks that are not always fully addressed in textbooks.
- The visit enhanced students' engagement with coursework by enabling them to connect theoretical concepts with practical implications.
- Students found the experience beneficial for the design, simulation, and implementation stages of their academic projects.
- Learners developed an understanding of organizational culture, workplace ethics, and professional conduct prevalent in industry settings.
- Exposure to diverse industries allowed students to explore a wide range of career opportunities related to their field of study.

D. Industrial training/ internship (05)

- With the objective of exposing students to professional career pathways through observation, understanding of industry working mechanisms, and hands-on experience in real-world projects, an internship program has been made mandatory during the 3rd and 5th semesters.
- The internship aims to equip students with practical knowledge and provide exposure to real-time industrial environments. To ensure broad learning opportunities, students may choose internships across various sectors, including government agencies, skill development centres, the social sector, government-initiated social schemes, and non-governmental organizations (NGOs).
- The internship duration is structured to align with academic progression, with a two-week internship for 3rd semester students and a six-week internship for 5th semester students.

Table 2.2.17: Student Internship Details, Year-wise (2022-23 to 2025-26)

Sr. No.	Academic Year	Semester	Number of Regular Students	Students completed internship Participants
1	2022-23	3	12	11
2	2023-24	3	9	8
3		5	6	6
4	2024-25	3	6	6
5		5	8	8
6	2025-26	5	6	6

Participation Rate

Across the assessment period, 45 of 47 regular students completed the mandatory internship, a participation rate of **95.74%**. Four of the six semester cohorts recorded **100% participation** (2023-24 Sem 5, 2024-25 Sem 3, 2024-25 Sem 5 and 2025-26 Sem 5); the remaining two recorded 91.67% (2022-23 Sem 3, 11 of 12) and 88.89% (2023-24 Sem 3, 8 of 9).



Figure 2.2.42: Sample Internship Photo

E. Post training/ internship Assessment (10)

Upon completion of the internship, an evaluation is conducted at the institute in consultation with industry. At institute level, Students are assessed using a defined evaluation rubric that measures the knowledge and skills acquired during the internship period.

Evaluation of student performance by Institute Mentor

Name of Student: PANCHAL SHUBH KIRANBHAI

Enrollment No: 226260311003

Date of Evaluation: 07/08/2024

Institute Evaluation-50 Marks ESE(V) Minimum Passing Marks: 25					
Parameter	Excellent	Good	Average	Not up to the level of Satisfaction	Remarks
Mark range	10-09	08-07	06-05	Below 5	
Knowledge acquisition in Specific domain. 10marks	10				—
Skill and attitude attainment in specific domain. 10marks	10				—
Feedback and suggestions given are incorporated? 10marks	09				—
Quality of the prepared report and poster 10marks	09				—
Quality of the presentation 10marks	09				—
Total Marks Obtained Out of 50-ESE (V)				47	Nice work



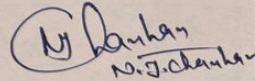

 N. J. Chavhan
 Institute Mentor
 (Name & Signature)

Figure 2.2.43: Internship Evaluation Rubrics

F. Contribution to Community related projects/activities (05)

- Participating in community service allows students to actively contribute to their communities while creating a meaningful, long-term positive impact on society.
- Through community service or volunteerism, students develop valuable life skills and practical knowledge while offering support to individuals and groups in need.

Table 2.2.18: Community related activities

Sr.NO	Date	Activities	Participated Student
1	05/05/2022	Drawing and essay writing Competition on the theme of Matdan Awareness	53
2	24/09/2022	Talk with Village people about importance of organic farming @ Dhelana Village & playing physical games with primary school students	276
3	02/01/2023 To 08/01/2023	Special Camp @ JalraKarja Village • Learning through teaching • Yoga Practice • Village Survey • Horticulture Development Seminar • Sight seen through Walking at dantiwada dam water • Awareness Rally • Self employment through bakery business • Distribution of TULSI Plants • Tree Plantation • Primary school kitchen services and gathering firewood from the forest for cooking	50
4	14/07/2023	Trekking @ Jeshor Forest Hills & Collecting plastic garbage	46
5	09/08/2023	Earthen Lamp Lighting (Meri Matti Mera Desh)	187
6	10/08/2023	Vasudha Vandan By Tree Plantation	175
7	08/12/2023	Awareness Program on Mission LiFE (Life for Environment)	48
8	28/03/2024	Seminar and hands on practice for organic farming	70
9	19/04/2024	Thalassemia Testing, Eye Check up and Dental Checkup	170
10	01/10/2024	Cleanliness Drive at Railway station Palanpur	46
11	09/12/2024	ACPDC awareness program	School students
12	10/02/2025	Ambaji NSS Seva Camp	24
13	07/03/2025	Gujarat cultural Elocution competition– 2025	06
14	Yearly Activity	RTO (Learning license) duties by faculties	All learning license aspirants



Figure 2.2.44: Drawing and Essay Writing Competition on the Theme of Matdan Awareness



Figure 2.2.45: Earthen Lamp Lighting (Meri Matti Mera Desh)



Figure 2.2.46: Awareness Program on Mission LiFE (Life for Enviroment)



Figure 2.2.47: Cleanliness Drive at Railway Station Palanpur



Figure 2.2.48: Gujarat Cultural Elocution Competition– 2025



Figure 2.2.49: ACPDC Awareness Program

2.2.6 Information Access Facilities and Student Centric Learning Initiatives (15)

A. Availability of facilities & Effective Utilization; specify the facilities, materials and scope for self-learning, Webinars, NPTEL Podcast, MOOCs etc. (10)

List of available information access facilities

- The Institute provides 24×7 internet connectivity to support students' academic and research activities.
- The Government of Gujarat has distributed tablets to students at a subsidized cost of ₹1000, enabling them to leverage modern technology and enhance their technical knowledge.
- The college offers access to the National Digital Library of India (NDLI), a vast digital repository developed by IIT Kharagpur under the Ministry of Education.
- The Institute website functions as the official digital platform, providing comprehensive and up-to-date information about the college.

- The Department website provides detailed information on faculty profiles, curriculum, laboratory facilities, events, and academic activities.
- The Department ensures 24×7 access to academic resources through a systematically organized Google Drive repository.
- The Department regularly organizes expert lectures and industrial visits to familiarize students with real-world applications and current industry practices.
- During the COVID-19 period, the Government of Gujarat provided students with Microsoft Teams accounts and Office 365 subscriptions to facilitate online learning.
- Faculty members utilize Google Classroom to share lecture materials, assignments, quizzes, and important announcements, ensuring effective communication, timely feedback, and an enhanced teaching-learning
- An induction program is conducted for first-year students to orient them to the academic environment, institutional facilities, and support systems.
- The students also have wired connectivity of internet in each lab. Sufficient LAN ports are available in all labs.
- A projector is setup along with screen in room no 008, 009 and 011. This is helpful in teaching learning process and project presentation for the students.
- The Government of Gujarat has provided Tablets to the students at a cost of Rs. 1000. So that students could take lever age of today's technological trends and add some more knowledge into their technical database.
- Under the Namo E-Tablet Scheme, Gujarat Government offers subsidized tablets (Acer/Lenovo) to first-year college and polytechnic students from financially weaker back-grounds (annual income $\leq$ ₹1 lakh).



Figure 2.2.50: Multimedia Classroom

Table 2.2.19: Tablet Distribution Summary, Year-wise (2017–2019)

Year	EC	IC	Civil	Mechanical	Electrical	Total
2017	2	7	70	103	52	234

Year	EC	IC	Civil	Mechanical	Electrical	Total
2018	2	3	77	102	76	260
2019	17	3	97	58	42	217

- The Government of Gujarat has facilitated digital education by providing Microsoft Teams accounts and Office 365 subscriptions to faculty and students. This initiative supports seamless online teaching, learning.
- Faculty members can now conduct live classes, share study materials, and interact with students more efficiently during COVID time. And no teaching suffers during pandemic. It has enhanced the overall accessibility and effectiveness of digital education in the institute.
- All the teaching and learning data is available with faculty members through Microsoft Teams. This includes lecture recordings, study materials, assignments, and student attendance records. It helps ensure organized and efficient academic management.

FirstName	LastName	DisplayName	UserPrincipalName	Department	Title	MobilePhone	UsageLocation	AccountSkuid	Password	state	country
ASHVINSH	DABHI	ASHVINSH DABHI	19020011002@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	EC94183	Palanpur, Gujarat
KHOSHI	GARASITA	KHOSHI GARASITA	19020011003@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	NO08702	Palanpur, Gujarat
KALASHKUMAR	JOSHI	KALASHKUMAR JOSHI	19020011004@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	W0P9071	Palanpur, Gujarat
CHAYANE	NEVEDA	CHAYANE NEVEDA	19020011005@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	VYH51027	Palanpur, Gujarat
DARSHKUMAR	MODI	DARSHKUMAR MODI	19020011006@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	5h027174	Palanpur, Gujarat
TIRTH	PANCHAL	TIRTH PANCHAL	19020011008@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	Ku82162	Palanpur, Gujarat
LATRA	PANMAR	LATRA PANMAR	19020011010@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	V9P7549	Palanpur, Gujarat
KRISHBEN	PATEL	KRISHBEN PATEL	19020011011@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	VuH3442	Palanpur, Gujarat
ACHITKUMAR	PRALAPATI	ACHITKUMAR PRALAPATI	19020011012@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	Y6L84725	Palanpur, Gujarat
ROHIT	PRALAPATI	ROHIT PRALAPATI	19020011013@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	Om017932	Palanpur, Gujarat
BIHVIK	RAPUT	BIHVIK RAPUT	19020011014@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	Ag82244	Palanpur, Gujarat
TYNARAJIN	RAPUT	TYNARAJIN RAPUT	19020011015@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	W0H9778	Palanpur, Gujarat
ANAS	UMATHIA	ANAS UMATHIA	19020011016@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	T684117	Palanpur, Gujarat
NITESHMA	CHUDHARI	NITESHMA CHUDHARI	19020011017@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	h0-18029	Palanpur, Gujarat
BHARGAVKUMAR	DAMOR	BHARGAVKUMAR DAMOR	19020011018@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	H0H5130	Palanpur, Gujarat
HETALKUMAR	PATEL	HETALKUMAR PATEL	19020011019@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	A0H6051	Palanpur, Gujarat
NEHAVERMA	SOLANKI	NEHAVERMA SOLANKI	19020011020@gpalanpur.amnicrosoft.com	EC	2019	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	U0H5001	Palanpur, Gujarat
Nishikumar	Pratap	Nishikumar Pratap	19020011021@gpalanpur.amnicrosoft.com	EC	2018	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	Y4T7923	Palanpur, Gujarat
Arunthumar	Patel	Arunthumar Patel	19020011022@gpalanpur.amnicrosoft.com	EC	2017	57_regular	reseller-account:STANDARDOFFPACK_STUDENT	IN	reseller-account:STANDARDOFFPACK_STUDENT	MQ20887	Palanpur, Gujarat

Figure 2.2.51: Sample of Registration Details of MS Team Credential

Institute Library – EC Department Collection

- Apart from NDLI access, the institute library houses a dedicated collection of over 102 books related to Electronics and Communication Engineering.
- These include textbooks, reference books, manuals, and competitive exam materials covering key areas like analog & digital electronics, communication systems, microprocessors, VLSI, and embedded systems.
- The library supports students' academic, project, and research needs, and provides a quiet environment for self-study and knowledge enhancement.
- Students issue books from the institute library as per their academic requirements. Records of both book issuance and return are systematically maintained in the library.
- A sample copy of the record format is available for reference. This helps in ensuring proper tracking and management of library resources.

પુસ્તકોની					ઇસ્યુ બુક				
Name of Institution સંસ્થાનું નામ					સંસ્થાનું Address				
ક્ર. નંબર Sr. No.	પુસ્તકનું નામ Name of the Book	પુસ્તકનો No. of Book	ઇસ્યુ તારીખ Issue Date	ઇસ્યુ કરનારનું નામ Name	સંસ્થાનું Address	ઇસ્યુ કરનારની સહી Signature	પસંદ તારીખ Received Date	પસંદ લેનારની સહી Signature of Receiver	નોંધ Remarks
63	Integrated Electronics	13752	11/11/15	Medi Jaini D.	246260311011	Jhama	11/11/15		
64	એલેક્ટ્રોનિક્સ એપ્લિકેશન	13758	11/11/15	Suresh Divyash A.	246260306108	Divyash	11/11/15		
65	એલેક્ટ્રોનિક્સ એપ્લિકેશન	137510	11/11/15	Trivedi Aksh S.	246260319002	AKSH	11/11/15		
66	એલેક્ટ્રોનિક્સ એપ્લિકેશન	11625	11/11/15	Trivedi Aksh S.	246260319002	AKSH	11/11/15		
67	એલેક્ટ્રોનિક્સ એપ્લિકેશન	11505	13/11/15	Pravesh V.	246260306009	Pravesh	11/11/15		
68	એલેક્ટ્રોનિક્સ એપ્લિકેશન - I	13755	13/11/15	Pravesh V.	246260306009	Pravesh	11/11/15		
69	એલેક્ટ્રોનિક્સ એપ્લિકેશન	13757	13/11/15	Pravesh V.	246260306009	Pravesh	11/11/15		
70	પ્રિન્સિપલ્સ ઓફ એલેક્ટ્રોનિક્સ	13954	11/11/15	Joshi Bhavya N.	246260332011	Joshi	11/11/15		
71	Integrated Electronics	13752	11/11/15	Medi Jaini D.	246260311011	Jhama	11/11/15		
72	Computer Networks	1389	11/11/15	Pravesh V.	246260311011	Pravesh	11/11/15		
73	એલેક્ટ્રોનિક્સ એપ્લિકેશન	13810	11/11/15	Trivedi Aksh S.	246260319002	AKSH	11/11/15		
74	એલેક્ટ્રોનિક્સ એપ્લિકેશન	11625	11/11/15	Trivedi Aksh S.	246260319002	AKSH	11/11/15		
75	એલેક્ટ્રોનિક્સ એપ્લિકેશન	13753	11/11/15	Pravesh V.	246260306009	Pravesh	11/11/15		
76	એલેક્ટ્રોનિક્સ એપ્લિકેશન	13758	11/11/15	Pravesh V.	246260306009	Pravesh	11/11/15		
77	Transmission Engineering	116	03/12/15	Suresh Divyash A.	246260306009	Divyash	11/11/15		
78	એલેક્ટ્રોનિક્સ એપ્લિકેશન	13729	03/12/15	Rathod Dev. V.	246260306009	Dev. V.	11/11/15		
79	એલેક્ટ્રોનિક્સ એપ્લિકેશન	12724	01/12/15	Pravesh V.	246260306009	Pravesh	11/11/15		
80	એલેક્ટ્રોનિક્સ એપ્લિકેશન - I	11486	01/12/15	Pravesh V.	246260306009	Pravesh	11/11/15		
81	પ્રિન્સિપલ્સ ઓફ એલેક્ટ્રોનિક્સ	13954	01/12/15	Joshi Bhavya N.	246260332011	Joshi	11/11/15		
82	એલેક્ટ્રોનિક્સ એપ્લિકેશન	12725	10/12/15	Rathod Dev. V.	246260306009	Dev. V.	11/11/15		
83	એલેક્ટ્રોનિક્સ એપ્લિકેશન	13810	11/12/15	Trivedi Aksh S.	246260319002	AKSH	11/11/15		
84	એલેક્ટ્રોનિક્સ એપ્લિકેશન	11625	11/12/15	Trivedi Aksh S.	246260319002	AKSH	11/11/15		
85	એલેક્ટ્રોનિક્સ એપ્લિકેશન	12678	01/01/16	Suresh Divyash A.	246260306009	Divyash	11/11/15		
86	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		
87	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		
88	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		
89	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		
90	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		
91	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		
92	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		
93	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		
94	Water Supply Engineering	13562	07/01/16	Pravesh V.	236260306009	Pravesh	11/11/15		

Figure 2.2.52: Sample Copy of the Library Book Issue Return Record

EC Department Library

- In addition to the central library, the Electronics and Communication (EC) Department maintains a dedicated departmental library housing approximately 102 books, including subject-specific textbooks and reference materials aligned with the EC curriculum.
- This departmental library functions as a readily accessible academic resource center for both students and faculty, facilitating focused learning and providing convenient, department-level academic support.
- In addition to the central and departmental libraries, the institute provides online access to study materials for all subjects of the Electronics and Communication (EC) Department through the Learning Resources tab on the institute website, as mentioned below:

<http://gppalanpur.ac.in/departments/electronics-communication/resources/>

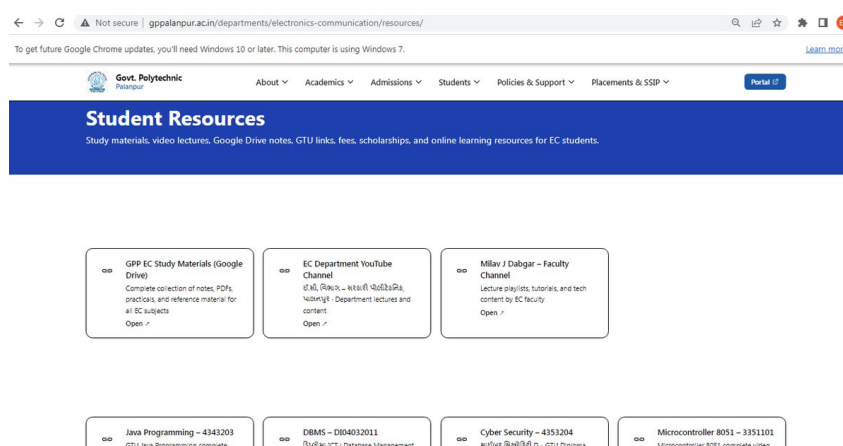


Figure 2.2.53: Learning Resources on Departmental Website

- The department website offers detailed information about the department's faculty, curriculum, lab facilities, events, and academic activities. It supports students by providing learning materials, project guidance, and updates related to departmental achievements.

The department website Link: <https://ec.gppalanpur.ac.in/>

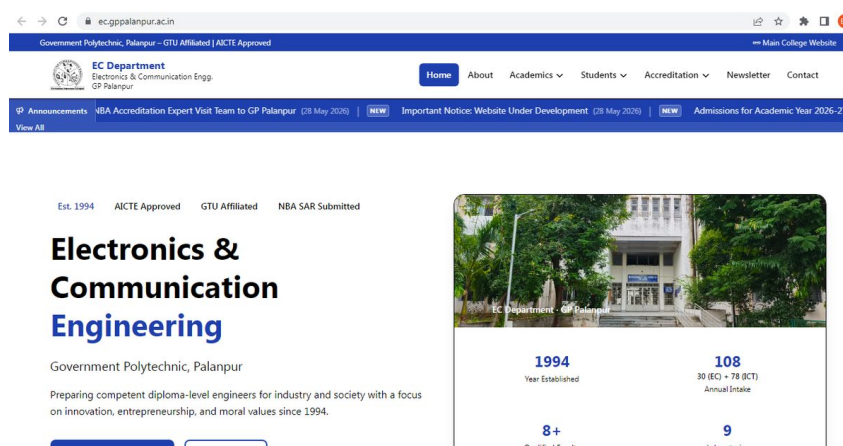


Figure 2.2.54: Department Website

Google Drive-Based Learning Material Access

- The department provides students with 24x7 access to academic resources through a well-organized Google Drive repository. This includes lecture notes, lab manuals, previous year question papers, assignments, and reference materials, arranged semester and subject-wise.
- The facility supports self-learning and ensures students can conveniently access study materials anytime, enhancing the overall learning experience.
- Students can conveniently access the study materials stored in Google Drive by scanning the provided QR code, which directs them to the digital repository for quick and easy reference.
- Students can conveniently access the study materials stored in Google Drive by scanning the provided QR code, which directs them to the digital repository for quick and easy reference.



Figure 2.2.55: Google Drive-Based Learning Material Access QR Code

List of E resources available

- Students are informed regarding NPTEL/SWAYAM portal for different MOOC training in engineering. Now, GTU has introduced MOOC credit program in sem-4 and sem-5 in NEP based syllabus. An introductory lecture is organized to make students aware of NPTEL website,
- Google classroom
- Microsoft Team
- Faculty members use Google Classroom to share lecture notes, assignments, quizzes, and important updates with students. It enables smooth communication, timely feedback, and enhances the overall teaching-learning process.
- The Government of Gujarat has provided Microsoft Teams accounts and Office 365 subscriptions to all diploma institute faculties during the COVID-19 pandemic.
- This initiative aimed to support uninterrupted online teaching and learning. Faculties can now effectively conduct virtual classes, share study materials, and collaborate with students in real time. The use of Office 365 tools has enhanced productivity and streamlined academic communication.
- Data related to lectures and lab sessions are maintained by the respective faculty members. This includes records of topics covered, attendance, and practical performance. Such documentation helps ensure proper academic monitoring and compliance.
- GTU has introduced a MOOC credit program under the NEP-based syllabus. This program allows students to earn academic credits through online courses offered by recognized platforms. It aims to promote flexible, self-paced, and industry-relevant learning.

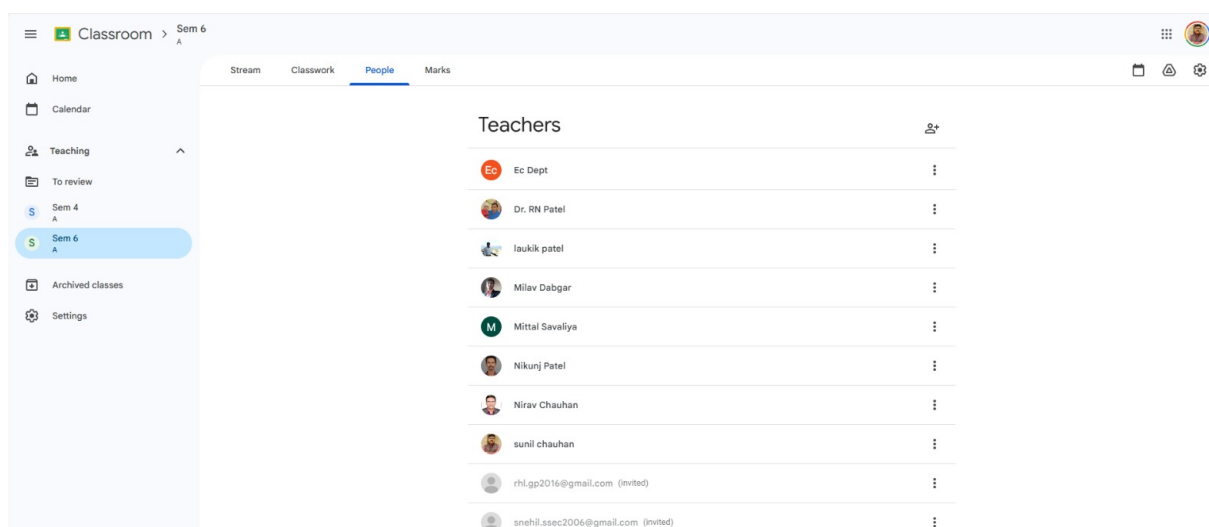


Figure 2.2.56: Usage of Google Classroom Created for Students

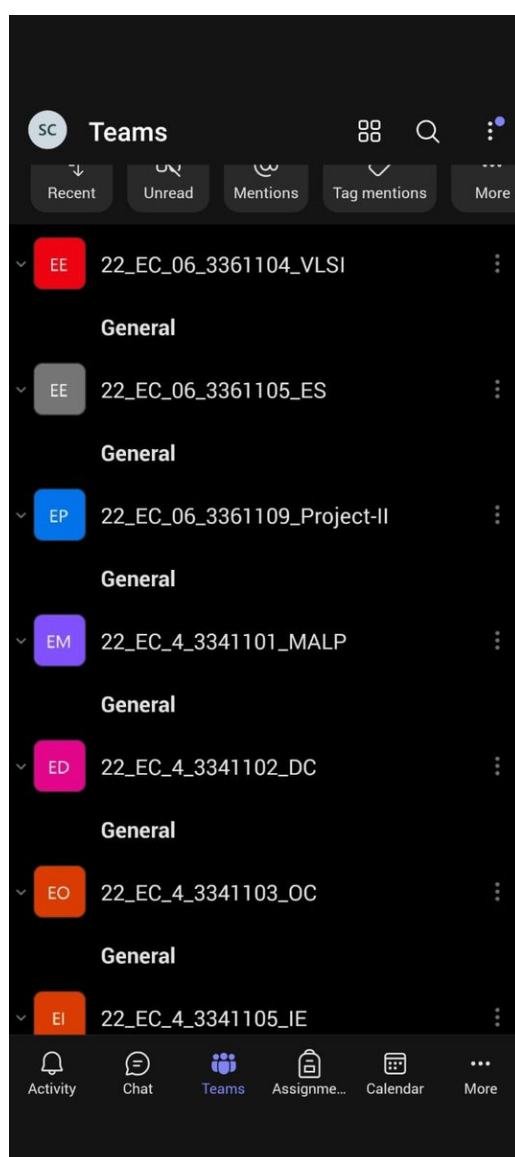


Figure 2.2.57: MS Team Used by Faculties of E.C. Department

TEACHING SCHEME / DETAIL SYLLABUS

Home

DIPLOMA ▼

11 - ELECTRONICS AND COMMUNICATION ENGINEERING ▼

4 ▼

2024-25 ▼

Select Elective / Non-Elective ▼

Subject Code

Enter Subject Name

*L=Lectures,T=Tutorial,P=Practical,E=TheoryExternal,M=TheoryInternal,I=Practical Internal,V=Practical External,On Job Training(OJT) is equivalent to Practical.

										Hours	Credit	Max Marks				
Exp.	Subcode	Branch code	Eff from	SubjectName	Category	Sem /Year	L	T	P	TW/SL	Total	E	M	I	V	Total
+	ini25_cs02	11	Jan-25	Machine Learning Using Python Programming	PEC-02(MOOC)	4	4	0	0	NA	4	100	0	0	0	100
+	noc25_cs11	11	Jan-25	Cloud Computing	PEC-01(MOOC)	4	4	0	0	NA	4	100	0	0	0	100
+	noc25_ge11	11	Jan-25	Entrepreneurship Essentials	MOPEC-01(MOOC)	4	3	0	0	NA	3	100	0	0	0	100
+	ntr24_ed42	11	Jul-24	Graphics and Animation Development	MOPEC-01(MOOC)	4	3	0	0	NA	3	100	0	0	0	100
+	ntr24_ed51	11	Jul-24	Entrepreneurship Development	MOPEC-01(MOOC)	4	3	0	0	NA	3	100	0	0	0	100

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Figure 2.2.58: Sample Copy of the MOOC Credit Course Details on GTU Website

B. Student Centric Learning Initiatives & Effective Implementation (05)

- Student Centric Learning focuses on empowering students to take an active role in education.
- Student Centric Learning is a worldwide popular teaching methodology which provides a thorough understanding of the concepts and process through active learning and co-operative participation.
- The project and problem-based learning is one kind of student centric learning which gives spark to the students' lateral thinking and promotes real application of the experiments in their fields of engineering.
- We are using various methods to raise the interest of students in the courses and technical events. We adapt various learning methods in classroom, like
 - Presentations
 - Seminar/WORKSHOP
 - Industrial Visit

- Department YouTube channel
- National Digital library
- E-Books (AICTE E Kumbh portal)
- Induction program
- Skilling Program



Figure 2.2.59: Student Project Presentation in Class

- Students present project or topic-based PPTs to improve communication, subject understanding, peer learning, and confidence.



Figure 2.2.60: Workshop Organized by the Department

- Seminars and workshops by industry and academic experts enhance students' technical knowledge, soft skills, and link classroom learning with real-world applications.
- Industrial visits give students practical exposure to industry practices, technologies, and workflows, bridging classroom learning with real applications. Reports with details, participation, and observations are maintained for academic records.



Figure 2.2.61: Sample Photographs of Industrial Visit

- Faculty share subject-related YouTube links to support self-learning and revision. A department faculty has created playlists on C Programming and DC Circuits, shared via Google Classroom and WhatsApp for easy access.
- Channel QR code:

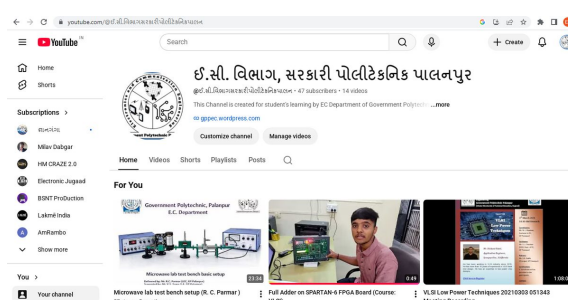


Figure 2.2.62: Department YouTube Channel and Its QR Code

- Our college provides access to the National Digital Library of India (NDLI), offering books, journals, videos, and exam materials. Students use it to enhance knowledge, support research, and promote self-learning.

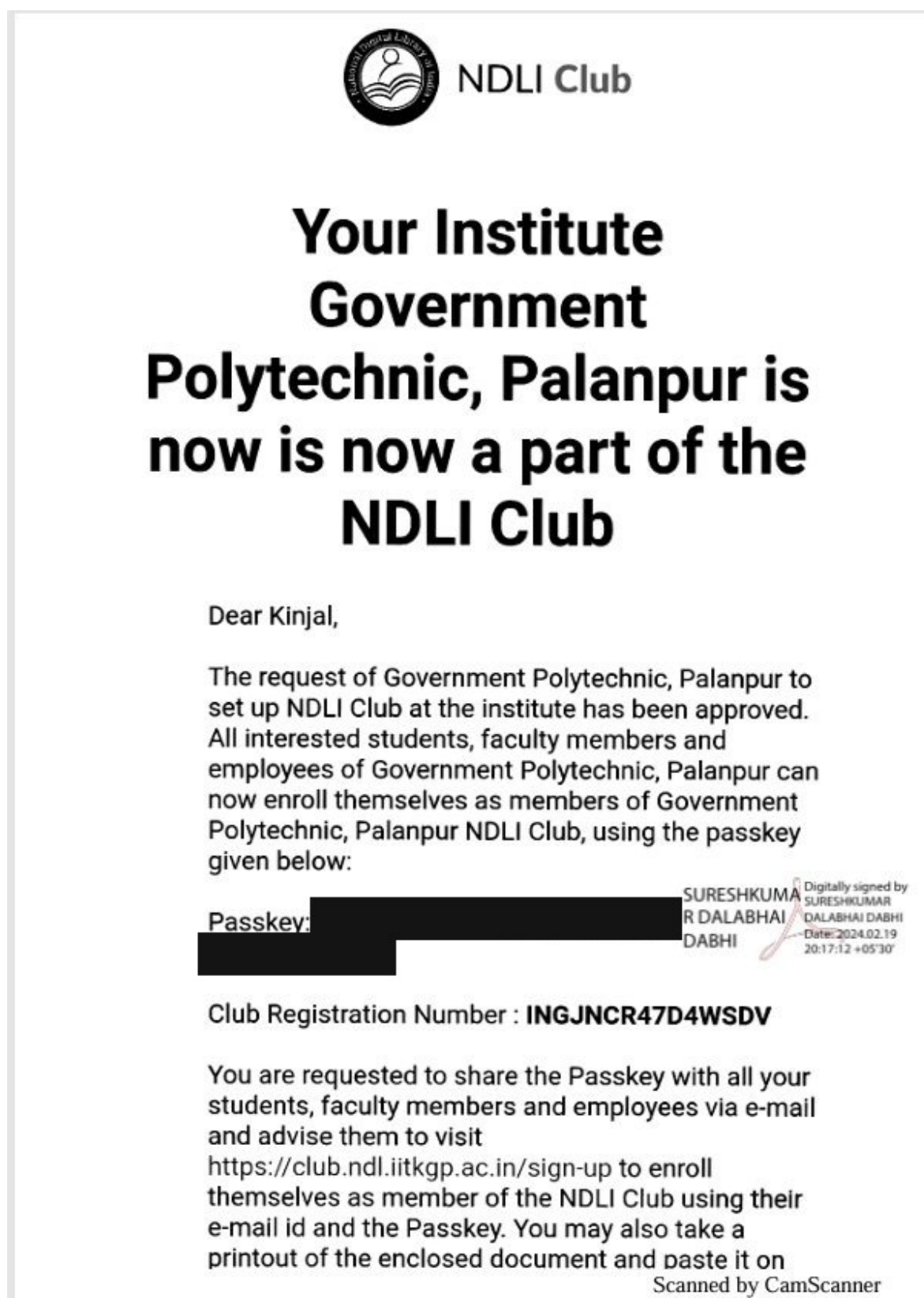


Figure 2.2.63: Copy of NDLI Club Registration

- AICTE e-Kumbh promotes digital learning by offering online resources, webinars, and expert sessions to enhance technical knowledge and industry readiness. Students are encouraged to use the platform and actively benefit from its resources for academic growth.

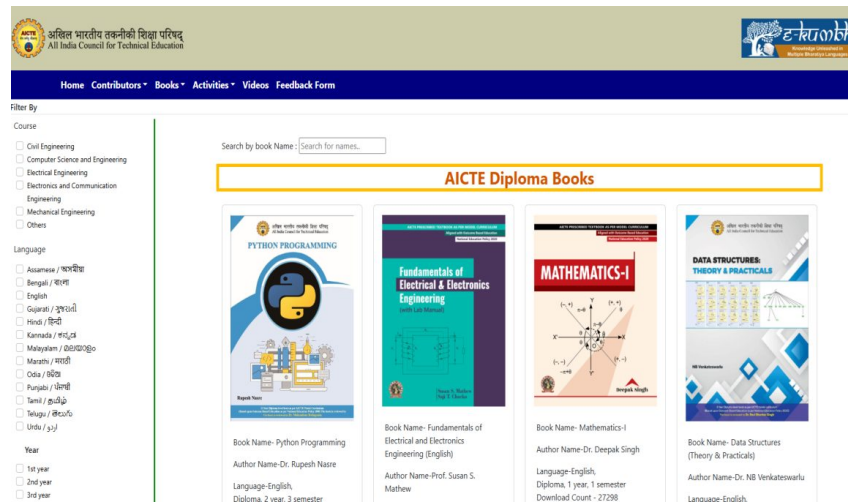


Figure 2.2.64: Students Use E-Resources on AICTE E-Kumbh Platform by Using Their Credentials

- As per GTU guidelines, the department conducts a two-week induction program for first-year students with sessions on values, communication, arts, technical awareness, and expert talks. It helps students adapt to college life, build confidence, and understand departmental activities. Records of the program are well maintained.

Government Polytechnic Palanpur (626)						
Induction/Orientation Programme (For First Year Students) (Admission Year-2025)						
Duration Of Programme: (24-07-2025 TO 06-08-2025) (2 Weeks)						
Week-1						
DATE	Session-A (10:30 AM TO 02:00 PM)	Session-B (12:30 PM to 01:00 PM - Lunch Break)	Session-B (2 :00 PM TO 5:00 PM) (4:00 PM to 4:30 PM - Short Break)			
	Programme/Session Details	Programme/Session Coordinator(s)	Programme Venue	Programme/Session Details	Programme/Session Coordinator(s)	Programme Venue
24/7/25	Students Arrival/Welcomes to campus (10:30 AM TO 11:00 AM) Light the lamp (By Principal & B.P. All Dept.) (11:00 AM TO 11:15 AM)	Shri P.K.Bhavsar	Seminar Hall	M-3 "KNOW YOUR DEPARTMENT" Department Presentation (Dept./Facilities/Career Opp.etc.) & "Campus Visit" (02:00 PM TO 3:30 PM)	Respective Department under the guidance of H.O.D. & Class Coordinator's (1st Year-2025)	1.Mech-(F09) (Mech.Block) 2.Elect (A-101) (Main Building) 3.Civil(A-210) (Main Building) 4.E.C (B-008) I.C.T (B-009) (B.A.D.P Building) 5.IT (Seminar Hall)
	Welcome Speech (By Principal) (11:15 AM TO 11:30 AM)	Shri P.K.Bhavsar	Seminar Hall			
	Brief Info. About "Student Induction Directory/ Induction Program Report & Evaluation Pattern" (11:30 AM TO 12:00 PM)	Shri T.D.Modi	Seminar Hall			
	"KNOW YOUR INSTITUTE" (Vision/Mission/Inst.Website, Rules&Regulation, Video tour Of Institute) (12:00 PM TO 12:30 PM)	Smt. M.K.Pothiyia Dr. R.N.Patel	Seminar Hall			
	"KNOW YOUR UNIVERSITY" (Rules & Regulations) (01:00 PM TO 01:30 PM)	Shri B.N.Prajapati Shri V.P.Patel	Seminar Hall			
25/7/25	"KNOW YOUR HOSTEL FACILITIES" (Team Introduction, Rules & Regulations) (01:30 PM TO 2:00 PM)	Shri A.D.Shah & Hostel Team	Seminar Hall	"HOSTEL COUNSELLING ACTIVITIES" (3:30 PM to Onwards)	(Shri A.D.Shah & Team With (PREFECTS/STAVES) Early On-campus)	Respective Hostel/ Accommodation
	M-3 "LITERATURE ACTIVITIES INCLUDING INDIAN KNOWLEDGE SYSTEMS-1 (IKS-1)" Everyday "Physics" (08:30 AM TO 11:30 PM)	Dr. B.B.Mor	Seminar Hall	M-2 "PHYSICAL ACTIVITY" Instant Games (Musical Chair, Rope, Pushups, Situps, Plank test etc.) (All Students) (02:00 PM to Onwards)	M.E (MKN/DPP) E.E (RMP/VBC) CIVIL (INC/PMP) E/C/I/T/L(NJC/IVQ)	Seminar Hall Arca
	M-3 "LITERATURE ACTIVITIES INCLUDING INDIAN KNOWLEDGE SYSTEMS-1 (IKS-1)" (11:30 AM TO 12:30 PM)	Dr. J.D.Modi	Seminar Hall			
	M-4 "PROFICIENCY MODULES" "ENGLISH" PROFICIENCY (01:00 PM TO 02:00 PM)	Dr.C.S.Pandya	Seminar Hall			
	26/7/25 & 27/7/25 (Holiday)					
28/7/25	M-2 "PHYSICAL ACTIVITY" Warmup & Yoga/Breath Practices (Group-1- ME/E/C/I/T/L) & Outdoor Games (Group-2- EE/CIVIL) (10:30 AM to 02:00 PM)	G-1 (F08) & G-2 (E.E (RMP/VBC) & CIVIL (INC/PMP)) (Games : Kabaddi/Kho-Kho/Lang Jump/100 Mtr race/Relay Cycling/Russa Khach etc...)	G-1 (Seminar Hall) & G-2 (Seminar Hall Outside Area/College Ground)	M-4 "UNIVERSAL HUMAN VALUES-1" Presentation On "Personality Development & Self Improvement" (03:00 PM TO 04:00 PM)	Shri T.D.Modi Shri S.N.Chauhan	Seminar Hall
				M-5 "LITERATURE ACTIVITIES INCLUDING INDIAN KNOWLEDGE SYSTEMS-1 (IKS-1)" Indian Contribution to Mathematics (04:00 PM TO 05:00 PM)	Shri C.P.Gohlot	Seminar Hall

Figure 2.2.65: Sample Time Table of Induction Program

The KCG Education Department's Finishing School, launched in 2016-17, delivers 80/40 hours of skill-enhancement training—structured across four modules—that empower final-year college students with life skills, employability skills, and spoken English proficiency to boost their industry readiness.

Table 2.2.20: KCG Finishing School details

Batch No.	Training Date (From)	Training Date (To)	Component Number	Training Hours	Total Students	Name of Trainer
1/2022-2023	06-FEB-2023	03-MAR-2023	ALL SETs	80	06	Mr. ANAND VYAS & Ms URJA JOSHI
3/2023-2024	19-FEB-2024	16-MAR-2024	ALL SETs	80	05	Mr Divyang Gor & Ms Kuntal Gor
6/2025-2026	15-SEPT-2025	26-SEPT-2025	ALL SETs	40	7	Mr Divyang Gor

2.2.7 New Initiatives for embedding Professional Skills (15)

A. Employability skill enhancement Initiatives and effective implementation (08)

Employability Skill Enhancement Initiatives

The Department of Electronics and Communication Engineering at Government Polytechnic, Palanpur places a strong emphasis on developing professional competence and employability skills among diploma students. This is achieved through systematic initiatives such as Placement Fairs, career guidance and counseling provided through mentors and the Training and Placement Office (TPO), as well as industry exposure through Industrial Visits and Expert Lectures.

Placement Fairs (Job Fairs)

The institute, in collaboration with the Education Department and the Knowledge Consortium of Gujarat (KCG), organized mega placement camps providing state-level opportunities for diploma students.

Table 2.2.21: Placement Fair Summary

Sr. No.	Year of Placement fair	Place	No of EC students Participated
1	2022-23 (10 th March 2023)	G P Palanpur	5
2	2023-24 (11 th March 2024)	DNP Arts, Deesa	5
3	2024-25 (25 th February 2025)	G P Palanpur	7
4	2025-26 (24 th February 2026)	GEC Palanpur	No Industry for EC students

These initiatives have provided students with real interview exposure and direct interaction with industries, while companies appreciated the discipline and technical competence of students.

Career guidance and counseling- Mentors and TPO Cell:

The EC Department facilitates career guidance and counseling through mentors and the TPO Cell by conducting expert talks, workshops, and employability-focused training sessions.

- Workshops on HAM Radio, Drone Technologies etc.
- Expert Lectures on Career Guidance For EC Engineers by Mr. Krishna Panchal
- Soft Skills sessions under Finishing School, KCG.

These initiatives improved communication skills, professional awareness, and prepared students for higher studies and entrepreneurship.

Industrial Visits & Expert Lectures:

Industrial Visits details

Table 2.2.22: Industrial Visits Details – Year 2021-22

Sr. No.	Date	Name of Industry	Semesters	No. of Participants	Name of Faculty
1	26/03/2022	COMMUNITY RADIO STATION, PALANPUR	4,6	14	Mr. M.J.Dabgar Mr. N.M.Patel
2	29/03/2022	SAMSUNG CARE, PALANPUR	4	15	Dr. R.N.Patel Mr. S.P.joshiara
3	12/04/2022	SAHAJANAND LASER TECH, GANDHINAGAR	4	4	Mr. M.J.Dabgar
4	02/05/2022	J K INDUSTRIES, CHANDISAR	2	14	Mr.N.J.Chauhan Mr. N.M.Patel

Table 2.2.23: Industrial Visits Details – Year 2022-23 to 2025-26

Sr. No.	Date	Name of Industry	Semesters	No. of Participants	Name of Faculty
Year 2022-23					
1	21/09/2022	BAJARANG PAPER PRODUCTS, PALANPUR	1	23	Mr. N.J.Chauhan
2	04/05/2023	SAMSUNG SERVICE CENTRE, PALANPUR	2 &4	27	Mr. S P Joshiara& Dr. R N Patel
3	10/05/2023	COMMUNITY RADIO STATION, PALANPUR	4	12	Mr. S J Chauhan & Mr. M J Dabgar
Year 2023-24					
1	01/08/2023	BAJARANG PAPER PRODUCTS, PALANPUR	1	51	Mr. S J Chauhan & Mr. M J Dabgar
2	16/03/2024	PCB POWER PVT LTD, GANDHINAGAR	2,4,6	56	Mr. L K Patel, Mr. N J Chauhan, Ms. M K Pedhadiya
3	16/03/2024	MCBS PVT LTD, GANDHINAGAR	2,4,6	56	Mr. L K Patel, Mr. N J Chauhan, Ms. M K Pedhadiya
Year 2024-25					
1	02/08/2024	BAJARANG PAPER PRODUCTS, PALANPUR	1	33	Mr. M J Dabgar

Sr. No.	Date	Name of Industry	Semesters	No. of Participants	Name of Faculty
2	25/09/2024	RAILWAY STATION, PALANPUR	3,5	49	Mr. N J Chauhan, Ms. M K Pedhadiya
3	05/10/2024	BANAS DAIRY	3,5	37	Dr. R N Patel, Mr. M J Dabgar, Mr. S P Joshiara
4	16/10/2024	COMMUNITY RADIO STATION, PALANPUR	4	24	Dr. R N Patel, Mr. S P Joshiara
Year 2025-26					
1	05/08/2025	COMMUNITY RADIO STATION, PALANPUR	1	30	R C Parmar, Mr. N J Chauhan
2	19/09/2025	NETRAM (Command and Control Centre) Palanpur	3,5	49	Mr. M J Dabgar&, S P Joshiara
3	17/11/2025	COMMUNITY RADIO STATION, PALANPUR	3	14	Mr. L K Patel, Ms. M K Pedhadiya

Expert Lectures details

Table 2.2.24: Expert lecture details

Sr. No	Topic	Name of Expert	Expert's Designation	Expert's institute/Company	Date	No Of beneficiary students
2021-22						
1	Importance of Programming	Mr. Pranav Dave	Associate Consultant	TCS, Gandhinagar	09/08/2021	39
2	NAVIC and its applications	Dr. Mehulkumar	Lecturer EC	GPG Surat	29/01/2022	29
2022-23						
1	Consumer Electronics Equipments	Mr. Sahejad Pathan	Service Engineer	Vardhan insys Pvt.	01/06/2023	31
2	Future of Electronics in industries	Mr. Prakash Darji	Design Engineer BE EC	Google Bangalore	06-08-2022	34
3	Importance of Communication in industries	Mr. Jaimin Rami	Station Controller ME EC	JMRC Ahmedabad	08-09-2022	05
4	Cyber Security	Mr. Sagar Hajare	Security Expert	Bank of America	03-31-2023	94
2023-24						
1	SEMICON INDIA-2023 Exhibition	Mahatma Mandir, Gandhinagar	Mahatma Mandir	Gandhinagar	23/07/2023	27
2	Embedded System	MR. VISHAL VADHER	AAST. MANAGER TRAINING B.E.E.C.	SOFCON INDIAPVT LTD	13/03/2024	74
3	Web development technologies	MR. VISHAL VADHER	AAST. MANAGER TRAINING B.E.E.C.	SOFCON INDIAPVT LTD	13/03/2024	74
2024-25						
1	AI-ML: A NEW ERA OF FUTURE	MR. VISHAL VADHER	AAST. MANAGER TRAINING B.E.E.C.	SOFCON INDIAPVT LTD	30/09/2024	91
2	Embedded -IOT	MR. VISHAL VADHER	AAST. MANAGER TRAINING B.E.E.C.	SOFCON INDIAPVT LTD	30/09/2024	91
3	INTERNET OF THINGS	DR. V K THAKAR	DEAN INDRASHIL UNIVERSITY PH.D.	INDRASHIL UNIVERSITY	22/10/2024	81
4	HAM Radio Workshop	Mr. N. B. Nadoda	Senior Lecturer	GGP, Ahmedabad	14/02/2025	54
2025-26						
1	Cyber Crime Awareness	Mr. Manish S Chauhan	Assistant Professor	GEC Modasa	12/09/2025	50

Sr. No	Topic	Name of Expert	Expert's Designation	Expert's institute/Company	Date	No Of beneficiary students
2	IoT Applications with NodeMCU & Raspberry Pi	Mr. Rishabh Prajapati	Co-Founder	Bee-Robokids Innovation Private Limited	07/10/2025	21
3	Semiconductor Manufacturing Technology	Dr. Vijay K. Patel	Professor	Ganpat Uni.	09/03/2026	55
4	Emerging Mobility Trends For Engineers	Mr. Jaimin Rami	Station Controller ME EC	JMRC Ahmedabad	12/03/2026	53

Comprehensive Employability and Soft Skills Training Initiative

- Wadhvani Foundation Skilling Program was offered to students to enhance their employability and soft skills. The program focused on communication, job readiness, and entrepreneurship.
- Such value-added programs are organized every year to support students' overall development. These initiatives help bridge the gap between academics and industry expectations. After completion of course they provide certificate.



Figure 2.2.66: Student Participation Certificates – Employability and Soft Skills Training

B. Personality development related Initiatives & effective implementation (07)

Personality development related Initiatives

The Department of Electronics and Communication Engineering at Government Polytechnic, Palanpur emphasizes the holistic development of students by strengthening their personality, communication, and life skills. These initiatives aim to prepare diploma students to face challenges with confidence, adaptability, and professionalism. The activities are implemented through structured programs and collaborations as detailed below:

Finishing School Program

The institute, in collaboration with the Education Department and Knowledge Consortium of Gujarat (KCG), has successfully implemented the Finishing School Program for final year students.

- **Duration:** 80/40 hours
- **Focus Areas:** Life skills, employability skills, functional English, and personality development.
- **Outcome:** Students developed self-confidence, communication ability, and professional etiquette, which enabled them to perform better in interviews and workplace environments.

Training & Placement (T&P) Cell Activities

The T&P Cell of the institute plays a vital role in the overall personality development of EC students.

- Resume & LinkedIn Profile creation.
- Placement fair conduction every year under KCG.
- Students are trained to handle stress, demonstrate leadership, and improve interpersonal skills.
- Industrial Visits and Expert Lectures conduction in collaboration with departments.

Value-Added Personality Development Programs

In addition to core technical training, the department encourages students to participate in programs aimed at soft skills, communication, and entrepreneurship mindset.

- **Wadhvani Foundation Skilling Program:** Focused on communication, job readiness, and entrepreneurship skills. Certificates are awarded upon completion.
- **Expert Lectures & Workshops:** Topics covered include soft skills for job interviews, career opportunities, teamwork, and leadership.



Figure 2.2.67: Student Participation Certificate – Wadhvani Foundation Skilling Programme

Outcomes of Personality Development Initiatives

- Improved communication skills and self-confidence among students.
- Enhanced ability to face interviews and interact with industry professionals.
- Positive attitude, leadership qualities, and teamwork capabilities.
- Better adaptability to changing industry demands and lifelong learning orientation.
- Stronger alignment of academic learning with professional personality requirements.

2.2.8 Co-curricular & Extra-Curricular Activities (10)

Co-curricular Activities

The Electronics & Communication Engineering Department at Government Polytechnic, Palanpur conducts a variety of co-curricular activities to enhance technical competence, industry exposure, and practical learning among students.

- The Institute organizes Department Level Project Exhibitions (New Palanpur for New India event) to showcase innovative ideas and practical solutions developed by students.
- Regular Expert Lectures and Seminars are conducted by industry experts and academicians to bridge the gap between academics and industry practices.
- Industrial Visits are arranged to reputed industries to provide students with real-time exposure to industrial processes and technologies.
- Various Workshops and Hands-on Training Programs on HAM Radio, Drone Technologies etc. are conducted to strengthen applied knowledge.

Table 2.2.25: Year-wise Count of Co-curricular Activities

Sr. No	Co-curricular Activities	2021-22	2022-23	2023-24	2024-25	2025-26
1	Industrial Visits	4	3	3	4	3
2	Workshop/ Expert Lectures	2	4	3	4	4
3	Project Exhibitions (New Palanpur for New India event)	0	0	1	1	1

Activities under ISTE Student Chapter (Co-curricular Activities)

Table 2.2.26: Co-curricular Activity summary

Sr. No	Organized Events and Titles	Organized Period	No. of Participants	No. of Days	Resource Person / Organizer
1	Workshop on “Introduction to RTL Design using Verilog HDL”	15/04/2023 (2022-23)	37	1	EC Department, G. P. Palanpur
2	Entrepreneurship Awareness Drive by ISTE Student Chapter GP Palanpur	07/04/2025& 08/04/2025 (2024-25)	95	2	CED (Centre of Entrepreneurship Development)
3	Expert Lecture on “Drone Technologies”	15/02/2025 (2024-25)	36	1	EC Department, G. P. Palanpur
4	Scratch Coding Competition	16/12/2025 (2025-26)	12	1	EC Department, G. P. Palanpur,

Extra-Curricular Activities

The Electronics & Communication Engineering Department at Government Polytechnic, Palanpur actively promotes student participation in diverse co-curricular and extra-curricular activities to foster holistic growth.

- Students enthusiastically participated in the Annual Sports Week –2023, 2024, and 2025, where they showcased their talent in different sports and games, fostering team spirit, leadership, and discipline.
- Under the banner of NSS (National Service Scheme), students took part in multiple social and cultural initiatives.
- International Yoga Day is celebrated every year to promote physical and mental well-being.
- A Tree Plantation Drive is organized every year, contributing to environmental sustainability and the development of a green campus.
- Independence Day and Republic Day celebrations, along with related programs, are organized every year to inculcate patriotism and national pride.
- The Garba event is conducted annually, contributing to the preservation and promotion of cultural heritage.
- Voter Awareness drives and Road Safety Oath programs are held frequently to encourage responsible citizenship and safe practices.

These extra-curricular activities not only provide students with opportunities to showcase their skills but also help in nurturing values of discipline, social responsibility, and cultural belongingness.

Table 2.2.27: Extra-curricular Activity summary

Sr. No	Extra-curricular Activities	No. of Events (Gymkhana)	No. of Events (NSS)
1	2021-22	20	2
2	2022-23	21	2
3	2023-24	10	7
4	2024-25	4	5
5	2025-26	18	0

Criterion 3

Course Outcomes and Program Outcomes (100)

Total Marks: 100

Table 3.0.1: Sub-Criteria and Marks Distribution – Criterion 3: Course Outcomes and Program Outcomes (Total 100 Marks)

No.	Sub-Criterion	Marks
3.1	Establish the correlation between the courses and the POs & PSOs	20
3.1.1	Course Outcomes (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses)	5
·	Evidence of COs being defined for every course	5
3.1.2	CO-PO/PSOs Matrices of Courses Selected in 3.1.1 (Six Matrices)	5
·	Explanation of table to be ascertained	5
3.1.3	Program Level Course-PO/PSOs Matrix of ALL Courses including First year Courses	10
·	Explanation of tables to be ascertained	10
3.2	Attainment of Course Outcomes	40
3.2.1	Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based	10
A	List of assessment processes	5
B	The quality /relevance of assessment processes & tools used	5
3.2.2	Record the attainment of Course Outcomes of all courses with respect to set attainment levels	30
·	Verify the attainment levels as per the benchmark set for all courses	30
3.3	Attainment of Program Outcomes & Program Specific Outcomes	40
3.3.1	Describe assessment tools and processes used for assessing the attainment of each POs and PSOs as mentioned in Annexure 1	10
A	List of assessment tools & processes	2
B	The quality/relevance of assessment tools/ processes used	8
3.3.2	Provide results of evaluation of each PO & PSO	30
A	Verification of documents, results and level of attainment of each PO/PSO	20
B	Overall levels of attainment	10
Total Marks – Criterion 3		100

3.1 Establish the correlation between the courses and the POs & PSOs (20)

The Program Outcomes (POs) are the skills and competencies which student should have after completion of the program. The Program Outcomes (POs) are specified by National Board of Accreditation (NBA) for all diploma courses all over the nation.

The Program Specific Outcomes (PSOs) are the statements that defines outcomes of a program which make students realize the fact that the knowledge and techniques learnt in this course has direct implication for his/her professional life. The Program Specific Outcomes (PSOs) have been proposed after taking consideration of various stake holders like students, alumni, society, industry persons and parents. Afterwards, PSOs were discussed and approved in meeting of faculty members of the Electronics and Communication Department DQAC Committee.

The POs and PSOs of Diploma Electronics and Communication Program are listed below.

Program Outcomes (POs):

PO1: Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

PO2: Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.

PO3: Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

PO4: Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

PO5: Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

PO6: Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

PO7: Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes.

Program Specific Outcomes (PSOs)

Table 3.1.1: Program Specific Outcomes (PSOs)

PSO	Description
PSO1	Demonstrate proficiency in installation and problem solving of electronics and communication equipment.
PSO2	Proficiency in specialized software packages and coding useful for the analysis of electronics engineering systems and PCB design.

3.1.1 Course Outcomes (05)

Course outcomes for Diploma in Electronics and Communication are developed by the faculties of Diploma Electronics and Communication department of Government Polytechnic, Palanpur. In EC department we use to have a policy to make a specific faculty as a subject in-charge before the beginning of the semester, and those faculties have to make a COs for that subject and should be endorsed by DQAC committee as well. This activity has been taken every time if and when need.

Course Title, course code and course ID for each semester have been listed through Tables B.3.1.1. course ID format is : C111 [C-for course, 1-Year of course (1/2/3), 1-Semester of course (1/2/3/4/5/6), -1 - course number for respective semester (1/2/3/4/5/6).

Table 3.1.2: All offered course for Electronics and Communication for the batch 2021-2024 & 2022-2025 & 2023-2026

SEM	COURSE TITLE	COURSE CODE	COURSE ID
I	Mathematics	4300001	C111
	Communication Skills in English	4300002	C112
	Physics	4300005	C113
	Basics of Information and Communication Technology	4300010	C114
	Sports and Yoga	4300015	C115
	Fundamentals of Electrical Engineering	4311101	C116
	Fundamentals of Electronics	4311102	C117
II	Environment and Sustainability	4300003	C121
	Engineering Drawing and Computer Aided Design	4300012	C122
	Indian Constitution	4300016	C123
	Engineering Mathematics	4320002	C124
	Electronics Workshop	4321101	C125
	Digital Electronics	4321102	C126
	Electronic Circuits & Applications	4321103	C127
III	Summer Internship-I	4330001	C231
	Electronic Circuits & Networks	4331101	C232
	Electronic Measurements & Instruments	4331102	C233
	Industrial Electronics	4331103	C234
	Principle of Electronic Communication	4331104	C235
	Programming In C	4331105	C236
IV	Integrated Personality Development Course	4340003	C241
	Microprocessor & Microcontroller	4341101	C242
	Digital Communication	4341102	C243
	Circuit Design Tools	4341104	C244
	Linear Integrated Circuit(Analog Electronics)	4341105	C245
	Antenna & Wave Propagation	4341106	C246
	Consumer Electronics & Maintenance	4341107	C247
V	Entrepreneurship and Start-ups	4300021	C351
	Embedded System	4351102	C352
	Microwave and Radar Communication	4351103	C353
	Mobile & Wireless Communication	4351104	C354
	Software Practices	4351105	C355
	Summer Internship-II	4351106	C356
	Electronics and Communication Engineering Project-I	4351107	C357
	OOPS & Python Programming	4351108	C358

SEM	COURSE TITLE	COURSE CODE	COURSE ID
VI	Computer Networks & Data Communication	4361101	C361
	VLSI	4361102	C362
	Electronics & Communication Engineering Project-II	4361103	C363
	Android App Development	4361104	C364
	Renewable Energy & Emerging Trends in Electronics	4361106	C365

Course outcomes of one course from each semester of study have been listed through Tables B.3.1.2 to B.3.1.7 for the batch of 2021 to 2024 and onwards.

Course Name: Fundamental of Electronics, **Course Code:** 4311102, **Course ID:** C117, **Semester:** 1, **Academic Year:** 2023-24, **Batch:** 2023-2026

Table 3.1.3: Course Outcomes – Fundamentals of Electronics (4311102)

CO	After successful completion of the course, student will be able to
C117.1	Use basic active and passive electronic components
C117.2	Develop different types of rectifiers using PN junction diode.
C117.3	Use special purpose diodes for different applications
C117.4	Analyze various transistor configurations.
C117.5	Dispose electronic waste safely.

Course Name: Digital Electronics, **Course Code:** 4321102, **Course ID:** C126, **Semester:** 2, **Academic Year:** 2023-24, **Batch:** 2023-2026

Table 3.1.4: Course Outcomes – Digital Electronics (4321102)

CO	After successful completion of the course, student will be able to
C126.1	Interpret various number systems and their conversions with binary arithmetic operations.
C126.2	Implement simplified Boolean equations using logic gates.
C126.3	Test different types of combinational logic circuits.
C126.4	Test different types of sequential logic circuits
C126.5	Classify various memories and logic families

Course Name: Electronic Circuits & Networks, **Course Code:** 4331101, **Course ID:** C232, **Semester:** 3, **Academic Year:** 2024-25, **Batch:** 2023-2026

Table 3.1.5: Course Outcomes – Electronic Circuits & Networks (4331101)

CO	After successful completion of the course, student will be able to
C232.1	Analyze the DC circuit to calculate voltage and current at various points in the circuit.
C232.2	Understand Concepts Of Two Port Network With Parameters.

C232.3	Use various network theorems to analyze electronic networks.
C232.4	Calculate parameters of series/parallel resonant and coupled circuits.
C232.5	Build different types of Attenuators and constant K-type passive filters.

Course Name: Microprocessor & Microcontroller, **Course Code:** 4341101, **Course ID:** C242, **Semester:** 4, **Academic Year:** 2022-23, **Batch:** 2021-2024

Table 3.1.6: Course Outcomes – Microprocessor & Microcontroller (4341101)

CO	After successful completion of the course, student will be able to
C242.1	Identify basic features of microprocessor.
C242.2	Explain architecture and working of microprocessor.
C242.3	Illustrate microcontroller internal architecture.
C242.4	Write and execute assembly language programs(software) for given application.
C242.5	Interface microcontroller with hardware for given application.

Course Name: Microwave and Radar Communication, **Course Code:** 4351103, **Course ID:** C353, **Semester:** 5, **Academic Year:** 2023-24, **Batch:** 2021-2024

Table 3.1.7: Course Outcomes – Microwave and Radar Communication (4351103)

CO	After successful completion of the course , student will be able to
C353.1	Distinguish Electromagnetic wave propagation through reflections from voltage and Current transmission.
C353.2	Analyze performance of microwave components from field point of view.
C353.3	Maintain microwave components and Set up of microwave bench for optimum Operation.
C353.4	Maintain microwave semiconductor devices used to realized amplifiers and Oscillators
C353.5	Maintain SONAR and RADAR systems as microwave application.

Course Name: VLSI, **Course Code:** 4361102, **Course ID:** C362, **Semester:** 6, **Academic Year:** 2023-24, **Batch:** 2021-2024

Table 3.1.8: Course Outcomes – VLSI (4361102)

CO	After successful completion of the course , student will be able to
C362.1	Describe working of MOSFET system
C362.2	Maintain MOS inverters
C362.3	Maintain MOS circuits
C362.4	Describe fabrication process for MOS
C362.5	Develop VERILOG Programs for combinational and sequential circuits

3.1.2 CO-PO/PSOs Matrices of Courses Selected in 3.1.1 (Six Matrices) (05)

Course Articulation Matrix

Course Articulation Matrix (CAM) means, the degree of each CO of the course is in line with PO. Course Articulation Matrix for Diploma in Electronics and Communication affiliated to GTU is developed by the faculties of Diploma Electronics and Communication department of Government Polytechnic, Palanpur. In EC department we use to have a policy to make a specific faculty as a subject in-charge before the beginning of the semester, and that faculty have to make a COs for that subject and should be endorsed by DQAC committee as well. This activity has been taken every time if and when need.

Moreover, the new syllabus which was introduced by the GTU from year 2021 for such subjects same way at department level we have assign a task by subject in-charge. Before starting of every semester, the task has been given to the concern faculty to develop CO of the course in line with PO with justification and also make a CO-PO-PSO mapping with proper justification.

The Course Articulation Matrix for one subject from each semester is presented through Tables B.3.1.8 – B.3.1.13. The last row of each below tables of course articulation matrix indicates mapping of course with POs /PSOs for the batch of 2021 to 2024.

Note:

1. Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

If there is no correlation, put "-"

CO-PO-PSO Mapping (for the Batch 2021-2024 and onwards)

Course Name: Fundamental of Electronics, **Course Code:** 4311102, **Course ID:** C117, **Semester:** 1, **Academic Year:** 2023-24, **Batch:** 2023-2026

Table 3.1.9: Course Articulation Matrix – Fundamentals of Electronics (4311102)

Course CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C117.1	3	2	1	3	-	2	1	3	
C117.2	3	1	2	2	1	1	-	3	1
C117.3	3	1	2	2	1	1	1	3	1
C117.4	3	1	2	2	-	-	-	3	1
C117.5	3	1	1	2	3	1	1	3	
Average	3.00	1.20	1.60	2.20	1.67	1.25	1.00	2.00	2.00

Course Name: Digital Electronics, **Course Code:** 4321102, **Course ID:** C126, **Semester:** 2, **Academic Year:** 2023-24, **Batch:** 2023-2026

Table 3.1.10: Course Articulation Matrix – Digital Electronics (4321102)

Course CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
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C126.1	3	1	1	1	-	1	1	2	1
C126.2	3	3	2	2	-	2	1	3	1
C126.3	3	2	2	2	-	2	1	3	1
C126.4	3	2	2	2	-	2	1	3	1
C126.5	3	1	2	2	2	2	2	2	1
Average	3.0	1.8	1.8	1.8	2.0	1.8	1.2	2.6	1

Course Name: Electronic Circuits & Networks, **Course Code:** 4331101, **Course ID:** C232, **Semester:** 3, **Academic Year:** 2024-25, **Batch:** 2023-2026

Table 3.1.11: Course Articulation Matrix – Electronic Circuits & Networks (4331101)

Course CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C232.1	3	3	3	3	2	2	2	3	2
C232.2	3	3	2	2	1	1	3	3	2
C232.3	3	3	2	2	1	2	2	3	2
C232.4	3	2	3	2	2	2	2	3	2
C232.5	3	3	3	2	2	2	2	3	2
Average	3	2.8	2.6	2.2	1.6	1.8	2.2	3	2

Course Name: Microprocessor & Microcontroller, **Course Code:** 4341101, **Course ID:** C242, **Semester:** 4, **Academic Year:** 2022-23, **Batch:** 2021-2024

Table 3.1.12: Course Articulation Matrix – Microprocessor & Microcontroller (4341101)

Course CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C242.1	3	2	2	2	1	2	2	2	3
C242.2	3	1	2	1	-	2	1	-	1
C242.3	3	2	2	3	-	2	3	1	2
C242.4	3	2	2	2	-	2	3	1	3
C242.5	3	3	3	3	1	3	3	2	3
Average	3.0	2	2.2	2.2	1	2.2	2.4	2	2.4

Course Name: Microwave and Radar Communication, **Course Code:** 4351103, **Course ID:** C353, **Semester:** 5, **Academic Year:** 2024-25, **Batch:** 2022-2025

Table 3.1.13: Course Articulation Matrix – Microwave and Radar Communication (4351103)

Course CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C353.1	3	2	2	2	2	-	2	3	2
C353.2	2	2	2	2	2	-	2	2	2
C353.3	2	2	2	3	2	2	2	1	3
C353.4	3	1	3	2	-	2	2	3	2

C353.5	1	1	2	1	-	-	1	3	2
Average	2.2	1.6	2.2	2	2	2	1.8	2.4	2.2

Course Name: VLSI, **Course Code:** 4361102, **Course ID:** C362, **Semester:** 6, **Academic Year:** 2024-25, **Batch:** 2022-2025

Table 3.1.14: Course Articulation Matrix – VLSI (4361102)

Course CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C362.1	3	1	1	1	0	0	2	1	-
C362.2	2	3	1	2	0	0	2	2	2
C362.3	3	3	3	2	2	2	2	3	-
C362.4	3	2	2	3	2	2	3	3	-
C362.5	2	3	3	3	3	3	2	3	3
Average	2.6	2.4	2	2.2	2.67	2.33	2.2	2.4	2.5

3.1.3 Program Level Course-PO/PSOs Matrix of ALL Courses including First year Courses (10)

There are some competencies that students must possess to be an outstanding Diploma Electronics and Communication professional for development of the industry, academics and society. The competencies are reflected into Program Outcomes. The curriculums are designed so that the required professional abilities can be developed.

The basic science courses are developed to transmit engineering knowledge in respective domains. Such courses are strongly mapped to attain PO1. These courses also contribute slightly / moderately / substantially to impart ability for problem analysis and ability to design/develop solutions. Looking at the course contents and the extent it helps to attain respective POs, i.e. PO1, PO2, PO3, the courses are mapped substantially-3, moderately-2 and slightly-1.

The courses in higher semesters help them to investigate complex problems at working in industry (PO3) and make them aware towards societal and environmental problems (PO5), which in turn sensitize the students to find out environmentally sustainable solutions. The extents these courses help to attain respective POs, i.e. PO3, PO5, the courses are mapped slightly/moderately/substantially.

PSO1 statement shows that a Diploma Electronics and Communication professional works as a team member to solve well defined problems using programming skills. PSO2 statement shows that it helps society by utilizing basic network & software. All the courses offered by the department also contribute to achieve Program Specific Outcomes. Hence all the courses are also mapped accordingly (PSO1/PSO2). Moreover, many subjects help the students to work as a professional or as an entrepreneur by applying principles and management practices slightly / moderately / strongly and hence they are mapped accordingly.

After deliberation in the committee consisting of senior faculty members and respective course coordinators, the Program Articulation Matrix and Course Articulation Matrix are prepared.

Program Articulation Matrix

The program articulation matrix indicates the extent each course helps to attain program outcomes. Program level Course PO matrix of all courses is reported as Table B.3.1.14 for the batch of 2021-2024 and onwards.

Table 3.1.15: Program Articulation Matrix-Batch-2021-2024 and onwards

Sr. No.	Course Code	Code ID	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
1	4300001	C111	Mathematics	3.00	1.25	1.00	-	-	-	1.00	-	-
2	4300002	C112	Communication Skills in English	1.75	-	-	-	-	2.00	1.80	-	-
3	4300005	C113	Physics	3.00	1.00	1.00	2.00	1.00	-	1.00	1.60	-
4	4300010	C114	Basics of Information and Communication Technology	2.80	2.00	2.00	2.00	1.25	2.00	2.40	2.50	2.50
5	4300015	C115	Sports and Yoga	2.4	-	-	-	1	-	2	-	-
6	4311101	C116	Fundamentals of Electrical Engineering	3.00	2.00	-	1.00	3.00	1.00	2.00	3.0	1.0
7	4311102	C117	Fundamentals of Electronics	3.00	1.20	1.60	2.20	1.67	1.25	1.00	3.00	1.00
8	4300003	C121	Environment and Sustainability	2.00	1.80	1.60	1.00	1.80	1.25	1.40	2.00	-
9	4300012	C122	Engineering Drawing and Computer Aided Design	3.00	1.50	2.75	2.50	2.00	2.00	2.00	-	1.00
10	4300016	C123	Indian Constitution	-	1	1	-	2	1	2	-	-
11	4320002	C124	Engineering Mathematics	3.00	1.00	1.00	-	-	-	1.00	-	-
12	4321101	C125	Electronics Workshop	2.60	2.20	2.40	2.80	1.60	1.40	2.20	2.60	2.60
13	4321102	C126	Digital Electronics	3.00	1.80	1.80	1.80	2.00	1.80	1.20	2.6	1.0
14	4321103	C127	Electronic Circuits & Applications	3.00	2.20	2.40	2.40	1.50	2.80	1.60	2.20	2.60
15	4330001	C231	Summer Internship-I	1.40	1.00	1.50	1.20	1.00	1.00	1.00	1.5	1.00
16	4331101	C232	Electronic Circuits & Networks	3.00	2.80	2.60	2.20	1.60	1.80	2.20	3.00	2.00
17	4331102	C233	Electronic Measurements & Instruments	3.00	2.00	2.50	2.80	2.00	1.00	1.20	3.0	1.33
18	4331103	C234	Industrial Electronics	3.00	2.00	2.00	2.40	1.66	2.40	1.40	2.80	2.60
19	4331104	C235	Principle of Electronic Communication	2.80	2.00	1.60	2.20	1.60	1.00	2.60	1.60	1.0
20	4331105	C236	Programming In C	2.60	2.25	2.00	2.40	1.60	1.60	2.20	-	3.00
21	4340003	C241	Integrated Personality Development Course	1.00	1.00	1.00	-	2.67	2.33	2.80	-	-
22	4341101	C242	Microprocessor & Microcontroller	3.00	2.00	2.20	2.20	1.00	2.20	2.40	2.5	1.8
23	4341102	C243	Digital Communication	3.00	1.40	1.40	2.40	1.60	1.80	2.60	2.80	2.6
24	4341104	C244	Circuit Design Tools	2.50	2.67	2.67	3.0	1.67	1.0	1.25	3	2.50
25	4341105	C245	Linear Integrated Circuit (Analog Electronics)	3.00	2.6	2.40	2.2	2.0	2.80	2.40	2.60	2.80
26	4341106	C246	Antenna & Wave Propagation	3.00	2.80	2.60	2.20	1.60	1.80	2.20	3.00	1.40
27	4341107	C247	Consumer Electronics & Maintenance	3.00	2.20	2.0	2.60	2.60	1.80	3.00	3.00	1.00
28	4300021	C351	Entrepreneurship and Start-ups	2.80	2.00	1.80	1.25	1.25	2.40	2.60	2.00	2.00
29	4351102	C352	Embedded System	3.00	2.40	2.00	2.00	1.67	2.20	2.40	2.20	2.00
30	4351103	C353	Microwave and Radar Communication	2.20	1.60	2.20	2.00	2.00	2.00	1.80	2.40	2.20
31	4351104	C354	Mobile & Wireless Communication	2.80	2.00	1.80	2.00	1.60	2.00	2.40	3.0	2.33

Sr. No.	Course Code	Code ID	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
32	4351105	C355	Software Practices	3.00	2.20	2.00	2.40	1.00	1.33	3.00	-	3.00
33	4351106	C356	Summer Internship-II	1.60	2.00	1.80	1.20	2.20	1.60	2.00	2.4	2.33
34	4351107	C357	Electronics and Communication Engineering Project-I	3.00	2.00	1.40	1.60	1.80	1.40	3.00	2.00	2.20
35	4351108	C358	OOPS & Python Programming	2.25	2.00	2.00	1.75	-	1.25	2.50	-	3.00
36	4361101	C361	Computer Networks & Data Communication	3.00	2.20	1.80	1.60	1.40	2.20	2.80	2.4	2.80
37	4361102	C362	VLSI	2.60	2.40	2.00	2.20	2.67	2.33	2.20	2.40	2.50
38	4361103	C363	Electronics & Communication Engineering Project-II	3.00	1.00	2.33	1.80	2.00	2.00	2.00	2.20	2.00
39	4361104	C364	Android App Development	2.20	2.40	3.00	2.40	1.60	1.40	1.00	1.00	2.00
40	4361106	C365	Renewable Energy & Emerging Trends in Electronics	3.00	2.00	2.00	2.00	1.75	2.00	2.75	3.00	3.00
			Average Attainment	2.67	1.89	1.92	2.05	1.73	1.75	2.01	2.44	2.07

The program articulation matrix indicates the extent each course helps to attain program outcomes.

3.2 Attainment of Course Outcomes (40)

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

A. List of assessment processes (05)

We are using two methods for calculating attainment of course outcomes of each subject, So, direct course outcomes attainment calculated based on the Direct and Indirect Method. For calculation of final attainment 80% of direct COs attainment and 20% of indirect COs attainment is considered. Our institute is affiliated to Gujarat Technological University. There are four major (Maximum) components defined by the University for evaluating the performance of the students as shown in Figure 3.2.1. Course exit survey form filled by student for indirect course outcomes attainment.

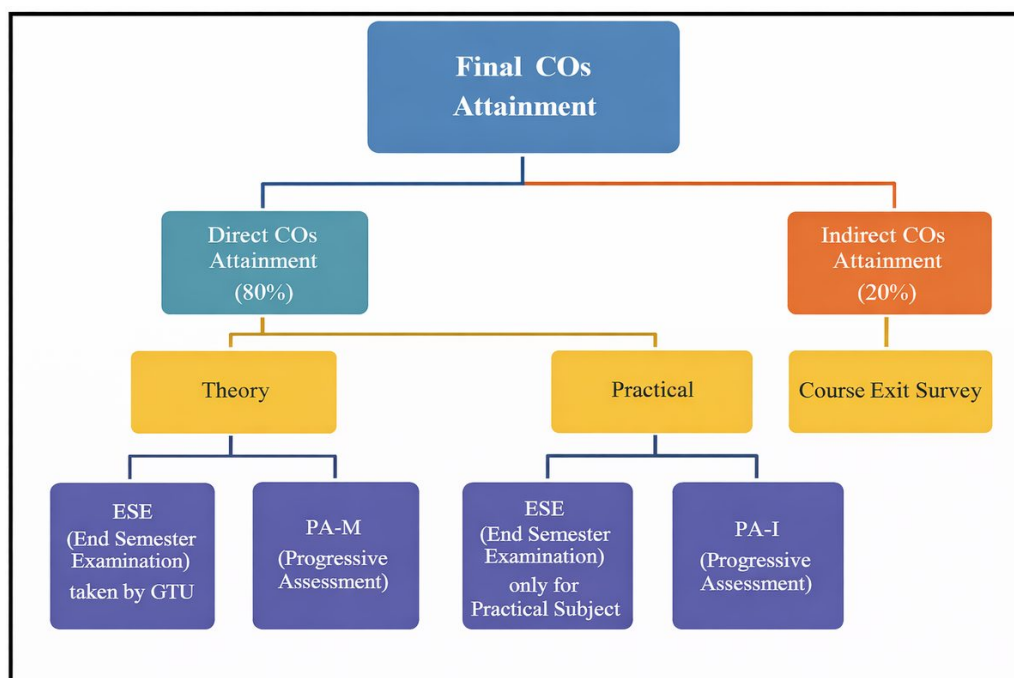


Figure 3.2.1: Structure and Weightage for CO Attainment

The various assessment components and processes used to gather the data for the evaluation of Course Outcomes by direct method are described as follows. The maximum marks and the weightage of each assessment component in the final grade are also summarized in the Table 3.2.1

Table 3.2.1: Assessment Component Weightage

Sr. No.	Component Name	Exam Conducted by	Marks	Remarks	Relevance of assessment process
1	End Semester Exam (ESE)	University	70	Results are declared by university in form of Grades	ESE is intended for making a comprehensive assessment of the ability of students to understand / apply / analyze / evaluate the various aspects of the respective course based on the entire syllabus.
2	End Semester Practical Exam ESE(V) – PR	Department (Sem. 1 to 4) University (Sem. 5 to 6)	25/50 25/50	Results are declared by university in form of Grades	The comprehensive assessment associated with the practical aspects of the course is carried out at the end of the semester through practical exam and viva voce.
3	Mid Semester Exam PA(M) + Micro Project	Department	30	Results are declared by university in form of Grades. Marks are provided by the department to the university	The Class test/Mid Semester Exam are conducted to assess the ability of students to understand / apply / analyses / evaluate the various aspects of the respective course. At the end of the semester as per curriculum students need to submit the micro project as per concern subject from which student get hands on practice of Application level.
4	Internal PA(I)	Department	25/50	Results are declared by university in form of Grades. Marks are provided by the department to the university	Assesses the ability of students to apply the theoretical aspects in practice as an individual task or as team work. It also helps to reinforce the concepts gained through class room learning. The assessment is carried out at the end of each experiment conducted and is based on the inferences drawn, data collected, analyzed & presented and knowledge of equipment / modern tools used during performance.

PA (M) Conducted by Institute.

PA (I) Conducted by Institute.

ESE (V) PR For 1 to 4 Semester Conducted by Institute and for 5 to 6 Semester conducted by university.

Various courses offered to the students of diploma Electronics and Communication as per GTU curriculum has three different evaluation schemes.

CO attainment is based on the internal and external assessment as per GTU scheme of examination. Depending upon nature, of course, maximum marks for various courses may be 50,100,150.

B. The quality /relevance of assessment processes & tools used (05)

Step 1: Fix the weightage of each Assessment Component Prescribed by GTU for the courses offered in the program as per teaching scheme.

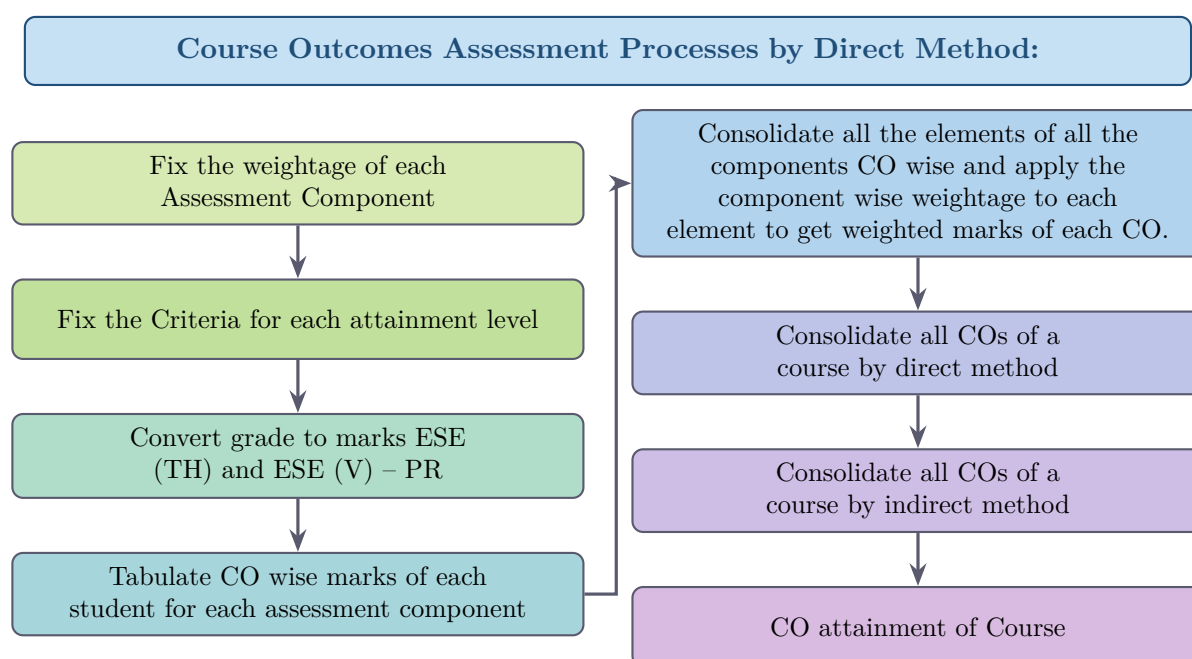


Figure 3.2.2: Step 1: Fix the Weightage of Each Assessment Component Prescribed by GTU for the Courses Offered in the Program as per Teaching Scheme.

Our institute is affiliated to Gujarat Technological University. There are four major (Maximum) components defined by the University for evaluating the performance of the students. The number of components for the subject varies from 2 to 4. The component wise distribution of marks for various credit and scheme is as shown in Table 3.2.1. Based on the Component wise marks we fix the weightage to each component

Subjects having Credit 3/4/5 – Component wise Weightage

Table 3.2.2: Component Weightage – Subjects having Credit 3/4/5

Component	Marks	% Weight
ESE	70	46.67
PA	30	20
ESE	25	16.67
PA	25	16.67
Total	150	100

Subjects having Credit 3/4 – Component wise Weightage (Theory only)

Table 3.2.3: Component Weightage – Subjects having Credit 3/4 (Theory only)

Component	Marks	% Weight
ESE	70	70
PA (M)	30	30
Total	100	100

Subjects having Credit 1/2/3 – Component wise Weightage (Practical Only)

Table 3.2.4: Component Weightage – Subjects having Credit 1/2/3 (Practical only)

Component	Marks	% Weight
PA (I)	25/50	50/50
ESE (V) – PR	25/50	50/50
Total	50/100	100

(Subjects with (a) 4 components, (b) 2 components & (d) 2 components as assessment tool)

PA (M) Conducted by Institute.

PA (I) Conducted by Institute.

ESE (V) PR For 1 to 4 semester Conducted by Institute and for 5 to 6 semesters conducted by university.

ESE – Conducted by University

Step 2: Fix the Criteria for CO attainment Level.

At the end of each course, the CO attainment is evaluated for all curriculum components. The attainment level is set by the Course Coordinator with the reference of previous results. The attainment is made by the institution or the program for analyzing the students' knowledge. For setting up the attainment level, our department has used the following method. Attainment level is taken as given below as considering student percentage fixed and varying the marks.

Table 3.2.5: CO attainment levels

CO Attainment Level	1 st and 2 nd Year	3 rd Year
3	50% of students score more than 60% marks	50% of students score more than 70% marks
2	50% of students score more than 50% marks	50% of students score more than 60% marks
1	50% of students score more than 40% marks	50% of students score more than 50% marks

At the end of each course CO attainment is evaluated for all courses. For setting up the attainment level our department has used the following method.

Table 3.2.6: Target Level for First and Second-Year Courses

For First and Second-Year Courses					
2021 Entry Batch		2022 Entry Batch		2023 Entry Batch	
% of Marks	Level	% of Marks	Level	% of Marks	Level
60	3	60	3	60	3
50	2	50	2	50	2
40	1	40	1	40	1

Table 3.2.7: Target Level for Final Year Courses

For Last Year Courses					
2021 Entry Batch		2022 Entry Batch		2023 Entry Batch	
% of Marks	Level	% of Marks	Level	% of Marks	Level
70	3	70	3	70	3
60	2	60	2	60	2
50	1	50	1	50	1

Step 3: Convert grade to marks ESE (TH).

For ESE (TH) component the grades from the GTU result are converted to marks as per table given below.

Table 3.2.8: Grade to Marks Conversion

Mark Range	Grade	Mid value of range
85 to 100	AA	92.5
75 to 84	AB	80

65 to 74	BB	70
55 to 64	BC	60
45 to 54	CC	50
40 to 44	CD	42
35 to 39	DD	37
<35	FF	17

Step 4: Tabulate CO wise marks of each student for each assessment component.

Each assessment component comprises of various elements which are as follows:

- Theory End Semester exam (70 marks)
- Theory Mid Semester Exam (30 marks, Comprised of Progressive Assessment Exam and micro project)
- Practical End Semester Viva (25/50 marks)
- Practical Progressive Assessment (25/50 marks)

GOVERNMENT POLYTECHNIC PALANPUR									
SUBJECT CODE & NAME :		4341105 - Linear Integrated Circuit(Analog Electronics)							
Sr. No	Enrollment No.	Name of Students	ESE TH	PA M					
			70	30					
				C245.1	C245.2	C245.3	C245.4	C245.5	TOTAL
				11	11	10	14	14	30
1	226260311002	LOKHANDWALA MAHAMMADTAUKIR TAIYAB	42	5.0	3.0	4.0	8.0	8.0	14
2	226260311003	PANCHAL SHUBH KIRANBHAI	25.9	5.5	4.5	6.0	8.0	9.5	17
3	226260311004	PATEL AKSHAR DILIPKUMAR	35	8.0	10.0	7.5	10.5	10.0	23
4	226260311007	PRAJAPATI HARSHOKUMAR SURESHBHAI	15.4	5.0	2.0	2.0	6.0	9.0	12
5	226260311008	PRAJAPATI KUNDAN HARIBHAI	25.9	7.0	3.0	2.0	7.0	7.0	13
6	226260311009	SUTHAR BHARAT VISHNUBHAI	35	8.0	7.0	7.0	7.5	10.5	20
7	226260311011	VAGDOJIYA SHUBHAM RASHMIKANT	15.4	4.5	4.5	3.0	6.5	7.0	13

Figure 3.2.3: Sample Overall Marksheet for Course Linear Integrated Circuit (Analog Electronics)

GOVERNMENT POLYTECHNIC PALANPUR														
SUBJECT CODE & NAME :			4341105 - Linear Integrated Circuit(Analog Electronics)						NO OF STUDENTS :			7		
Sr. No	Enrollment No.	Name of Students	ESE_V						PA_I					
			25						25					
			C245.1	C245.2	C245.3	C245.4	C245.5	TOTAL	C245.1	C245.2	C245.3	C245.4	C245.5	TOTAL
			4	5	4	7	5	25	5	5	5	5	5	25
1	226260311002	LOKHANOWALA MAHAMMADTAUKIR TAIYAB	3.00	4.00	3.00	6.00	4.00	20	4.0	3.0	4.0	5.0	5.0	21.0
2	226260311003	PANCHAL SHUBH KIRANBHAI	3.00	4.00	3.00	5.00	4.00	19	3.0	4.0	4.0	4.0	5.0	20.0
3	226260311004	PATEL AKSHAR DILIPKUMAR	3.00	5.00	3.00	6.00	4.00	21	4.0	4.0	4.0	5.0	5.0	22.0
4	226260311007	PRAJAPATI HARSHOKUMAR SURESHEHAJ	3.00	4.00	3.00	5.00	3.00	18	3.0	4.0	4.0	4.0	4.0	19.0
5	226260311008	PRAJAPATI KUNDAN HARIBHAI	3.00	4.00	3.00	5.00	4.00	19	4.0	4.0	4.0	4.0	4.0	20.0
6	226260311009	SUTHAR BHARAT VISHNUBHAI	3.00	5.00	3.00	6.00	4.00	21	4.0	4.0	4.0	5.0	5.0	22.0
7	226260311011	VAGDOJIYA SHUBHAM RASHMIKANT	3.00	4.00	3.00	6.00	4.00	20	3.0	4.0	4.0	4.0	5.0	20.0

Figure 3.2.4: Sample Overall Marksheet for Course Linear Integrated Circuit (Analog Electronics) (Contd.)

For all relevant components for the subject CO wise marks of each student for each assessment component is tabulated. Sample for ESE TH component is shown in Figure 3.2.5.

GOVERNMENT POLYTECHNIC PALANPUR									
SUBJECT CODE AND NAME :		4341105 - Linear Integrated Circuit(Analog Electronics)					NO OF STUDENTS:	7	
Sr. No	Enrollment No.	Name of Students	C245.1	C245.2	C245.3	C245.4	C245.5	OUT OF TOTAL(70)	OUT OF TOTAL (100)
1	226260311002	LOKHANDWALA MAHAMMADTAUKIR TAIYAB	12	12	15.43	13.72	6.86	42	60
2	226260311003	PANCHAL SHUBH KIRANBHAI	7.4	7.4	9.51	8.46	4.23	25.9	37
3	226260311004	PATEL AKSHAR DILIPKUMAR	10	10	12.86	11.43	5.72	35	50
4	226260311007	PRAJAPATI HARSHDKUMAR SURESHBHAI	4.4	4.4	5.66	5.03	2.51	15.4	22
5	226260311008	PRAJAPATI KUNDAN HARIBHAI	7.4	7.4	9.51	8.46	4.23	25.9	37
6	226260311009	SUTHAR BHARAT VISHNUBHAI	10	10	12.86	11.43	5.72	35	50
7	226260311011	VAGDOJIYA SHUBHAM RASHMIKANT	4.4	4.4	5.66	5.03	2.51	15.4	22

Figure 3.2.5: Sample Tabular Form of CO Wise Marks for Component ESE_TH for Linear Integrated Circuit (Analog Electronics)

Step 5: Consolidate all the elements of all the components CO wise and apply the component wise weightage to each element to get weighted marks of each CO.

Sample for CO1 is shown in Figure 3.2.6. Similarly, element wise consolidation for all COs of a course gives the attainment level of all the CO of a particular course.

GOVERNMENT POLYTECHNIC PALANPUR									
ATTAINMENT EVALUATION : C245.1									
Term Date:		18-12-2024		TO		28-04-2025			
Programme:		Diploma in Electronics and Communication							
Semester :		4							
Academic Year :		Feb 2024 TO May 2024							
Course Code and Name :		4341105 Linear Integrated Circuit(Analog Electronics)							
Course Coordinator :		Mr.R.C.Parmar							
Faculty Members Involved :		0.00							
No of Students in Class :		7							
C245.1 TARGET LEVEL		50	No of students		4	CO Attainment		No. of students	
Teaching scheme		ESE_TH	PA_M	ESE_Y	PA_I	3.0		3	
Component weightage		46.67	20.00	16.67	16.67	2.0		1	
						1.0		3	
Attainment level		3	2	1	0	0.0		0	
Criteria		Marks >= 60%	50%>Mark <= > 60%	50%>Mark <= > 40%	40% > Marks	Total		7	
						>= 2 (in %)		57.1	
COMPONENT WEIGHTAGE		ESE_TH	PA_M	ESE_Y	PA_I	TOTAL	TOTAL	% OF	ATTAINME
		20.00	18.33	20.00	16.00	74.33	19.00		
Sr.	Enrollment								
1	226260311002	12	8	15	13	48	11.9	62.63	3
2	226260311003	7	9	15	10	41	9.39	49.42	1
3	226260311004	10	13	15	13	51	11.97	63.00	3
4	226260311007	4	8	15	10	37	7.82	41.16	1
5	226260311008	7	12	15	13	47	10.42	54.84	2
6	226260311009	10	13	15	13	51	11.97	63.00	3
7	226260311011	4	8	15	10	37	7.65	40.26	1

Figure 3.2.6: Sample Consolidation of Element Wise Marks for CO1 for Linear Integrated Circuit (Analog Electronics)

We have taken students records for a particular subject as a sample data. In above figure column 3 to 6 shown marks gained by each student in different assessment component.

Total weightage marks of each component and for each student calculated by equation,

$$\text{Total Weightage Marks} = \sum \text{Weightage of component} \times \text{Marks obtained in component}$$

$$\text{Max weightage marks of C245.1} = (20 \times 0.4667) + (18.33 \times 0.20) + (20 \times 0.1667) + (16 \times 0.1667)$$

$$= 19$$

Marks obtained by student (Sr.No.-1) in C245.1

$$= (12 \times 0.4667) + (8.33 \times 0.20) + (12.8 \times 0.1667) + (15 \times 0.1667)$$

$$= 11.90$$

Percentage weightage marks obtained by student in C245.1 =

$$\frac{\text{Marks obtained by a student in C245.1}}{\text{Max marks of C245.1}} \times 100 = \frac{11.90}{19} = 62.63\%$$

Percentage weightage marks obtained by each student is calculated. Student wise CO attainment calculation criteria are given in Table 3.2.1. As per that table student 226260311002 obtained 62.63% in C245.1, so attainment level in C245.1 is 3. Same as 226260311003 obtained 49.42% in C245.1, so attainment level in C245.1 is 1.

Table 3.2.9: Student wise CO calculation criteria

CO Attainment Level	Target Attainment Level	Percentage for First & Second Year	Percentage for Final Year
3	2	$\geq 60\%$	$\geq 70\%$
2	2	$\geq 50\%$ and $\leq 60\%$	$\geq 60\%$ and $\leq 70\%$
1	2	$\geq 40\%$ and $\leq 50\%$	$\geq 50\%$ and $\leq 60\%$
0	2	$< 40\%$	$< 50\%$

Step 6: Consolidate all COs of a course by direct method.

For each student CO wise attainment calculated. After that we make one summary sheet of all CO Attainment as shown in Figure 3.2.7. From that, average value of each CO is considered as direct CO attainment for final attainment calculation.

GOVERNMENT POLYTECHNIC PALANPUR

Term Date:	18-12-2024		TO	28-04-2025				
Programme :	Diploma in Electronics and Communication							
Semester :	4							
Academic Year :	Feb 2024 TO May 2024							
Course Code and Name :	4341105	Linear Integrated Circuit(Analog Electronics)						
Course Coordinator :	Mr.R.C.Parmar							
Faculty Members Involved :	0.00							
No of Students in Class :	7.00							
	AVERAGE ATTAINMENT	2	1.86	1.71	2.14	2.57	0	2.056
Maximum weighted Marks -->	C245.1	C245.2	C245.3	C245.4	C245.5		TOTAL	
	19.00	19.67	21.33	23.33	16.67	0.00	100.00	
Sr. No	Roll No.	CO wise attainment level						Student
1	226260311002	3	2	3	3	3	0	2.3
2	226260311003	1	2	2	2	3	0	1.48
3	226260311004	3	3	3	3	3	0	2.5
4	226260311007	1	1	0	1	2	0	0.62
5	226260311008	2	1	1	2	2	0	1.26
6	226260311009	3	3	3	3	3	0	2.5
7	226260311011	1	1	0	1	2	0	0.62

Figure 3.2.7: Sample Summary Sheet of All COs Attainment for Linear Integrated Circuit (Analog Electronics)

Step 7: Consolidate all COs of a course by indirect method.

Course Exit Survey:

A course exit survey is conducted via hard copy for students who have completed the particular course. The Course outcome relevant questionnaires are asked in Course Exit Survey to evaluate the contribution of Course to attain POs and PSOs. Course exit survey also helps the Course Coordinator to take further corrective actions to improve. Sample of Course exit survey is shown in below figure:



Government Polytechnic, Palanpur

Electronics and Communication Department

Course Exit Survey

Course: Linear Integrated Circuit (Analog Electronics) [4341105]

Enrollment Number: _____

Date: ____/____/____

1) Are you able to understand the key parameters (like gain and bandwidth) of negative feedback amplifier?

1 Excellent 2 Very Good 3 Good 4 Average 5 Poor

2) Are you able to measure the frequency, amplitude, and waveform shape of oscillator outputs?

1 Excellent 2 Very Good 3 Good 4 Average 5 Poor

3) Are you able to describe the advantages and disadvantages of each type of power amplifier in practical applications?

1 Excellent 2 Very Good 3 Good 4 Average 5 Poor

4) Are you able to observe the output waveform of different circuits developed using IC 741 operational amplifier?

1 Excellent 2 Very Good 3 Good 4 Average 5 Poor

5) Are you able to design multivibrator circuits (astable, monostable, bistable) using the 555 timer IC?

1 Excellent 2 Very Good 3 Good 4 Average 5 Poor

Figure 3.2.8: Course Exit Survey

Based on Course Exit survey data received from student the co-relation has been established weightage between 1 to 3 as per need for calculating attainment of CO. So, we have established a co-relation for the values Excellent, Very Good, Good, Average and Poor with 3, 2.5, 2, 1.5 & 1 according. The received data from the student is compiled as shown in figure and average of COs used for final attainment calculation.

Step 8: Determine the overall attainment level of the course.

80% weightage is given to direct assessment and 20% to indirect assessment for overall CO Calculation.

For Example:

Direct Attainment Value of C245.1 = 2

Indirect Attainment Value of C245.1 = 2.29

Overall Attainment level of C245.1 = $(2.0 \times 0.8) + (2.29 \times 0.2) = 2.06$

Final overall attainment level of each COs for Linear Integrated Circuit (Analog Electronics) is calculated as shown in Table 3.2.1.

Table 3.2.10: Overall Attainment Level Calculation for Linear Integrated Circuit (Analog Electronics)

	C245.1	C245.2	C245.3	C245.4	C245.5
Direct COs Attainment	2	1.86	1.71	2.14	2.57
Indirect COs Attainment	2.29	1.86	2.29	2.36	2.21
Final COs Attainment (80% of Direct Attainment + 20% of Indirect Attainment)	2.06	1.86	1.83	2.18	2.50

3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (30)

Table 3.2.11: Attainment of Course outcome of Batch 2021-2024

Sr. No.	Sem	Course Code	Course Name	CO1	CO2	CO3	CO4	CO5	CO6	Average CO
1	1	C111	Mathematics	0.86	0.67	1.11	0.98	0.90	-	0.90
2		C112	Communication Skills in English	2.42	2.43	2.5	2.78	2.6	-	2.54
3		C113	Physics	1.98	1.67	1.57	1.62	1.54	-	1.67
4		C114	Basics of Information and Communication Technology	2.68	2.71	2.71	2.70	2.74	-	2.71
5		C115	Sports and Yoga	2.93	2.92	2.85	2.84	2.88	-	2.89
6		C116	Fundamentals of Electrical Engineering	1.61	1.24	2.66	2.09	-	-	1.90
7		C117	Fundamentals of Electronics	0.64	1.4	1.72	1.79	1.43	-	1.39
8	2	C121	Environment and Sustainability	1.29	1.91	1.67	1.99	1.88	-	1.75
9		C122	Engineering Drawing and Computer Aided Design	2.82	2.83	2.77	2.84	2.63	-	2.77
10		C123	Indian Constitution	2.87	2.77	2.86	2.87	2.83	-	2.84
11		C124	Engineering Mathematics	1.54	0.96	1.52	1.41	1.33	-	1.35
12		C125	Electronics Workshop	2.58	2.82	2.61	2.75	2.70	-	2.69
13		C126	Digital Electronics	2.4	2.28	2	2	2.13	-	2.16
14		C127	Electronic Circuits & Applications	1.68	1.47	1.87	2.01	1.76	-	1.76
15	3	C231	Summer Internship-I	2.85	2.48	2.68	2.37	2.56	-	2.59
16		C232	Electronic Circuits & Networks	1.53	1.75	1.52	1.14	1.69	-	1.52
17		C233	Electronic Measurements & Instruments	1.32	1.03	1.28	1.27	1.43	-	1.27
18		C234	Industrial Electronics	1.38	1.39	1.43	1.36	1.12	-	1.34
19		C235	Principle of Electronic Communication	1.69	1.29	1.67	1.25	1.56	-	1.47
20		C236	Programming In C	1.27	1.29	1.47	1.68	1.54	-	1.46
21	4	C241	Integrated Personality Development Course	2.87	2.88	2.91	2.91	2.89	2.89	2.89
22		C242	Microprocessor & Microcontroller	2.62	2.76	2.59	2.14	2.23	-	2.47
23		C243	Digital Communication	2.86	2.46	2.41	2.47	2.43	-	2.54
24		C244	Circuit Design Tools	2.89	2.90	2.89	2.78	-	-	2.82
25		C245	Linear Integrated Circuit(Analog Electronics)	1.87	1.68	1.69	1.70	2.03	-	1.8
26		C246	Antenna & Wave Propagation	1.66	1.62	1.40	1.66	1.71	-	1.61
27		C247	Consumer Electronics & Maintenance	1.75	1.29	1.40	1.75	1.31	-	1.5
28	5	C351	Entrepreneurship and Start-ups	1.90	2.06	1.74	1.16	1.36	-	1.64
29		C352	Embedded System	2.20	1.94	2.58	2.34	2.68	-	2.35
30		C353	Microwave and Radar Communication	1.70	2.72	2.10	0.86	1.74	-	1.82
31		C354	Mobile & Wireless Communication	1.72	2.84	2.74	2.50	2.68	-	2.50
32		C355	Software Practices	2.82	2.88	2.80	2.88	2.86	-	2.85
33		C356	Summer Internship-II	2.84	2.84	2.90	2.82	2.84	-	2.85
34		C357	Electronics and Communication Engineering Project-I	2.68	2.62	2.72	2.72	2.66	-	2.68

Sr. No.	Sem	Course Code	Course Name	CO1	CO2	CO3	CO4	CO5	CO6	Average CO
35		C358	OOPS & Python Programming	2.68	2.18	2.04	1.70	-	-	2.15
36		C361	Computer Networks & Data Communication	2.80	2.88	2.85	2.23	2.38	-	2.63
37		C362	VLSI	1.78	1.63	2.90	1.30	2.63	-	2.05
38	6	C363	Electronics & Communication Engineering Project-II	2.83	2.75	2.93	2.88	2.83	-	2.84
39		C364	Android App Development	2.83	2.75	2.93	2.88	2.83	-	2.84
40		C365	Renewable Energy & Emerging Trends in Electronics	2.88	2.63	2.88	2.85	-	-	2.81

Table 3.2.12: Attainment of Course outcome of Batch 2022-2025

Sr. No.	Sem	Course Code	Course Name	CO1	CO2	CO3	CO4	CO5	CO6	Average CO
1		C111	Mathematics	1.59	1.15	1.58	1.59	1.55	-	1.49
2		C112	Communication Skills in English	1.6	1.55	1.6	2.19	2.1	-	1.8
3		C113	Physics	2.14	2.34	2.06	2.07	1.37	-	2.00
4	1	C114	Basics of Information and Communication Technology	2.68	2.61	2.78	2.69	2.76	-	2.71
5		C115	Sports and Yoga	2.87	2.78	2.85	2.87	2.78	-	2.83
6		C116	Fundamentals of Electrical Engineering	2.17	2.11	2.42	2.33	-	-	2.26
7		C117	Fundamentals of Electronics	1.92	1.83	1.77	1.59	0.74	-	1.57
8		C121	Environment and Sustainability	1.78	1.68	1.60	1.79	1.68	-	1.71
9		C122	Engineering Drawing and Computer Aided Design	2.02	2.06	2.04	2.08	2.00	-	2.04
10		C123	Indian Constitution	2.65	2.54	2.43	2.21	2.59	-	2.48
11	2	C124	Engineering Mathematics	1.92	1.66	2.1	2.1	1.98	-	1.95
12		C125	Electronics Workshop	2.60	2.57	2.51	2.44	2.24	-	2.47
13		C126	Digital Electronics	2.42	2.09	2	2.14	2.29	-	2.19
14		C127	Electronic Circuits & Applications	1.62	1.70	2.11	2.04	1.88	-	1.87
15		C231	Summer Internship-I	2.57	2.45	2.68	2.53	2.57	-	2.56
16		C232	Electronic Circuits & Networks	2.06	2.17	1.95	1.80	2.06	-	2.01
17	3	C233	Electronic Measurements & Instruments	2.28	1.86	2.15	2.05	2.20	-	2.11
18		C234	Industrial Electronics	1.73	1.84	1.58	1.60	1.63	-	1.67
19		C235	Principle of Electronic Communication	2.49	1.59	2.37	1.36	2.05	-	1.97
20		C236	Programming In C	1.83	1.60	0.78	1.38	1.69	-	1.46
21		C241	Integrated Personality Development Course	2.89	2.90	2.94	2.91	2.89	-	2.89
22		C242	Microprocessor & Microcontroller	2.07	1.99	1.76	1.47	1.57	-	1.77
23		C243	Digital Communication	2.29	2.26	2.29	2.24	2.50	-	2.32
24	4	C244	Circuit Design Tools	2.86	2.83	2.89	2.48	-	-	2.82
25		C245	Linear Integrated Circuit(Analog Electronics)	2.06	1.86	1.83	2.18	2.50	-	2.08
26		C246	Antenna & Wave Propagation	2.72	2.44	2.47	2.46	2.42	-	2.50

Sr. No.	Sem	Course Code	Course Name	CO1	CO2	CO3	CO4	CO5	CO6	Average CO
27	5	C247	Consumer Electronics & Maintenance	1.63	1.63	1.34	1.59	1.81	-	1.60
28		C351	Entrepreneurship and Start-ups	2.01	1.57	1.59	1.53	1.33	-	1.6
29		C352	Embedded System	1.99	1.71	2.47	2.56	2.67	-	2.28
30		C353	Microwave and Radar Communication	2.51	2.32	2.51	2.18	2.61	-	2.43
31		C354	Mobile & Wireless Communication	2.21	1.99	2.51	2.23	2.30	-	2.25
32		C355	Software Practices	2.84	2.77	2.77	2.84	2.83	-	2.81
33		C356	Summer Internship-II	2.71	2.71	2.76	2.70	2.71	-	2.72
34		C357	Electronics and Communication Engineering Project-I	2.77	2.89	2.87	2.84	2.89	-	2.85
35		C358	OOPS & Python Programming	2.83	2.36	2.50	2.27	-	-	2.52
36	6	C361	Computer Networks & Data Communication	2.54	2.53	2.63	2.50	1.45	-	2.33
37		C362	VLSI	2.67	1.50	1.74	2.68	2.46	-	2.21
38		C363	Electronics & Communication Engineering Project-II	2.73	2.72	2.84	2.86	2.84	-	2.8
39		C364	Android App Development	2.71	2.67	2.74	2.74	2.70	-	2.71
40		C365	Renewable Energy & Emerging Trends in Electronics	2.77	2.82	2.79	2.58	-	-	2.74

Table 3.2.13: Attainment of Course outcome of Batch 2023-2026

Sr. No.	Sem	Course Code	Course Name	CO1	CO2	CO3	CO4	CO5	CO6	Average CO
1	1	C111	Mathematics	1.71	1.28	1.95	1.73	1.81	-	1.70
2		C112	Communication Skills in English	2.63	2.54	2.63	2.76	2.84	-	2.68
3		C113	Physics	2.63	2.66	2.63	2.07	1.81	-	2.36
4		C114	Basics of Information and Communication Technology	2.81	2.83	2.84	2.90	2.81	-	2.84
5		C115	Sports and Yoga	2.84	2.86	2.87	2.90	2.83	-	2.86
6		C116	Fundamentals of Electrical Engineering	2.15	1.85	2.43	2.15	-	-	2.15
7		C117	Fundamentals of Electronics	2.25	2.14	2.35	2.29	0.46	-	1.90
8	2	C121	Environment and Sustainability	1.33	1.46	1.7	1.41	1.21	-	1.42
9		C122	Engineering Drawing and Computer Aided Design	2.81	2.83	2.84	2.9	2.81	-	2.83
10		C123	Indian Constitution	2.8	2.83	2.84	2.9	2.81	-	2.84
11		C124	Engineering Mathematics	1.37	1.17	1.37	1.38	1.35	-	1.33
12		C125	Electronics Workshop	2.81	2.81	2.79	2.86	2.86	-	2.83
13		C126	Digital Electronics	2.76	2.50	2.54	2.37	2.73	-	2.58
14		C127	Electronic Circuits & Applications	1.73	1.70	1.74	1.68	1.93	-	1.76
15	3	C231	Summer Internship-I	2.83	2.72	2.97	2.82	2.88	-	2.84
16		C232	Electronic Circuits & Networks	2.03	2.32	2.30	1.88	2.08	-	2.12
17		C233	Electronic Measurements & Instruments	2.59	1.91	2.25	2.17	2.17	-	2.22
18		C234	Industrial Electronics	2.25	2.03	2.28	2.24	2.07	-	2.17

Sr. No.	Sem	Course Code	Course Name	CO1	CO2	CO3	CO4	CO5	CO6	Average CO
19	4	C235	Principle of Electronic Communication	2.43	1.78	2.83	1.75	2.62	-	2.28
20		C236	Programming In C	1.88	1.93	1.35	1.84	2.59	-	1.92
21		C241	Integrated Personality Development Course	2.87	2.88	2.91	2.91	2.89	2.89	2.89
22		C242	Microprocessor & Microcontroller	1.90	2.20	2.31	2.17	2.10	-	2.14
23		C243	Digital Communication	2.55	2.38	2.80	2.36	2.59	-	2.54
24		C244	Circuit Design Tools	2.80	2.80	2.90	2.77	-	-	2.82
25		C245	Linear Integrated Circuit(Analog Electronics)	2.48	2.57	2.03	2.60	2.88	-	2.51
26		C246	Antenna & Wave Propagation	2.63	2.68	2.57	2.77	2.87	-	2.70
27		C247	Consumer Electronics & Maintenance	2.42	2.38	2.40	2.36	2.71	-	2.45
28	5	C351	Entrepreneurship and Start-ups	2.80	2.43	1.83	2.68	1.95	-	2.34
29		C352	Embedded System	1.85	2.28	2.50	2.78	2.68	-	2.42
30		C353	Microwave and Radar Communication	2.40	2.83	2.50	2.98	2.80	-	2.70
31		C354	Mobile & Wireless Communication	2.40	2.43	2.70	2.98	2.80	-	2.66
32		C355	Software Practices	2.83	2.83	2.85	2.88	2.80	-	2.84
33		C356	Summer Internship-II	2.85	2.88	2.93	2.78	2.80	-	2.85
34		C357	Electronics and Communication Engineering Project-I	2.85	2.88	2.93	2.78	2.80	-	2.85
35		C358	OOPS & Python Programming	2.60	2.43	2.10	2.58	-	-	2.43
36	6	C361	Computer Networks & Data Communication	2.65	2.50	2.63	2.75	2.28	-	2.56
37		C362	VLSI	2.35	2.73	2.93	2.75	2.93	-	2.73
38		C363	Electronics & Communication Engineering Project-II	2.95	2.90	2.93	2.88	2.95	-	2.92
39		C364	Android App Development	2.90	2.90	2.93	2.93	2.88	-	2.90
40		C365	Renewable Energy & Emerging Trends in Electronics	2.95	2.90	2.93	2.88	2.95	-	2.92

3.3 Attainment of Program Outcomes & Program Specific Outcomes (40)

Program Outcomes (POs) represent the knowledge, skills and attitudes the students should have at the end of a three year diploma program in India.

Program Specific Outcomes are statements that describe what the graduates of a specific engineering program should be able to do.

3.3.1 Describe assessment tools and processes used for assessing the attainment of each POs and PSOs as mentioned in Annexure 1 (10)

A. List of assessment tools & processes (02)

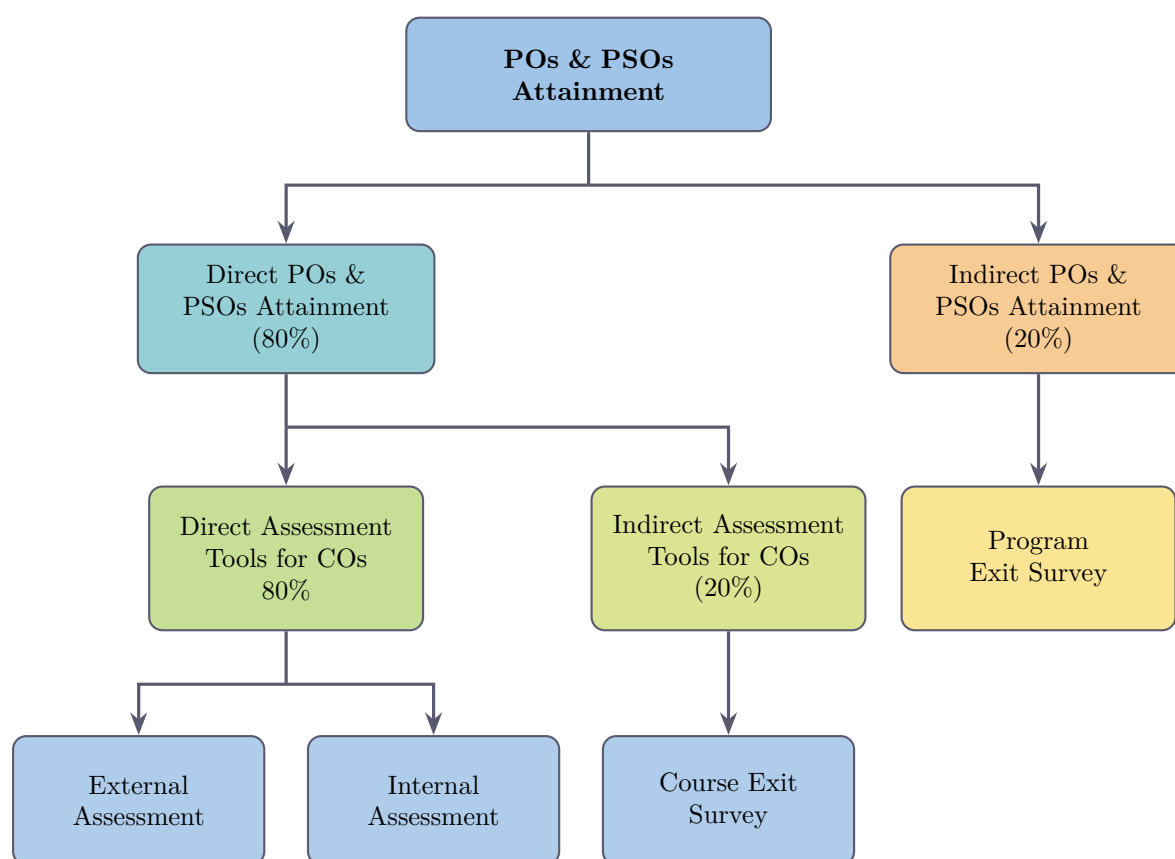


Figure 3.3.1: Structure for POs & PSOs Attainment

The assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes consist of direct and indirect attainment. For direct attainment process of POs consists of two tools i.e. direct assessment tool and indirect assessment tool for COs. The direct assessment tool consists of Internal and External assessment of the student as mentioned in above figure. The indirect assessment of COs is carried out by course exit survey.

B. The quality/relevance of assessment tools/ processes used (08)***Direct POs & PSOs Attainment:***

Each COs of a particular course is mapped with the POs and PSOs with attainment level 1, 2, and 3. The value of particular COs attainment and COs POs PSOs mapping is used to derive the attainment of particular POs and PSOs using the below equation.

$$\text{POs \& PSO Direct Attainment} = \frac{\text{COs-POs-PSOs Mapping Value} \times \text{COs Attainment}}{3}$$

Likewise, attainment of all POs and PSOs with respect to all COs are derived and tabulated in COs-POs-PSOs attainment matrix.

The last row of COs-POs-PSOs attainment matrix indicates weighted average of all COs attainment for particular POs and PSOs, which in turns, represents POs and PSOs attainment for a particular course. A sample COs-POs-PSOs attainment matrix is given below. It represents the contribution of the respective course in direct attainment of POs and PSOs.

GOVERNMENT POLYTECHNIC PALANPUR										
Term Date:		18-12-2024	TO		28-04-2025					
Programme :		Diploma in Electronics and Communicati								
Semester :		4								
Academic Year :		Feb 2024 TO May 2024								
Course Code and Name :		4341105 Linear Integrated Circuit(Analog El								
Course Coordinator :		Mr.R.C.Parmar								
Faculty Members Involve		0.00								
No of Students in Class :		7.00								
CO	AVERAGE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C245.1	2.06	3	2	2	2	2	2	2	2	2
		2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
C245.2	1.86	3	3	2	2	2	3	2	3	3
		1.3	1.3	1.2	1.2	1.2	1.3	1.2	1.3	1.3
C245.3	1.83	3	3	2	2	2	3	3	2	3
		1.8	1.8	1.2	1.2	1.2	1.8	1.8	1.2	1.8
C245.4	2.18	3	2	3	2	2	3	3	3	3
		2.2	1.5	2.2	1.5	1.5	2.2	2.2	2.2	2.2
C245.5	2.50	3.0	3.0	3.0	3.0	2.0	3.0	2.0	3.0	3.0
		2.5	2.5	2.5	2.5	1.7	2.5	1.7	2.5	2.5
	-									
		-	-	-	-	-	-	-	-	-
Attainment		2.08	1.80	1.70	1.56	1.39	1.95	1.66	1.83	1.95

Figure 3.3.2: Sample COsPOs/PSOs Direct Attainment of Course Linear Integrated Circuit (Analog Electronics)

Course attainment value for each POs and PSOs is then tabulated for all the courses of the program to measure the direct attainment value for POs and PSOs. Average of all course POs & PSOs is considered as direct attainment of POs & PSOs which further used for overall POs & PSOs attainment calculation.

Indirect POs & PSOs Attainment:

Indirect assessment includes program exit survey. These are based on a questionnaire which directly resembles with POs and PSOs. It is taken from passed out students from each batch through hard copy. The format of program exit survey is shown in Figure 3.3.3.



Government Polytechnic, Palanpur
Electronics and Communication Department



Program Exit Survey

Enrollment Number: _____

Date: ____/____/____

- 1) PO1- Have you attained the ability to apply knowledge of basic mathematics, science and engineering fundamentals and Electronics and Communication specialization to solve engineering problems? (Basic and discipline specific knowledge).
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor
- 2) PO2 - Will you be able to identify and analyze well-defined engineering problems using codified standard methods? (Problem analysis).
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor
- 3) PO3 - Will you be able to design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs? (Design and development of solutions).
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor
- 4) PO4 - Will you be able to apply modern engineering tools and appropriate technique to conduct standard tests and measurements? (Engineering Tools, experimentation and testing).
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor
- 5) PO5 - Will you be able to produce technical solution in global and societal context and get an understanding of professional and ethical responsibilities and act accordingly in all situations? (Engineering practices for society, sustainability and environment)
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor
- 6) PO6 - Will you be able to function effectively as an individual, as a team member, and in multidisciplinary environment teams? (Project Management).
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor
- 7) PO7 - Would be able to improve Self through continuous professional development, and independent and lifelong learning in the context of technological changes? (Life-long learning).
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor
- 8) PSO1 - Are you able to develop Developed proficiency in Installation, maintenance and troubleshooting of electronics and communication systems?
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor
- 9) PSO2 - Are you able to customized solution of real-life problems using hardware and software?
 1.Excellent 2.Very Good 3.Good 4.Average 5.Poor

Figure 3.3.3: Sample of Program Exit Survey Form

The responses are analyzed and transformed into Weightage of 1 to 3 as per need for calculating attainment of POs & PSOs. So, we have established a co-relation for the values Excellent, Very Good, Good, Average and Poor with 3, 2.5, 2, 1 & 0 accordingly. From the response we make summary sheet which are shown in Figure 3.3.4. Average of each POs & PSOs is taken for overall attainment of POs & PSOs calculation.

PO	Total Count in received feedback								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
Excellent (3)	2	3	1	0	0	2	2	0	2
Very Good (2.5)	2	1	4	3	2	4	1	3	2
Good (2)	3	3	2	3	2	1	4	3	3
Average (1)	0	0	0	1	3	0	0	1	0
Poor (0)	0	0	0	0	0	0	0	0	0
PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
LEVEL	2.43	2.5	2.43	2.08	1.72	2.58	2.36	2.08	2.43

Figure 3.3.4: Sample Summary Sheet of Indirect POs & PSOs Attainment for Batch 2022-25

Overall attainment of POs and PSOs:

The overall attainment for each POs and PSOs is derived as per weightage of direct and indirect assessment. To measure the attainment of POs and PSOs, direct assessment has 80% weightage and indirect assessment has 20% weightage. Following illustrative table gives an insight of evaluating the weightage of direct and indirect attainment in measuring overall attainment of POs and PSOs.

Table 3.3.1: Sample Overall attainment of POs and PSOs For Batch 2022-2025

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
Direct Attainment of POs/PSOs	1.96	1.38	1.42	1.50	1.30	1.31	1.51	1.85	1.53
Indirect Attainment of POs/PSOs	2.43	2.50	2.43	2.08	1.72	2.58	2.36	2.08	2.43
Final Attainment of POs/PSOs (80% Direct + 20% Indirect)	2.05	1.60	1.62	1.62	1.38	1.56	1.68	1.90	1.71

3.3.2 Provide results of evaluation of each PO & PSO (30)**A. Verification of documents, results and level of attainment of each PO/PSO (20)****Record of the attainment of POs and PSOs for (Batch 2021-2024)**

Table 3.3.2: POs and PSOs attainment for the Entry Year Batch 2021-24

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4300001	C111	0.91	0.37	0.29	-	-	-	0.3	-	-
4300002	C112	1.51	-	-	-	-	1.71	1.53	-	-
4300005	C113	1.68	0.57	0.56	1.12	0.53	-	0.56	0.9	-
4300010	C114	2.53	1.80	1.81	1.80	1.13	1.81	2.17	2.25	2.35
4300015	C115	2.31	-	-	-	0.96	-	1.92	-	-
4311101	C116	1.90	0.95	-	0.61	2.09	0.63	1.27	1.90	0.63

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4311102	C117	0.59	0.24	0.33	0.44	0.26	0.24	0.18	0.59	0.21
4300003	C121	1.17	1.08	0.95	0.62	1.04	0.71	0.84	1.17	-
4300012	C122	2.82	1.4	2.58	2.35	1.87	1.87	1.88	-	0.95
4300016	C123	-	0.95	0.95	-	1.89	0.95	1.89	-	-
4320002	C124	1.35	0.45	0.43	-	-	-	0.44	-	-
4321101	C125	2.32	1.96	2.15	2.51	1.26	0.90	1.79	2.32	2.32
4321102	C126	2.16	1.29	1.28	1.28	1.42	1.28	0.86	1.86	0.72
4321103	C127	1.76	1.30	1.42	1.40	0.92	1.63	0.93	1.23	1.48
4330001	C231	1.23	0.86	1.29	1.04	0.86	0.86	0.86	2.59	2.42
4331101	C232	1.52	1.45	1.31	1.12	0.80	0.90	1.13	1.52	1.02
4331102	C233	1.27	0.84	1.08	1.18	0.77	0.42	0.51	1.27	0.54
4331103	C234	1.11	0.74	0.74	0.90	0.56	0.90	0.53	1.04	0.98
4331104	C235	1.39	0.97	0.81	1.08	0.78	0.47	1.27	0.81	0.50
4331105	C236	1.26	1.15	1.04	1.20	0.80	0.78	1.07	-	1.45
4340003	C241	0.97	0.97	0.97	-	2.57	2.25	2.70	-	-
4341101	C242	2.47	1.61	1.80	1.78	0.81	1.81	1.93	2.15	1.43
4341102	C243	2.53	1.19	1.17	2.04	1.36	1.52	2.17	2.36	2.17
4341104	C244	2.40	1.93	1.93	2.86	1.18	0.95	1.20	0.69	2.40
4341105	C245	1.80	1.56	1.45	1.33	1.20	1.67	1.42	1.56	1.67
4341106	C246	1.61	1.50	1.41	1.18	0.87	0.97	1.18	1.61	0.74
4341107	C247	1.50	1.06	1.00	1.27	1.27	0.89	1.50	1.50	0.48
4300021	C351	1.57	1.02	0.98	0.62	0.67	1.32	1.44	1.10	0.84
4351102	C352	2.35	1.90	1.62	1.62	1.34	1.77	1.94	2.22	1.64
4351103	C353	1.27	1.04	1.27	1.24	1.45	0.99	1.10	1.36	1.36
4351104	C354	2.33	1.73	1.57	1.68	1.38	1.68	1.97	2.50	2.08
4351105	C355	2.85	2.09	1.90	2.28	0.95	1.26	2.85	-	2.85
4351106	C356	1.52	1.90	1.71	1.14	2.09	1.52	1.90	2.28	2.22
4351107	C357	2.68	1.79	1.26	1.43	1.61	1.25	2.68	1.79	1.97
4351108	C358	1.66	1.45	1.38	1.21	-	0.90	1.79	-	2.15
4361101	C361	2.63	1.91	1.59	1.42	1.22	1.87	2.44	2.10	2.43
4361102	C362	1.76	1.72	1.51	1.51	1.95	1.81	1.45	1.70	0.74
4361103	C363	2.79	0.93	2.19	1.70	1.86	1.92	1.91	2.08	1.89
4361104	C364	2.08	2.27	2.84	2.28	1.52	1.33	0.95	0.95	1.89
4361106	C365	2.81	1.85	1.85	1.85	1.63	1.85	2.57	2.81	2.74
Direct Attainment of POs/PSOs		1.85	1.31	1.36	1.44	1.24	1.26	1.47	1.67	1.53
Indirect Attainment of POs/PSOs		2.25	2	2.63	2.63	2.25	2.63	2.25	2.50	2.50
Final Attainment of POs/PSOs (80% Direct + 20% Indirect)		1.93	1.44	1.61	1.67	1.44	1.53	1.62	1.83	1.72

Record of the attainment of POs and PSOs for (Batch 2022-2025)

Table 3.3.3: POs and PSOs attainment for the Entry Year Batch 2022-25

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4300001	C111	1.49	0.62	0.48	-	-	-	0.45	-	-

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4300002	C112	1.11	-	-	-	-	1.24	1.1	-	-
4300005	C113	2	0.72	0.67	1.33	0.61	-	0.67	1.06	-
4300010	C114	2.53	1.81	1.80	1.81	1.13	1.80	2.18	2.24	2.34
4300015	C115	2.26	-	-	-	0.94	-	1.89	-	-
4311101	C116	2.26	1.43	-	0.74	2.33	0.75	1.51	2.26	0.75
4311102	C117	1.58	0.65	0.93	1.18	0.43	0.63	0.44	1.58	0.67
4300003	C121	1.14	1.02	0.91	0.56	1.03	0.70	0.80	1.23	-
4300012	C122	2.05	1.02	1.88	1.71	1.37	1.37	1.37	-	0.69
4300016	C123	-	0.83	0.83	-	1.66	0.83	1.66		
4320002	C124	1.95	0.65	0.65	-	-	-	0.63	-	-
4321101	C125	2.15	1.80	1.97	2.31	1.30	1.12	1.80	2.15	2.15
4321102	C126	2.19	1.28	1.30	1.30	1.52	1.30	0.88	1.87	0.73
4321103	C127	1.87	1.38	1.51	1.48	0.97	1.73	1.00	1.87	0.79
4330001	C231	1.20	0.85	1.29	1.03	0.85	0.85	0.85	1.29	0.85
4331101	C232	2.01	1.89	1.74	1.48	1.07	1.20	1.48	2.01	1.34
4331102	C233	2.11	1.40	1.78	1.96	1.30	0.68	0.84	2.11	0.91
4331103	C234	1.40	0.93	0.93	1.12	0.71	1.12	0.66	1.30	1.22
4331104	C235	1.83	1.26	1.09	1.42	1.01	0.59	1.67	1.08	0.66
4331105	C236	1.22	0.97	0.85	1.10	0.74	0.81	1.08	-	1.46
4340003	C241	0.97	0.97	0.97	-	2.58	2.27	2.72	-	-
4341101	C242	1.77	1.15	1.29	1.27	0.61	1.29	1.37	1.54	1.01
4341102	C243	2.32	1.08	1.07	1.86	1.24	1.39	2.01	2.15	2.01
4341104	C244	2.35	1.91	1.90	2.76	1.09	0.92	1.16	2.48	2.35
4341105	C245	2.08	1.80	1.70	1.56	1.39	1.95	1.66	1.83	1.95
4341106	C246	2.50	2.34	2.17	1.85	1.34	1.50	1.83	2.50	1.16
4341107	C247	1.60	1.19	1.08	1.38	1.38	0.97	1.60	1.60	0.53
4300021	C351	1.50	1.03	0.97	0.63	0.63	1.26	1.37	-	-
4351102	C352	2.28	1.87	1.62	1.62	1.32	1.75	1.92	1.75	1.61
4351103	C353	1.76	1.30	1.76	1.61	1.63	1.57	1.44	1.94	1.79
4351104	C354	2.10	1.52	1.37	1.52	1.20	1.52	1.78	2.25	1.71
4351105	C355	2.81	2.07	1.88	2.26	0.95	1.25	2.81	-	2.81
4351106	C356	1.45	1.81	1.63	1.09	2.00	1.45	1.82	2.18	2.12
4351107	C357	2.85	1.90	1.33	1.52	1.71	1.33	2.85	1.90	2.09
4351108	C358	1.90	1.65	1.63	1.42	-	1.03	2.06	-	2.49
4361101	C361	2.33	1.65	1.46	1.22	1.04	1.65	2.16	1.82	2.16
4361102	C362	1.95	1.68	1.48	1.64	2.10	1.80	1.65	1.93	1.73
4361103	C363	2.72	0.91	2.14	1.67	1.85	1.90	1.88	2.05	1.87
4361104	C364	1.99	2.17	2.71	2.17	1.45	1.27	0.90	0.90	1.81
4361106	C365	2.74	1.81	1.81	1.81	1.60	1.81	2.51	2.74	2.70
Direct Attainment of POs/PSOs		1.96	1.38	1.42	1.50	1.30	1.31	1.51	1.85	1.53
Indirect Attainment of POs/PSOs		2.43	2.50	2.43	2.08	1.72	2.58	2.36	2.08	2.43
Final Attainment of POs/PSOs (80% Direct + 20% Indirect)		2.04	1.60	1.62	1.62	1.38	1.56	1.68	1.90	1.71

Record of the attainment of POs and PSOs for (Batch 2023-2026)

Table 3.3.4: POs and PSOs attainment for the Entry Year Batch 2023-26

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4300001	C111	1.7	0.7	0.55	-	-	-	0.54	-	-
4300002	C112	1.58	-	-	-	-	1.79	1.61	-	-
4300005	C113	2.36	0.83	0.79	1.57	0.72	-	0.79	1.26	
4300010	C114	2.65	1.89	1.89	1.89	1.18	1.89	2.28	2.35	2.84
4300015	C115	2.29	-	-	-	0.95	-	1.91	-	-
4311101	C116	2.15	1.34	-	0.72	2.15	0.72	1.43	2.15	0.72
4311102	C117	1.90	0.78	1.08	1.42	0.65	0.79	0.56	1.90	0.75
4300003	C121	0.95	0.86	0.76	0.48	0.87	0.61	0.67	0.95	-
4300012	C122	2.85	1.42	2.61	2.37	1.89	1.91	1.9	-	0.97
4300016	C123	-	0.95	0.95	-	1.89	0.95	1.89	-	-
4320002	C124	1.33	0.44	0.44	-	-	-	0.44	-	-
4321101	C125	2.44	2.07	2.26	2.64	1.51	1.32	2.07	2.64	1.56
4321102	C126	2.54	1.20	1.19	2.03	1.35	1.53	2.18	2.36	2.18
4321103	C127	1.76	1.28	1.41	1.38	0.92	1.64	0.94	1.30	1.53
4330001	C231	1.33	0.95	1.43	1.15	0.95	0.95	0.95	2.84	2.65
4331101	C232	2.12	2.00	1.82	1.55	1.11	1.26	1.57	2.12	1.42
4331102	C233	2.22	1.47	1.95	2.05	1.36	0.72	0.88	2.22	0.95
4331103	C234	1.81	1.21	1.21	1.45	0.89	1.45	0.84	1.69	1.57
4331104	C235	2.11	1.45	1.23	1.64	1.19	0.71	1.95	1.26	0.76
4331105	C236	1.62	1.38	1.28	1.54	1.02	1.06	1.45	-	1.92
4340003	C241	0.96	0.96	0.96	-	2.56	2.24	2.69	-	-
4341101	C242	2.14	1.42	1.56	1.57	0.67	1.56	1.72	1.80	1.30
4341102	C243	2.54	1.20	1.19	2.03	1.35	1.53	2.18	2.36	2.18
4341104	C244	2.36	1.89	1.89	2.82	1.16	0.94	1.18	2.77	2.36
4341105	C245	2.51	2.18	2.04	1.87	1.68	2.35	1.99	2.21	2.35
4341106	C246	2.70	2.52	2.35	1.98	1.45	1.62	1.98	2.70	1.25
4341107	C247	2.45	1.81	1.66	2.13	2.13	1.50	2.45	2.45	0.82
4300021	C351	2.16	1.63	1.44	0.96	0.89	1.85	1.97	1.56	1.54
4351102	C352	2.42	1.97	1.70	1.70	1.31	1.82	1.99	1.82	1.69
4351103	C353	1.97	1.42	2	1.78	1.72	1.83	1.61	2.18	1.97
4351104	C354	2.46	1.79	1.60	1.76	1.42	1.76	2.10	2.66	2.13
4351105	C355	2.84	2.08	1.89	2.27	0.94	1.26	2.84	-	2.84
4351106	C356	1.53	1.90	1.71	1.14	2.09	1.52	1.90	2.28	2.20
4351107	C357	2.85	1.90	1.33	1.51	1.71	1.33	2.85	1.90	2.09
4351108	C358	1.83	1.64	1.58	1.40	-	1.01	1.99	-	2.43
4361101	C361	2.56	1.86	1.56	1.35	1.18	1.88	2.38	2.04	2.39
4361102	C362	2.36	2.24	1.88	2.05	2.54	2.24	2.01	2.40	2.37
4361103	C363	2.93	0.98	2.27	1.75	1.95	1.92	1.96	2.14	1.95
4361104	C364	2.13	2.33	2.91	2.32	1.55	1.36	0.97	0.97	1.94
4361106	C365	2.94	1.97	1.97	1.97	1.72	1.97	2.70	2.94	2.98
Direct Attainment of POs/PSOs		2.16	1.52	1.57	1.71	1.40	1.46	1.70	2.07	1.83
Indirect Attainment of POs/PSOs		2.5	2.5	2.5	2.4	2	2.7	2.6	2.5	2.6
Final Attainment of POs/PSOs (80% Direct + 20% Indirect)		2.22	1.71	1.75	1.84	1.52	1.70	1.88	2.15	1.98

B. Overall levels of attainment (10)

The overall level of attainment of each PO and PSO, for every batch, is the **Final Attainment of POs/PSOs (80% Direct + 20% Indirect)** row of the respective batch table in Section 3.3.2 A, computed from the Direct and Indirect attainment rows shown immediately with it. Those rows are consolidated below so that the overall level of every outcome, and its movement across the three batches, can be read in one place.

The target against which each level is judged is **not a single fixed value**. As recorded in Criterion 7 (Table 7.1.1), the department sets the target for each outcome individually at a percentage of that outcome's Programme Articulation Matrix average, and raises it whenever the target is met: 66.67% for 2023–24, 70% for 2024–25 and 73% for 2025–26. The targets shown below are therefore the 2025–26 values, the highest the department has set.

Table 3.3.5: Overall Levels of Attainment of POs and PSOs across Batches

Outcome	Batch 2021–24	Batch 2022–25	Batch 2023–26	Target 2025–26	Margin	Change	Status
PO1	1.93	2.04	2.22	1.95	+0.27	+0.29	Target exceeded
PO2	1.44	1.60	1.71	1.38	+0.33	+0.27	Target exceeded
PO3	1.61	1.62	1.75	1.40	+0.35	+0.14	Target exceeded
PO4	1.67	1.62	1.84	1.50	+0.34	+0.17	Target exceeded
PO5	1.44	1.38	1.52	1.26	+0.26	+0.08	Target exceeded
PO6	1.53	1.56	1.70	1.28	+0.42	+0.17	Target exceeded
PO7	1.62	1.68	1.88	1.47	+0.41	+0.26	Target exceeded
PSO1	1.83	1.90	2.15	1.78	+0.37	+0.32	Target exceeded
PSO2	1.72	1.71	1.98	1.51	+0.47	+0.26	Target exceeded

Observations on the Overall Levels of Attainment

- **Every outcome exceeded its target, in every year of the assessment period.** All seven POs and both PSOs attained above target in 2023–24, in 2024–25 and again in 2025–26, with margins in the latest batch ranging from +0.26 (PO5) to +0.47 (PSO2).
- **The target itself was raised twice because it was met.** Under the revision rule in Criterion 7 the target moves up by 3% whenever it is achieved and down if it is not; it has moved only upward, from 66.67% of the Programme Articulation Matrix average to 70% and then 73%. The levels below are therefore attained against a progressively harder standard.
- **Every outcome also improved in absolute terms.** All nine record a higher final attainment in Batch 2023–26 than in Batch 2021–24, with no outcome regressing over the period as a whole.
- **The strongest gains are in PSO1 (+0.32), PO1 (+0.29), PO2 (+0.27) and PO7 (+0.26),** corresponding to the laboratory upgrades and the project and skill-based activities described in Criterion 2 and Criterion 6.
- **PO1 (2.22) and PSO1 (2.15) have additionally passed level 2.00,** the mapping

strength used for curricular-gap analysis in Criterion 2, with PSO2 at 1.98 effectively at that level as well.

- **PO5 is the outcome selected for further strengthening.** It clears its 2025–26 target by +0.26, and the department has chosen it as the focus of the next improvement cycle through sustainability-themed projects and community activities, as recorded in Criterion 7.

The consistent margin above target across all nine outcomes, sustained while the target was raised in each successive year, is what allows the improvement cycle recorded in Criterion 7 to keep tightening the standard rather than relax it.

Criterion 4

Students' Performance (200)

Total Marks: 200

Table 4.0.1: Sub-Criteria and Marks Distribution – Criterion 4: Students' Performance (Total 200 Marks)

No.	Sub-Criterion	Marks
4.1	Enrolment Ratio	20
4.2	Success Rate in the stipulated period of the program	60
4.2.1	Success rate without backlogs in any year of study	40
4.2.2	Success rate in stipulated period of study	20
4.3	Academic Performance in First Year	25
4.4	Academic Performance in Second Year	20
4.5	Academic Performance in Final Year	15
4.6	Placement, Higher Studies and Entrepreneurship	40
a	Provide the placement data in the below mentioned format with the name of the program and the assessment year (separately for CAYm1, CAYm2 and CAYm3)	–
4.7	Professional Activities	20
4.7.1	Professional societies / student chapters and organizing technical events	10
A	Availability of Professional Societies/Chapters & Relevant activities	5
B	Number, quality of engineering events	5
4.7.2	Publication of technical magazines, newsletters, etc	5
A	Quality & Relevance of the contents and Print Material	3
B	Participation of Students from the program	2
4.7.3	Participation in inter-institute / state/national events by students of the program of study	5
Total Marks – Criterion 4		200

Intake and Graduation Summary

Intake information

Table 4.0.2: Intake information – sanctioned intake and admitted students

Item	CAY 2025-26	CAYm1 2024-25	CAYm2 2023-24	CAYm3 2022-23	CAYm4 2021-22	CAYm5 2020-21
Sanctioned intake strength of the program (N)	30	30	30	30	30	30
Total number of students admitted through state-level counselling (N 1)	17	15	07	11	19	06
Number of students admitted through Institute level quota (N 2)	00	00	00	00	00	00
Number of students admitted through lateral entry (N3)	00	00	00	01	01	00
Total number of students admitted in the Program (N 1 + N 2 + N3)	17	15	07	12	20	06

CAY – Current Academic Year

CAYm1- Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

CAYm3 - Current Academic Year minus3=Current Assessment Year minus 2

CAYm4 - Current Academic Year minus4=Current Assessment Year minus 3

CAYm5 - Current Academic Year minus5=Current Assessment Year minus 4

Table 4.0.3: Students graduated without backlogs in any year of study

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)		
		I Year	II Year	III Year
CAY 2025-26	17			
CAYm1 2024-25	15	02	00	
CAYm2 2023-24	07	03	01	01
CAYm3(LYG) 2022-23	12	03	00	00
CAYm4 (LYGm1)2021-22	20	01	01	01
CAYm5 (LYGm2) 2020-21	06	04	02	02

LYG – Last Year Graduate

LYGm1 – Last Year Graduate minus 1

LYGm2 – Last Year Graduate minus 2

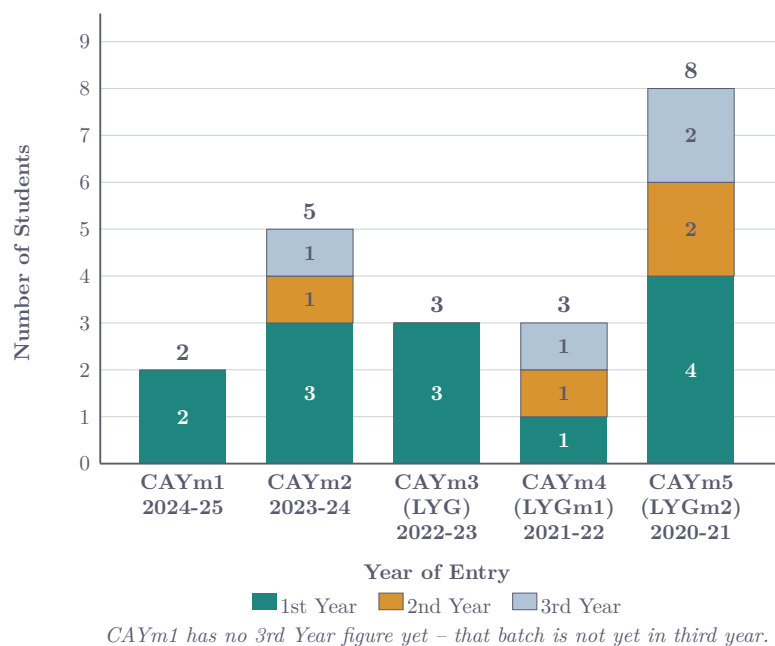


Figure 4.0.1: Students Graduated Without Backlogs in Any Semester/Year of Study

Table 4.0.4: Students graduated in the stipulated period of study

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated in stipulated period of study (total of with backlog+ without backlog)		
		I Year	II Year	III Year
CAY 2025-26	17			
CAYm1 2024-25	15	08	08	
CAYm2 2023-24	07	06	04	04
CAYm3(LYG) 2022-23	12	09	07	03
CAYm4 (LYGm1)2021-22	20	13	05	03
CAYm5 (LYGm2) 2020-21	06	06	05	02

LYG – Last Year Graduate

LYGm1 – Last Year Graduate minus 1

LYGm2 – Last Year Graduate minus 2

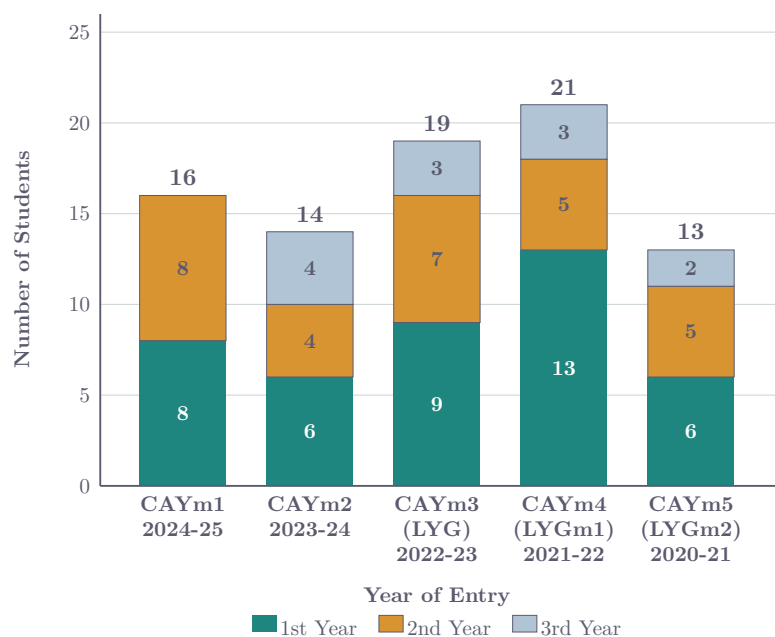


Figure 4.0.2: Students Graduated in the Stipulated Period of Study

4.1 Enrolment Ratio (20)

Enrolment Ratio = $(N1+N2) / N$

Table 4.1.1: Enrolment ratio assessment marks slab

Item (Students enrolled at the First Year Level on average basis during the previous three academic years including the current academic year)	Marks
> = 90% Students	20
> = 80% Students	18
> = 70% Students	16
> = 60% Students	12
> = 50% Students	08
< 50% Students	0

Table 4.1.2: Enrolment ratio computation – 2023-24 to 2025-26

Sr No	Year	N (From Table 4.1)	N1+N2 (From Table 4.1)	Enrollment Ratio $[(N1 + N2 / N) * 100]$
1	2025-26	30	17	56.67
2	2024-25	30	15	50.00
3	2023-24	30	07	23.33
Average				43.33

Average = $[(ER1+ER2+ER3)/3] * 100 = 43.33 \%$

Assessment:- 0.00

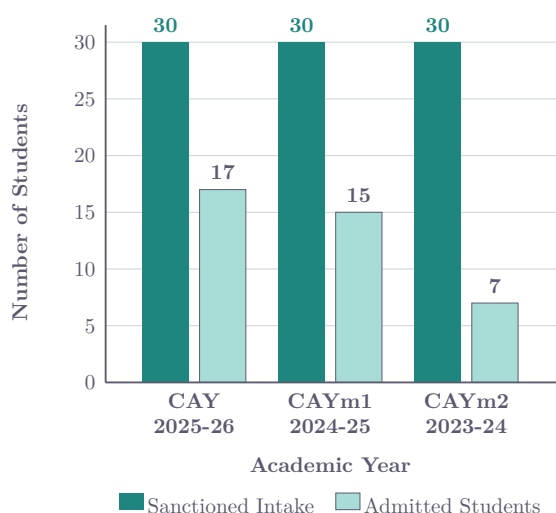


Figure 4.1.1: Enrolment – Sanctioned Intake vs Admitted Students

4.2 Success Rate in the stipulated period of the program (60)

4.2.1 Success rate without backlogs in any year of study (40)

SI = (Number of students who have passed from the program without backlog)/(Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry)

Average SI = Mean of success index (SI) for past three batches

Success rate without backlogs in any year of study = $40 \times \text{Average SI}$

Table 4.2.1: Success index computation without backlogs – LYG to LYGm2

Item	Last Year Graduate, (LYG) 2022-2023	Last Year Graduate, (LYGm1) 2021-2022	Last Year Graduate, (LYGm2) 2020-2021
Total number of students (admitted through state level counselling + admitted through Institute on level quota+ actually admitted through lateral entry) ($N_1 + N_2 + N_3$)	12	20	06
Number of students who have passed without backlogs in the stipulated period(Y)	00	01	02
Success index (SI)=Y/X	0.00	0.05	0.33
Average SI	0.13	0.13	0.13
Success rate without backlogs in any year of study = $40 \times \text{Average SI}$	5.20		

4.2.2 Success rate in stipulated period of study (20)

SI= (Number of students who have passed from the program in the stipulated period of course duration)/ (Number of students admitted in the first year of that batch plus actually admitted in 2nd year via lateral entry)

Average SI = Mean of success index (SI) for past three batches

Success rate = $20 \times \text{Average SI}$

Table 4.2.2: Success index computation for the stipulated period – LYG to LYGm2

Item	Last Year Graduate, (LYG) 2022-2023	Last Year Graduate, (LYGm1) 2021-2022	Last Year Graduate, (LYGm2) 2020-2021
Total number of students (admitted through state level counselling + admitted through Institute on level quota+ actually admitted through lateral entry) ($N_1 + N_2 + N_3$)	12	20	06
Number of students who have passed in the stipulated period, i.e. total of with backlog and without backlog (Y)	03	03	02
Success index (SI)=Y/X	0.25	0.15	0.33
Average SI	0.24	0.24	0.24
Success rate = 20 × Average SI			4.80

4.3 Academic Performance in First Year (25)

Academic Performance Level = 2.5 * Average API

API = ((Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in First Year/ 10)) x (successful students/number of students appeared in the examination).

Successful students are those who are permitted to proceed to the second year

Table 4.3.1: Academic Performance Index computation – First Year

Academic Performance	CAYm1 2024-25	CAYm2 2023-24	CAYm3 2022-23 LYG
Mean of CGPA or Mean Percentage of all successful students (X)	6.34	6	5.71
Total no. of successful students (Y)	8	6	9
Total no. of students appeared in the examination (Z)	15	7	11
API = $X * (Y/Z)$	3.38	5.14	4.67
Average API = $(AP1 + AP2 + AP3)/3$	4.40	4.40	4.40
Academic Performance Level = 2.5 * Average API=2.5*4.40		11.00	

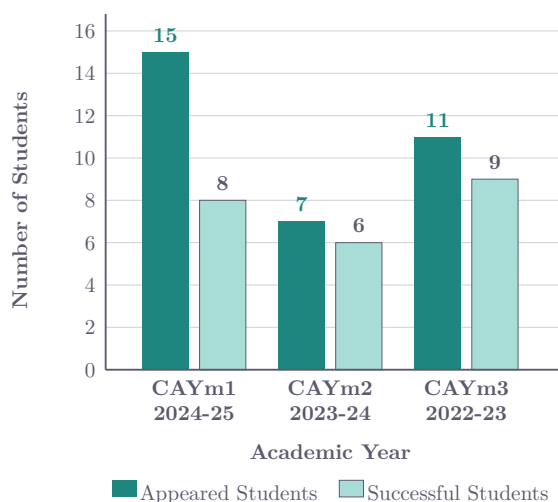


Figure 4.3.1: First Year – Students Appeared vs Successful

4.4 Academic Performance in Second Year (20)

Academic Performance Level = $2.0 \times \text{Average API}$

API = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/ 10)) $\times$ (successful students/number of students appeared in the examination).

Successful students are those who are permitted to proceed to the final year

Table 4.4.1: Academic Performance Index computation – Second Year

Academic Performance	CAYm2 2023-24	CAYm3 2022-23 LYG	CAYm4 2021-22 LYGm1
Mean of CGPA or Mean Percentage of all successful students (X)	6.93	4.9	6.18
Total no. of successful students (Y)	4	7	5
Total no. of students appeared in the examination (Z)	6	10	14
API = $X \times (Y/Z)$	4.62	3.43	2.21
Average API = $(AP1 + AP2 + AP3)/3$	3.42	3.42	3.42
Academic Performance Level = $2.0 \times \text{Average API} = 2 \times 3.42$		6.84	

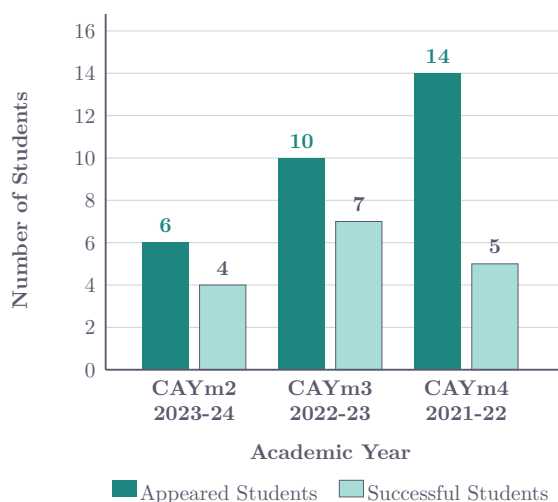


Figure 4.4.1: Second Year – Students Appeared vs Successful

4.5 Academic Performance in Final Year (15)

Academic Performance Level = $1.5 \times \text{Average API}$ (Academic Performance Index)

API = (Mean of Final Year Grade Point Average of all successful Students on a 10-point scale)
or (Mean of the percentage of marks of all successful students in Final Year/10) $\times$ (successful students/number of students appeared in the examination)

Successful students are those who passed in all the final year courses

Table 4.5.1: Academic Performance Index computation – Final Year

Academic Performance	CAYm3 2022-23 LYG	CAYm4 2021-22 LYGm1	CAYm5 2020-21 LYGm2
Mean of CGPA or Mean Percentage of all successful students (X)	7.94	7.72	8.31
Total no. of successful students (Y)	3	3	2
Total no. of students appeared in the examination (Z)	7	5	5
API = $X \times (Y/Z)$	3.40	4.63	3.32
Average API = $(AP1 + AP2 + AP3)/3$	3.78	3.78	3.78
Academic Performance Level = $1.5 \times \text{Average API}$ = 1.5×3.78		5.68	

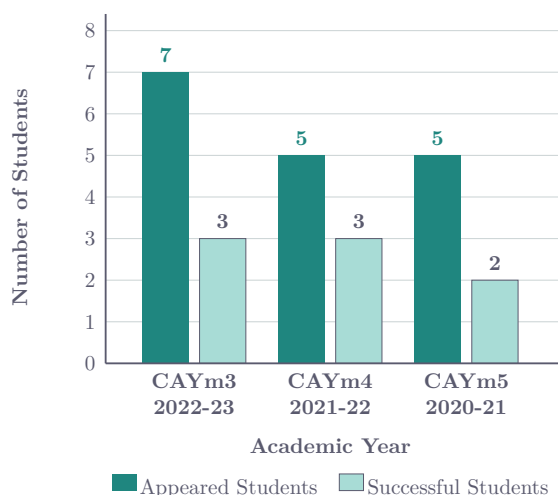


Figure 4.5.1: Final Year – Students Appeared vs Successful

4.6 Placement, Higher Studies and Entrepreneurship (40)

Table 4.6.1: Placement, higher studies and entrepreneurship index – LYG to LYGm2

Item	Last Year Graduate, (LYG) (2024-25)	Last Year Graduate, minus-1 (LYGm1) (2023-2024)	Last Year Graduate, minus-2 (LYGm2) (2022-23)
Total No. of Final Year Students (N)	07	05	05
No. of students placed in companies or Government Sector (X)	01	02	00
No. of students admitted to higher studies (Y)	01	01	02
No. of students turned entrepreneur in the respective field of engineering/technology (Z)	00	00	00
Placement Index (P) : $(1.25X + Y + Z)/N$	0.32	0.70	0.40
Average placement = $(P1 + P2 + P3)/3$	0.47	0.47	0.47
Assessment Points = 40 X Average placement = 40×0.47		18.80	

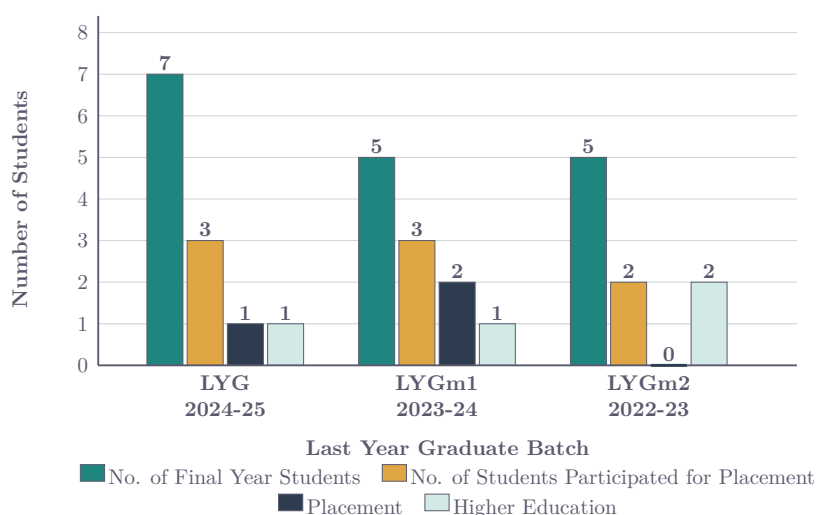


Figure 4.6.1: Placement, Higher Studies and Entrepreneurship

a. Provide the placement data in the below mentioned format with the name of the program and the assessment year (separately for CAYm1, CAYm2 and CAYm3)

Table 4.6.2: Placement Detail of CAYm1 (2024-25)

Assessment Year :- 2024-25 (CAYm1) (Placement)			
Sr. No.	Student name	Enrollment No.	Name of employer
1	PANCHAL SHUBH KIRANBHAI	226260311003	MICRON SEMICONDUCTOR TECHNOLOGY INDIA PRIVATE LIMITED
Assessment Year :- 2024-25 (CAYm1) (Higher Study)			
Sr. No	Student name	Enrollment No.	Name of employer
1	PATEL AKSHAR DILIPKUMAR	226260311004	FACULTY OF TECHNOLOGY(SFI), DHARMSINH DESAI UNIVERSITY, NADIAD

Table 4.6.3: Placement Detail of CAYm2 (2023-24)

Assessment Year :- 2023-24 (CAYm2) (Placement)			
Sr. No.	Student name	Enrollment No.	Name of employer
1	PAWAR BHARAT SHANKARLAL	216260311003	MICRON SEMICONDUCTOR TECHNOLOGY INDIA PRIVATE LIMITED
2	RAVAL STUTIBEN AMITKUMAR	216260311005	TDS Lithium-Ion Battery Gujarat Private Limited
Assessment Year :- 2023-24 (CAYm2) (Higher Study)			
Sr. No.	Student name	Enrollment No.	Name of employer

1	CHAUDHARY SRUJAL YASHVANTBHAI	216260311012	VISHWAKARMA GOVERNMENT ENGINEERING COLLEGE, CHAND- KHEDA,GANDHINAGAR
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Table 4.6.4: Placement Detail of CAYm3 (2022-23)

Assessment Year :- 2022-23 (CAYm3) (Placement)			
Sr. No.	Student name	Enrollment No.	Name of Institute
-NIL-			
Assessment Year :- 2022-23 (CAYm3) (High Study)			
Sr. No.	Student name	Enrollment No.	Name of Institute
1	CHAUDHARY PIYUSHBHAI NAGJIBHAI	206260311003	Government Engineering College, Sector-28, Gandhinagar
2	CHAUDHARY ADARSH PREMJIBHAI	206260311005	L.D. College of Engineering, Ahmedabad

4.7 Professional Activities (20)

4.7.1 Professional societies / student chapters and organizing technical events (10)

A. Availability of Professional Societies/Chapters & Relevant activities (05)

RUSA

- Rashtriya Uchchatar Shiksha Abhiyan (RUSA) is a Centrally Sponsored Scheme (CSS), launched in 2013 aims at providing strategic funding to eligible state higher educational institutions.
- Improve equity in higher education by providing adequate opportunities of higher education to SC/STs and socially and educationally backward classes; promote inclusion of women, minorities, and differently abled persons.

Activities under RUSA

Table 4.7.1: Professional Society Activities

Sr. No	Organized Events and Titles	Organized Period	No. of Days	Name of Expert
1	Expert lecture on Energy conservation	30/03/2017	1	Mr. Rajendra Pandya
2	Expert lecture on Kaizen & Quality Trends	31/08/2017	1	Mukesh T.Khatri
3	Expert lecture on Recent Trends in Automobile Engineering	5/9/2018	1	Mr Sudhirbhai and Mr Ashishbai ,
4	Expert lecture on Health Awareness Among Girl Child	27/9/2018	1	Dr.Jayshreeben Majethiya

Sr. No	Organized Events and Titles	Organized Period	No. of Days	Name of Expert
5	Expert lecture on Laws Related to Women Safety	29/01/2020	1	Hetalben K.Joshi
6	Expert lecture on "Create a atmosphere of Excellence & Equality among all sections of society"	13/02/2020	1	Mr.P.A.Thakor
7	Expert lecture on "Health Awareness Among Girl Child"	13/02/2020	1	Dr.Jayshreeben Majethiya
8	Workshop on "Self Defence Training for Women"	25/02/2020 To 29/02/2020	5	Mr.Jayeshkumar shivrambhai prajapati
9	Workshop "Self Defence Training for Women"	13/12/2021 To 17/12/2021	5	Mr. Jayeshkumar shivrambhai prajapati
10	Expert lecture on "LAW RELATED TO WOMEN SAFET"	03/05/2022	1	Ms. Yashshvi Mehta
11	Expert lecture on "DISADVANTAGES OF MOBILE AND INTERNET"	03/05/2022	1	Ms. Geeta Acharya
12	Expert lecture on "SELF EMPLOYMENT ENHANCEMENT"	03/05/2022	1	Tithi Vakil
13	Expert lecture on "COMPETITIVE EXAM PREPARATION CLASSES"	09/12/2022	1	Target academy
14	Expert lecture on "PREVENTION OF FETICIDE"	09/12/2022	1	Dr. Nilam Patel
15	Expert lecture on "GROUP COUNCELLING"	09/12/2022	1	Dr. NILAM PATEL
16	Expert lecture on "SELF EMPLOYMENT AND ENHANCEMENT FOR GIRLS' STUDENTS "	13/03/2023	1	MS. Jalpaben R Vaidya
17	Expert lecture on "MOTIVATIONALTALK FOR GIRL'S STUDENTS"	13/03/2023	1	Mr. Darshan Solanki
18	Expert lecture on "WOMEN EMPOWERMENT FOR GIRLS STUDENTS"	15/03/2023	1	MS. M.K. Pedhadiya
19	Expert lecture on "ICE BREAKING ACTIVITY FOR GIRLS' STUDENTS"	17/03/2023	1	Ms. Manishaben Joshi
20	Expert lecture on "ENHANCE CREATIVITY SKILLS FOR GIRLS' STUDENTS"	17/03/2023	1	Ms. Rukshanaben Parmar
21	Expert lecture on "ENTREPRENEURSHIP DEVLOPMENT"	21/08/2023	1	Mr. Virendrasinh Chavda
22	Expert lecture on "INNOVATIONS & CREATIVITY"	21/08/2023	1	Hiten Patel
23	Expert lecture on "SELF EMPLOYMENT AND ENHANCEMENT"	21/08/2023	1	Mr. Gaurav Patel
24	KARATE WORKSHOP FOR GIRLS	28/08/2023	1	Mr. Nareshbhai Prajapati

Sr. No	Organized Events and Titles	Organized Period	No. of Days	Name of Expert
25	YOGA WORKSHOP	15/09/2023	1	Mr. Ashish Modi



a. Expert Lecture on Energy Conservation



b. Expert Lecture on Kaizen & Quality Trends



c. Expert Lecture on Recent Trends in Automobile Engineering



d. Expert Lecture on Health Awareness Among Girl Child



e. Expert Lecture on Laws Related to Women Safety



f. Expert Lecture on "Create a Atmosphere of Excellence & Equality Among All Sections of Society"

Figure 4.7.1: RUSA Activities — Expert Lectures and Workshops (1 of 4)



a. Expert Lecture on “Health Awareness Among Girl Child”



b. Workshop on “Self Defence Training for Women”



c. Expert Lecture on Laws Related to Women Safety



d. Expert Lecture on “Disadvantages of Mobile and Internet”



e. Expert Lecture on “Self Employment Enhancement”



f. Expert Lecture on “Competitive Exam Preparation Classes”

Figure 4.7.2: RUSA Activities — Expert Lectures and Workshops (2 of 4)



a. Expert Lecture on “Prevention of Feticide”



b. Expert Lecture on “Group Counselling”



c. Expert Lecture on “Self Employment and Enhancement for Girls’ Students”



d. Expert Lecture on “Motivational talk for GIRL’S Students”



e. Expert Lecture on “Women Empowerment for Girls Students”



f. Expert Lecture on “ICE Breaking Activity for Girls’ Students”

Figure 4.7.3: RUSA Activities — Expert Lectures and Workshops (3 of 4)



a. Expert Lecture on “Enhance Creativity Skills for Girls’ Students”



b. Expert Lecture on “Entrepreneurship Development”



c. Expert Lecture on “Innovations & Creativity”



d. Expert Lecture on “Self Employment and Enhancement”



e. Karate Workshop for Girls

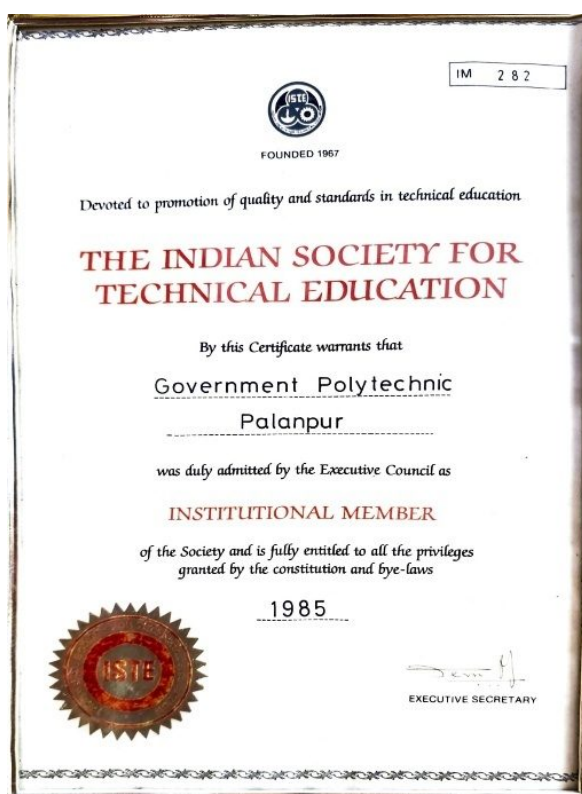


f. Yoga Workshop

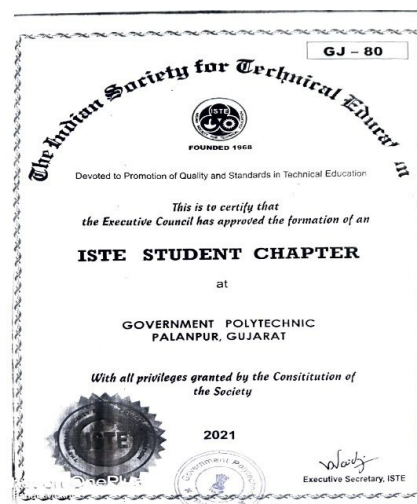
Figure 4.7.4: RUSA Activities — Expert Lectures and Workshops (4 of 4)

ISTE (Student chapter)

The Indian Society for Technical Education (ISTE) is the leading National Professional non-profit making Society for the Technical Education System in our country with the motto of Career Development of Teachers and Personality Development of Students and overall development of our Technical Education System. The department has had an ISTE student chapter since 2021.



a. Institutional Member ISTE Chapter



b. ISTE Student Chapter

Figure 4.7.5: ISTE Membership and Student Chapter Certificates

Activities under ISTE student chapter

Table 4.7.2: Activities under ISTE student chapter

Sr. No	Organized Events and Titles	Organized Period	No. Of Participants	No. of Days	Event organized By
1	Entrepreneurship Awareness Drive	07/04/2025 To 08/04/2025	95	2	CED (Center of Entrepreneurship Development)
2	Expert Lecture on "Drone Technologies"	15/02/2025	36	1	EC Department , G.P.Palanpur
3	Scratch Coding Competition	16/12/2025	12	1	EC Department , G.P.Palanpur
4	Workshop on "Introduction to RTL Design using Verilog HDL"	15/04/2023	37	1	EC Department ,G.P.Palanpur



a. Entrepreneurship Awareness Drive



b. Expert Lecture on "Drone Technologies"



c. Scratch Coding Competition



d. Workshop on "Introduction to RTL Design using Verilog HDL"

Figure 4.7.6: ISTE Student Chapter Activities

B. Number, quality of engineering events (05)

- Various activities like Expert Lectures, Seminars, Industrial visits, Guest Lectures and Career Guidance Programs are conducted to enhance various technical and professional skills among the students.
- Through these, we motivate our young, energetic, enthusiastic students to use their creative minds and their boundless imagination in the best possible way.
- With the help of this, students exhibit their talents which help in their career development and to elevate themselves onto excellent positions in the society.

Expert Lecture (Academic Year 2025-26)

Table 4.7.3: Expert lecture details 2025-26

Expert Lecture (Academic Year 2025-26)					
Sr No	Title Of Event	Date	Type Of Event	No. Of Student Participants (EC & others)	Name of Expert/Place
1	Emerging Mobility Trends For Engineers	12/03/2026	Technical Event	53	Mr. Jaimin Rami
2	Semiconductor Manufacturing Technology	09/03/2026	Technical Event	55	Dr. Vijay K. Patel

Sr No	Title Of Event	Date	Type Of Event	No. Of Student Participants (EC & others)	Name of Expert/Place
3	IOT Application with ESP-32, NOD-MCU, Rasberry Pi	07/10/2025	Technical Event	21	Mr. Rishabh Prajapati
4	Cyber Crime Awareness and Crime Detection	12/09/2025	Technical Event	50	Prof. Manish Chauhan



a. Emerging Mobility Trends for Engineers



b. Semiconductor Manufacturing Technology



c. IoT Application with ESP-32, NOD-MCU, Rasberry Pi



d. Cyber Crime Awareness and Crime Detection

Figure 4.7.7: Expert Lecture (Academic Year 2025-26)

Industrial Visit (Academic Year 2025-26)

Table 4.7.4: Industrial Visit Details 2025-26

Industrial Visit (Academic Year 2025-26)						
Sr No.	Date	Area/Subject Of Industrial Visit	Name of Industry /Organization	Sem	Number of Students Benefited (EC & others)	Name of Faculties Who Visited Industry
1	17/11/2025	Communication System	COMMUNITY RADIO STATION, PALANPUR	3	14	Ms.M.K.Pedhadiya Dr. L.K.Patel
2	19/09/2025	Computer Networking	NETRAM (Command and Control Centre) Palanpur	3,5	49	Mr. M.J.Dabgar Mr. S.P.Joshiara
3	05/08/2025	Communication System	COMMUNITY RADIO STATION, PALANPUR	1	30	Mr. R.C.Parmar Mr. N.J.Chauhan



a. Community Radio Station, Palanpur



b. NETRAM (Command and Control Centre) Palanpur



c. Community Radio Station, Palanpur

Figure 4.7.8: Industrial Visit (Academic Year 2025-26)

Expert Lecture (Academic Year 2024-25)

Table 4.7.5: Expert lecture details 2024-25

Expert Lecture (Academic Year 2024-25)					
Sr No	Title Of Event	Date	Type Of Event	No. Of Student Participants (EC & others)	Name of Expert/Place
1	HAM Radio Workshop	14/02/2025	Technical Event	54	Mr. N. B. Nadoda
2	INTERNET OF THINGS	22/10/2024	Expert Lecture	81	DR. V K THAKAR
3	AI-ML: A NEW ERA OF FUTURE	30/09/2024	Expert Lecture	91	MR. VISHAL VADHER
4	Embedded -IOT	30/09/2024	Expert Lecture	91	MR. VISHAL VADHER



a. HAM Radio Workshop



b. Internet of Things



c. Embedded -IoT and AI-ML: a NEW ERA of Future

Figure 4.7.9: Expert Lecture (Academic Year 2024-25)

Industrial Visit (Academic Year 2024-25)

Table 4.7.6: Industrial Visit Details 2024-25

Industrial Visit (Academic Year 2024-25)						
Sr No.	Date	Area/Subject Of Industrial Visit	Name of Industry /Organization	Sem	Number of Students Benefited (EC & others)	Name of Faculties Who Visited Industry
1	16/10/2024	Communication system	COMMUNITY RADIO STATION, PALANPUR	3,5	24	Dr. R.N.Patel, Mr. S.P.Joshiara
2	05/10/2024	Automation	BANAS DAIRY	3, 5	37	Dr. R.N.Patel, Mr. M.J.Dabgar Mr. S.P.Joshiara
3	25/09/2024	Fiber optics and communication	RAILWAY STATION, PALANPUR	3,5	49	Ms. M.K.Pedhadiya Mr. N.J.Chauhan
4	02/08/2024	Automation	BAJARANG PAPER PRODUCTS, PALANPUR	1	33	Mr. Mr. M.J.Dabgar



a. Community Radio Station, Palanpur



b. Banas Dairy



c. Railway Station, Palanpur



d. Bajarang Paper Products, Palanpur

Figure 4.7.10: Industrial Visit (Academic Year 2024-25)

Expert Lecture (Academic Year 2023-24)

Table 4.7.7: Expert lecture details 2023-24

Expert Lecture (Academic Year 2023-24)					
Sr No	Title Of Event	Date	Type Of Event	No. Of Student Participants (EC & others)	Name of Expert/Place
1	Web development technologies	13/03/2024	Expert Lecture	74	MR. VISHAL VADHER
2	Embedded System	13/03/2024	Expert Lecture	74	MR. VISHAL VADHER
3	SEMICON INDIA-2023 Exhibition	23/07/2023	Technical Event	27	Mahatma Mandir, Gandhinagar



a. Web Development Technologies and Embedded System



b. Web Development Technologies and Embedded System (Contd.)



c. SEMICON India-2023 Exhibition



d. SEMICON India-2023 Exhibition (Contd.)

Figure 4.7.11: Expert Lecture (Academic Year 2023-24)

Industrial Visit (Academic Year 2023-24)

Table 4.7.8: Industrial Visit Details 2023-24

Industrial Visit (Academic Year 2023-24)						
Sr No.	Date	Area/Subject Of Industrial Visit	Name of Industry /Organization	Sem	Number of Students Benefited (EC & others)	Name of Faculties Who Visited Industry
1	16/03/2024	Electronics and Embedded system	PCB POWER AND MCBS PVT LTD, GANDHINAGAR	2,4,6	56	Ms.M.K.Pedhadiya Dr. L.K.Patel, Mr. N.J.Chauhan
2	01/08/2023	Automation	BAJARANG PAPER PRODUCTS, PALANPUR	1	51	Mr. S.J.Chauhan Mr. M.J.Dabgar



a. PCB Power and MCBS PVT LTD, Gandhinagar



b. Bajarang Paper Products, Palanpur

Figure 4.7.12: Industrial Visit (Academic Year 2023-24)

Expert Lecture (Academic Year 2022-23)

Table 4.7.9: Expert lecture details 2022-23

Expert Lecture (Academic Year 2022-23)					
Sr No	Title Of Event	Date	Type Of Event	No. Of Student Participants (EC & others)	Name of Expert/Place
1	Consumer Electronics Equipments	01/06/2023	Expert Lecture	31	Mr.Sahejad Pathan
2	Cyber Security	31/03/2023	Expert Lecture	94	Mr. Sagar Hajare
3	Importance of Communication in industries	08/09/2022	Expert Lecture	05	Mr. Jaimin Rami
4	Future of Electronics in industries	06/08/2022	Expert Lecture	34	Mr. Prakash Darji



a. Consumer Electronics Equipments



b. Cyber Security



c. Importance of Communication in Industries



d. Future of Electronics in Industries

Figure 4.7.13: Expert Lecture (Academic Year 2022-23)

Industrial Visit (Academic Year 2022-23)

Table 4.7.10: Industrial Visit Details 2022-23

Industrial Visit (Academic Year 2022-23)						
Sr No.	Date	Area/Subject Of Industrial Visit	Name of Industry /Organization	Sem	Number of Students Benefited (EC & others)	Name of Faculties Who Visited Industry
1	10/05/2023	Communication system	COMMUNITY RADIO STATION, PALANPUR	4	12	Mr. S.J.Chauhan Mr. M.J.Dabgar
2	04/05/2023	Mobile communication	SAMSUNG SERVICE CENTRE, PALANPUR	2,4	27	Mr.N.J.Chauhan Mr. N.M.Patel, Mr. R.C.Parmar

Sr No.	Date	Area/Subject Of Industrial Visit	Name of Industry /Organization	Sem	Number of Students Benefited (EC & others)	Name of Faculties Who Visited Industry
3	21/09/2022	Automation	BAJARANG PAPER PRODUCTS, PALANPUR	1	23	Mr. N.J.Chauhan



a. Community Radio Station, Palanpur



b. Samsung Service Centre, Palanpur



c. Bajarang Paper Products, Palanpur

Figure 4.7.14: Industrial Visit (Academic Year 2022-23)

Expert Lecture (Academic Year 2021-22)

Table 4.7.11: Expert lecture details 2021-22

Expert Lecture (Academic Year 2021-22)					
Sr No	Title Of Event	Date	Type Of Event	No. Of Student Participants (EC & others)	Name of Expert/Place
1	NAVIC and its applications	29/01/2022	Expert Lecture	29	Dr. Mehulkumar
2	Importance of Programming	09/08/2021	Expert Lecture	39	Mr. Pranav Dave

Organized By
Department of Electronics and Communication Engineering
Government Polytechnic Palanpur
(Under Directorate of Technical Education, Gujarat)

Expert Talk On
Importance of Programming

09 Aug 2021
11:00 am Onwards

Coordinator:
Ms. M. K. Pedhadiya,
(Lecturer in EC,
GP Palanpur)

Facilitator:
Mr. S. J. Chauhan
(HoD, Dept. of EC,
GP Palanpur)

Patrons:
Mr. S.D. Dabhi
(Principal, GP Palanpur)

Contact:
Email Id –
gspec11@gmail.com

Expert:

Mr. Pranav Dave
Tech Lead(Associate consultant)
Tata Consultancy Services(TCS),
Gandhinagar

Registration Link:
<https://forms.gle/gthtwKxWZHCu6U4d8>
Link to join:
[Click Here](#)

Note: e-certificates will be given to the participants

Organized By
Department of Electronics and Communication Engineering
Government Polytechnic Palanpur
(Under Directorate of Technical Education, Gujarat)

Expert Talk On
India's NavIC
Navigation with Indian Constellation (NavIC) and Its Application

29 January 2022
03:00 PM Onwards

Coordinator:
Ms. M. K. Pedhadiya,
(Lecturer in EC,
GP Palanpur)

Facilitator:
Mr. S. J. Chauhan
(HoD, Dept. of EC,
GP Palanpur)

Patrons:
Mr. S.D. Dabhi
(Principal, GP Palanpur)

Contact:
Email Id –
gspec11@gmail.com

Dr. Mehulkumar Desai,
Lecturer in EC,
Government Polytechnic for Girls, Surat

He completed his Ph.D from SNIT, Surat, Gujarat, India. His work is on "Development and Analysis of Ionospheric Correction Model for Position Estimation with NavIC Receiver". He has published many papers in reputed journals and conferences. He is recognized as winner in the IITB-ISRO-AICTE Mapathon held on 7 Dec. to 22 Dec. 2020.

[Click Here to Join Talk](#)

a. Importance of Programming

b. NAVIC and Its Applications

Figure 4.7.15: Expert Talk Announcements — Academic Year 2021-22

Industrial Visit (Academic Year 2021-22)

Table 4.7.12: Industrial Visit Details 2021-22

Industrial Visit (Academic Year 2021-22)						
Sr No.	Date	Area/Subject Of Industrial Visit	Name of Industry /Organization	Sem	Number of Students Benefited (EC & others)	Name of Faculties Who Visited Industry
1	02/05/2022	Fundamental of electrical engineering	J K INDUSTRIES, CHANDISAR	2	14	Mr.N.J.Chauhan Mr. N.M.Patel
2	12/04/2022	Optical Communication	SAHAJANAND LASER TECH, GANDHINAGAR	4	4	Mr. M.J.Dabgar
3	29/03/2022	Mobile Communication	SAMSUNG CARE, PALANPUR	4	15	Dr. R.N.Patel Mr. S.P.joshiara
4	26/03/2022	Communication system	COMMUNITY RADIO STATION, PALANPUR	4,6	14	Mr. M.J.Dabgar Mr. N.M.Patel



a. J K Industries, Chandisar



b. Sahajanand Laser Tech, Gandhinagar



c. Samsung Care, Palanpur



d. Community Radio Station, Palanpur

Figure 4.7.16: Industrial Visit (Academic Year 2021-22)

Expert Lecture (Academic Year 2020-21)

Table 4.7.13: Expert lecture details 2020-21

Expert Lecture (Academic Year 2020-21)					
Sr No	Title Of Event	Date	Type Of Event	No. Of Student Participants (EC & others)	Name of Expert/Place
1	Digital Communication basics realization with MATLAB	19/03/2021	Expert Lecture	17	Dr. Urvashi P. Shukla
2	VLSI Low Power Techniques	03/03/2021	Expert Lecture	20	Mr. Nishant Patel
3	PCB Design	10/10/2020	Expert Lecture	23	Mr. Ankit Tundeliya
4	Basic of Chip Design	26/09/2020	Expert Lecture	22	Mr. Abhishek Joshi



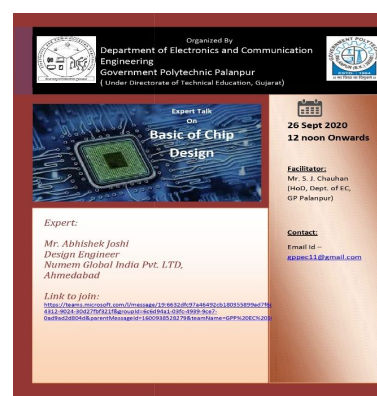
a. Digital Communication Basics Realization with MATLAB



b. VLSI Low Power Techniques



c. PCB Design



d. Basic of Chip Design

Figure 4.7.17: Expert Lecture (Academic Year 2020-21)

Expert Lecture (Academic Year 2019-20)

Table 4.7.14: Expert lecture details 2019-20

Expert Lecture (Academic Year 2019-20)					
Sr No	Title Of Event	Date	Type Of Event	No. Of Student Participants (EC & others)	Name of Expert/Place
1	Fundamentals of microwave devices and circuits for communication	06/06/2020	Expert Lecture	66	Dr. Subhash Chandra Bera
2	Digital system design using FPGA	06/06/2020	Expert Lecture	78	Mr. Rajat Arora
3	CCTV Installation	01/02/2020	Expert Lecture	14	Organized by EC Department, G.P. Palanpur



a. Fundamentals of Microwave Devices and Circuits for Communication



b. Digital System Design Using FPGA



c. CCTV Installation



d. CCTV Installation (Contd.)

Figure 4.7.18: Expert Lecture (Academic Year 2019-20)

Industrial Visit (Academic Year 2019-20)

Table 4.7.15: Industrial Visit Details 2019-20

Industrial Visit (Academic Year 2019-20)						
Sr No.	Date	Area/Subject Of Industrial Visit	Name of Industry /Organization	Sem	Number of Students Benefited (EC & others)	Name of Faculties Who Visited Industry
1	15/02/2020	Fundamental of Electrical and Electronics	Bhagat Electricals, Palanpur	6	4	Mr.N.J.Chauhan
2	15/02/2020	Fundamental of Electronics	Rudraksh Electronics, Palanpur	6	4	Mr.N.J.Chauhan
3	22/07/2019	Communication system	RAILWAY STATION, PALANPUR	1,3,5	14	Mr. R.C.Parmar Mr.N.J.Chauhan



a. Bhagat Electricals, Palanpur



b. Rudraksh Electronics, Palanpur



c. Railway Station, Palanpur

Figure 4.7.19: Industrial Visit (Academic Year 2019-20)

4.7.2 Publication of technical magazines, newsletters, etc (05)

A. Quality & Relevance of the contents and Print Material (03)

- Electronics & Communication department publishes yearly newsletter that broadly includes Vision and Mission of Department and Institute , PSOs , Photographs related to Departmen-

tal Curricular activities and Institute Co-Curricular activities, Technical blogs and Placement of students.

B. Participation of Students from the program (02)

- The head of Department is the chief editor and designated faculty and student coordinator yearly provide volunteer contribution for proof reading and selection of contents that has key thrust on upcoming technologies and development in the field of electronics and communication and research.

List of Publication of Newsletters in CAYm1 (2024-2025)

Table 4.7.16: Spectrum Band-IV newsletter editorial team – 2024-25

Year	Publication Name	Chief Editor/Faculty coordinator	Name of the Students
2024-25	Spectrum (Band-IV)	Mr. S.J.Chauhan, HOD EC (Chief Editor) Mr. Milav Dabgar (Faculty Coordinator)	MALI BHAVIN ASHOKBHAI
			MODI JAINILKUMAR DIPAKBHAI



Figure 4.7.20: Spectrum Band-IV Newsletter Cover – 2024-25

List of Publication of Newsletters in CAYm2 (2023-2024)

Table 4.7.17: Spectrum Band-III newsletter editorial team – 2023-24

Year	Publication Name	Chief Editor/Faculty coordinator	Name of the Students
2023-24	Spectrum (Band-III)	Mr. S.J.Chauhan, HOD EC (Chief Editor) Mr. Milav Dabgar (Faculty Coordinator)	DAVE FALGUNI JITENDRAKUMAR
			PRAJAPATI PRINCEKUMAR DILIPBHAI



Figure 4.7.21: Spectrum Band-III Newsletter Cover – 2023-24

List of Publication of Newsletters in CAYm3 (2022-2023)

Table 4.7.18: Spectrum Band-II newsletter editorial team – 2022-23

Year	Publication Name	Chief Editor/Faculty coordinator	Name of the Students
2022-23	Spectrum (Band-II)	Mr. S.J.Chauhan, HOD EC (Chief Editor) Mr. Milav Dabgar (Faculty Coordinator)	PANCHAL SHUBH KIRANBHAI
			PATEL AKSHAR DILIPKUMAR



Figure 4.7.22: Spectrum Band-II Newsletter Cover – 2022-23

List of Publication of Newsletters in CAYm4 (2021-2022)

Table 4.7.19: Spectrum Band-I newsletter editorial team – 2021-22

Year	Publication Name	Chief Editor/Faculty coordinator	Name of the Students
2021-22	Spectrum (Band-I)	Mr. S.J.Chauhan, HOD EC (Chief Editor) Mr. Milav Dabgar (Faculty Coordinator)	PAWAR BHARAT SHANKARLAL

			RAVAL STUTIBEN AMITKUMAR
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Figure 4.7.23: Spectrum Band-I Newsletter Cover – 2021-22

4.7.3 Participation in inter-institute / state/national events by students of the program of study (05)

Electronics & Communication department have encouraged and motivated students to participate in technical events with strong support of department faculties and head of department.

Table 4.7.20: Participation in inter-institute / state/national events by students

Sr No.	Enrollment No.	Name of Student	Name of Event	Place	Year	Outcome
1	236260311003	MALI PARESH RAMESHBHAI	G3Q 2.0	Government of Gujarat	2024	Winner
2	236260311007	PRAJAPATI SHAILESH	G3Q 2.0	Government of Gujarat	2024	Winner



a. G3q 2.0 Quiz Participation Certificate – Mali Paresh Rameshbhai



b. G3q 2.0 Quiz Winner Certificate – Prajapati Sailesh

Figure 4.7.24: G3q 2.0 Quiz Certificates

Placement Fair Detail

Table 4.7.21: Placement fair participation – 2022-23 to 2025-26

Sr.No	Title of Event	Dates	No. of Participants	Place/Institute Name	Sponsor/Collaboration	Level of Event (Zonal/State/National)
Academic Year 2022-23						
1	Placement Fair	10/03/2023	5	G.P.Palanpur	KCG	Zonal Level
Academic Year 2023-24						
1	Placement Fair	11/03/2024	5	DNP arts College , Deesa	KCG	Zonal Level
Academic Year 2024-25						
1	Placement Fair	25/02/2025	7	G.P.Palanpur	KCG	Zonal Level
Academic Year 2025-26						
1	Placement Fair	24/02/2026	6	DNP arts College , Deesa	KCG	Zonal Level

Criterion 5

Faculty Information and Contributions (150)

Total Marks: 150

Table 5.0.1: Sub-Criteria and Marks Distribution – Criterion 5: Faculty Information and Contributions (Total 150 Marks)

No.	Sub-Criterion	Marks
5.1	Student-Faculty Ratio (SFR)	25
5.1.1	Provide the information about the regular and contractual faculty as per the format mentioned below	–
5.2	Faculty Qualification	25
5.2.1	Faculty Qualification Index	20
5.2.2	Availability of Faculty/principal of that discipline with PhD. Qualification	5
5.3	Faculty Retention	20
5.4	Faculty as participants in Faculty development/training activities	42
5.4.1	Faculty as participants in Faculty development/training activities conducted by other organizations	30
5.4.2	Organized/ Conducted FDPs and STTP by this department at State / National Level	12
5.5	Product development, Consultancy, Manufacturing contracts, testing contracts	8
·	5 marks in each based on documentary evidence	–
5.6	Faculty Performance Appraisal and Development System (FPADS)	30
A	A well-defined FPADS instituted for all the assessment years	5
B	Its implementation and effectiveness	15
C	Details of qualification up-gradation of faculty	10
Total Marks – Criterion 5		150

Faculty Information

The following tables present the cumulative faculty list and NBA-format year-wise faculty details for the Department of Electronics & Communication Engineering, Government Polytechnic Palanpur, covering assessment years CAY (2025-26), CAYm1 (2024-25), and CAYm2 (2023-24).

Table 5.0.2: Cumulative Faculty List (CAY, CAYm1, CAYm2)

Faculty Name	Qual.	Spec.	% CAY	% CAYm1	% CAYm2	Papers	Desig.	Joining	Assoc.
Mr. Sunil J. Chauhan	M.E.	Communication System Engg.	42	40	69	0	HOD	07/12/1993	Regular
Ms. Mittal K. Pedhadiya	M.Tech	Wireless Communication And Technology	50	32	46	1	Lecturer	26/04/2011	Regular
Dr. Laukikkumar K. Patel	Ph.D.	Electronics And Communication	30	35	36	1	Lecturer	28/04/2011	Regular
Dr. Ratansing N. Patel	Ph.D.	Electronics And Communication	63	62	61	1	Lecturer	28/10/2016	Regular
Mr. Milav J. Dabgar	M.E.	Communication System Engg.	18	23	31	0	Lecturer	02/11/2016	Regular
Mr. Rahul C. Parmar	M.E.	Communication System Engg.	48	56	50	0	Lecturer	28/10/2016	Regular
Mr. Snehilkumar P. Joshiara	B.E.	Electronics And Communication	67	61	35	0	Lecturer	25/05/2017	Regular
Mr. Nirav J. Chauhan	M.E.	Communication System Engg.	45	37	35	3	Lecturer	01/07/2017	Regular
Mr. Chetan P. Gehlot	M.Sc.	Maths	10	15	11.36	0	Lecturer	17/12/2009	Regular
Dr. Chirag S. Pandya	Ph.D.	English	19.05	9.68	9.68	0	Lecturer	26/05/2011	Regular
Dr. Bhupendra B Mor	Ph.D.	Physics	23.81	12.82	13.51	6	Lecturer	06/02/2012	Regular
Dr. Mahesh F. Tank	Ph.D.	Chemistry	12	12	0	0	Lecturer	08/02/2010	Regular
Dr. Jigna D. Modi	Ph.D.	Chemistry	0	5.88	0	0	Lecturer	08/10/2010	Regular
Mr. Chirag M. Amin	M.E.	Mechanical	0	3.57	0	0	Lecturer	09/11/2016	Regular
Mr. Tarun D. Modi	B.E.	Mechanical	0	3.57	0	0	Lecturer	28/10/2016	Regular
Mr. Sandip P. Mahant	B.E.	Mechanical	0	37.5	0	0	Lecturer	28/10/2016	Regular
Mr. Rajesh L. Chaudhari	B.E.	Mechanical	0	0	16.66	0	Lecturer	28/10/2016	Regular
Mr. Dhanraj P. Judal	B.E.	Mechanical	0	0	14.28	0	Lecturer	28/10/2016	Regular
Mr. Ashfaq M. Qureshi	M.E.	Electrical Engg.	0	13	0	0	Lecturer	15/11/2016	Regular
Mr. Ravindra P. Chavda	M.E.	Electrical Engg.	0	4	0	0	Lecturer	17/05/2017	Regular
Mrs. Meghana M. Shah	B.E.	Ic	0	0	100	0	Lecturer	14/02/1997	Regular
Mr. Mahesh J. Vadhvaniya	B.E.	Ic	50	0	33	0	Lecturer	17/11/2000	Regular

<i>Faculty Name</i>	<i>Qual.</i>	<i>Spec.</i>	<i>% CAY</i>	<i>% CAYm1</i>	<i>% CAYm2</i>	<i>Papers</i>	<i>Desig.</i>	<i>Joining</i>	<i>Assoc.</i>
Mr. Jabbar V. Kureshi	M.E.	Ic	0	0	16.6	0	Lecturer	20/10/2015	Regular

Table 5.0.3: Faculty Information – CAY (2025-26)

Sr.	Name of the Faculty Member	Qualification	University & Year of Graduation	Designation & Date of Joining	a (%)	b (%)	c (%)	Research Papers	M.Tech/ Ph.D. during AY	Yrs. Exp.	Assoc.	Date of Leaving
1	Mr. Sunil J. Chauhan	M.E.	MSU, Baroda (28/03/2002)	HOD (07/12/1993)	42	—	38	0	No	33	Regular	NA
2	Ms. Mittal K. Pedhadiya	M.Tech	SPU, Mehsana (08/05/2018)	Lecturer (26/04/2011)	50	—	50	1	No	22	Regular	NA
3	Dr. Laukikkumar K. Patel	Ph.D.	SPU, Mehsana (22/07/2024)	Lecturer (28/04/2011)	30	—	70	1	Yes	14	Regular	NA
4	Dr. Ratansing N. Patel	Ph.D.	GTU, Ahmedabad (20/06/2019)	Lecturer (28/10/2016)	63	—	37	1	No	18	Regular	NA
5	Mr. Milav J. Dabgar	M.E.	GTU, Ahmedabad (27/07/2015)	Lecturer (02/11/2016)	18	—	82	0	No	9	Regular	NA
6	Mr. Rahul C. Parmar	M.E.	GTU, Ahmedabad (22/07/2014)	Lecturer (28/10/2016)	48	—	52	0	No	17	Regular	NA
7	Mr. Snehilkumar P. Joshiara	B.E.	Bhavnagar Uni, Bhavnagar (13/07/2006)	Lecturer (25/05/2017)	67	—	33	0	No	15	Regular	NA
8	Mr. Nirav J. Chauhan	M.E.	GTU, Ahmedabad (20/07/2013)	Lecturer (01/07/2017)	45	—	55	3	No	13	Regular	NA

Sr.	Name of the Faculty Member	Qualification	University & Year of Graduation	Designation & Date of Joining	a (%)	b (%)	c (%)	Research Papers	M.Tech/ Ph.D. during AY	Yrs. Exp.	Assoc.	Date of Leaving
9	Mr. Chetan P. Gehlot	M.Sc.	HNGU, Patan (09/10/2008)	Lecturer (17/12/2009)	—	10	—	0	No	14	Regular	NA
10	Dr. Chirag S. Pandya	Ph.D.	HNGU, Patan (05/08/2016)	Lecturer (26/05/2011)	—	19.05	—	0	No	15	Regular	NA
11	Dr. Bhupendra B Mor	Ph.D.	Rai Uni, 2017 (11/10/2017)	Lecturer (06/02/2012)	—	23.81	—	6	No	20	Regular	NA
12	Dr. Mahesh F. Tank	Ph.D.	HNGU, Patan (07/06/2014)	Lecturer (08/02/2010)	—	12	—	0	No	15	Regular	NA
13	Mr. Mahesh J. Vad- hvaniya	B.E.	GU, Ahmed- abad (11/08/1999)	Lecturer (17/11/2000)	—	50	—	0	No	25	Regular	NA
Total					363	114.86	417	12				

Note: a = % teaching load from own department/program; b = % load served to other programs from this department; c = remaining load (not counted for SFR).

Table 5.0.4: Faculty Information – CAYm1 (2024-25)

Sr.	Name of the Faculty Member	Qualification	University & Year of Graduation	Designation & Date of Joining	a (%)	b (%)	c (%)	Research Papers	M.Tech/ Ph.D. during AY	Yrs. Exp.	Assoc.	Date of Leaving
1	Mr. Sunil J. Chauhan	M.E.	MSU, Baroda (28/03/2002)	HOD (07/12/1993)	40	—	60	0	No	33	Regular	NA
2	Ms. Mittal K. Pedhadiya	M.Tech	SPU, Mehsana (08/05/2018)	Lecturer (26/04/2011)	32	—	68	1	No	22	Regular	NA
3	Dr. Laukikkumar K. Patel	Ph.D.	SPU, Mehsana (22/07/2024)	Lecturer (28/04/2011)	35	—	65	1	Yes	14	Regular	NA
4	Dr. Ratansing N. Patel	Ph.D.	GTU, Ahmedabad (20/06/2019)	Lecturer (28/10/2016)	62	—	38	1	No	18	Regular	NA
5	Mr. Milav J. Dabgar	M.E.	GTU, Ahmedabad (27/07/2015)	Lecturer (02/11/2016)	23	—	77	0	No	9	Regular	NA
6	Mr. Rahul C. Parmar	M.E.	GTU, Ahmedabad (22/07/2014)	Lecturer (28/10/2016)	56	—	44	0	No	17	Regular	NA
7	Mr. Snehilkumar P. Joshiara	B.E.	Bhavnagar Uni, Bhavnagar (13/07/2006)	Lecturer (25/05/2017)	61	—	39	0	No	15	Regular	NA
8	Mr. Nirav J. Chauhan	M.E.	GTU, Ahmedabad (20/07/2013)	Lecturer (01/07/2017)	37	—	63	3	No	13	Regular	NA

Sr.	Name of the Faculty Member	Qualification	University & Year of Graduation	Designation & Date of Joining	a (%)	b (%)	c (%)	Research Papers	M.Tech/ Ph.D. during AY	Yrs. Exp.	Assoc.	Date of Leaving
9	Mr. Chetan P. Gehlot	M.Sc.	HNGU, Patan (09/10/2008)	Lecturer (17/12/2009)	—	15	—	0	No	14	Regular	NA
10	Dr. Chirag S. Pandya	Ph.D.	HNGU, Patan (05/08/2016)	Lecturer (26/05/2011)	—	9.68	—	0	No	15	Regular	NA
11	Dr. Bhupendra B Mor	Ph.D.	Rai Uni, 2017 (11/10/2017)	Lecturer (06/02/2012)	—	12.82	—	6	No	20	Regular	NA
12	Dr. Mahesh F. Tank	Ph.D.	HNGU, Patan (07/06/2014)	Lecturer (08/02/2010)	—	12	—	0	No	15	Regular	NA
13	Dr. Jigna D. Modi	Ph.D.	HNGU, Patan (15/10/2009)	Lecturer (08/10/2010)	—	5.88	—	0	No	10	Regular	NA
14	Mr. Chirag M. Amin	M.E.	GTU, Ahmed-abad (07/08/2013)	Lecturer (09/11/2016)	—	3.57	—	0	No	18	Regular	NA
15	Mr. Tarun D. Modi	B.E.	GTU, Ahmed-abad (19/06/2008)	Lecturer (28/10/2016)	—	3.57	—	0	No	12	Regular	NA
16	Mr. Sandip P. Mahant	B.E.	Kutch Uni, Kutch (05/06/2008)	Lecturer (28/10/2016)	—	37.5	—	0	No	17	Regular	NA
17	Mr. Ashfaq M. Qureshi	M.E.	GTU, Ahmed-abad (27/08/2013)	Lecturer (15/11/2016)	—	13	—	0	No	17	Regular	NA
18	Mr. Ravindra P. Chavda	M.E.	GTU, Ahmed-abad (21/07/2012)	Lecturer (17/05/2017)	—	4	—	0	No	13	Regular	NA

<i>Sr.</i>	<i>Name of the Faculty Member</i>	<i>Qualification</i>	<i>University & Year of Graduation</i>	<i>Designation & Date of Joining</i>	<i>a (%)</i>	<i>b (%)</i>	<i>c (%)</i>	<i>Research Papers</i>	<i>M.Tech/ Ph.D. during AY</i>	<i>Yrs. Exp.</i>	<i>Assoc.</i>	<i>Date of Leaving</i>
Total					346	117.02	454	12				

Note: a = % teaching load from own department/program; b = % load served to other programs from this department; c = remaining load (not counted for SFR).

Table 5.0.5: Faculty Information – CAYm2 (2023-24)

Sr.	Name of the Faculty Member	Qualification	University & Year of Graduation	Designation & Date of Joining	a (%)	b (%)	c (%)	Research Papers	M.Tech/ Ph.D. during AY	Yrs. Exp.	Assoc.	Date of Leaving
1	Mr. Sunil J. Chauhan	M.E.	MSU, Baroda (28/03/2002)	HOD (07/12/1993)	69	—	31	0	No	33	Regular	NA
2	Ms. Mittal K. Pedhadiya	M.Tech	SPU, Mehsana (08/05/2018)	Lecturer (26/04/2011)	46	—	54	1	No	22	Regular	NA
3	Dr. Laukikkumar K. Patel	Ph.D.	SPU, Mehsana (22/07/2024)	Lecturer (28/04/2011)	36	—	64	1	Yes	14	Regular	NA
4	Dr. Ratansing N. Patel	Ph.D.	GTU, Ahmedabad (20/06/2019)	Lecturer (28/10/2016)	61	—	39	1	No	18	Regular	NA
5	Mr. Milav J. Dabgar	M.E.	GTU, Ahmedabad (27/07/2015)	Lecturer (02/11/2016)	31	—	69	0	No	9	Regular	NA
6	Mr. Rahul C. Parmar	M.E.	GTU, Ahmedabad (22/07/2014)	Lecturer (28/10/2016)	50	—	50	0	No	17	Regular	NA
7	Mr. Snehilkumar P. Joshiara	B.E.	Bhavnagar Uni, Bhavnagar (13/07/2006)	Lecturer (25/05/2017)	35	—	65	0	No	15	Regular	NA
8	Mr. Nirav J. Chauhan	M.E.	GTU, Ahmedabad (20/07/2013)	Lecturer (01/07/2017)	35	—	65	3	No	13	Regular	NA

Sr.	Name of the Faculty Member	Qualification	University & Year of Graduation	Designation & Date of Joining	a (%)	b (%)	c (%)	Research Papers	M.Tech/ Ph.D. during AY	Yrs. Exp.	Assoc.	Date of Leaving
9	Mr. Chetan P. Gehlot	M.Sc.	HNGU, Patan (09/10/2008)	Lecturer (17/12/2009)	—	11.36	—	0	No	14	Regular	NA
10	Dr. Chirag S. Pandya	Ph.D.	HNGU, Patan (05/08/2016)	Lecturer (26/05/2011)	—	9.68	—	0	No	15	Regular	NA
11	Dr. Bhupendra B Mor	Ph.D.	Rai Uni, 2017 (11/10/2017)	Lecturer (06/02/2012)	—	13.51	—	6	No	20	Regular	NA
12	Mr. Rajesh L. Chaudhari	B.E.	GTU, Ahmedabad (29/05/2008)	Lecturer (28/10/2016)	—	16.66	—	0	No	9	Regular	NA
13	Mr. Dhanraj P. Judal	B.E.	Saurashtra Uni, Saurashtra (09/07/2015)	Lecturer (28/10/2016)	—	14.28	—	0	No	9	Regular	NA
14	Mrs. Meghana M. Shah	B.E.	Bhavnagar Uni, Bhavnagar (09/08/1995)	Lecturer (14/02/1997)	—	100	—	0	No	28	Regular	NA
15	Mr. Mahesh J. Vadhvaniya	B.E.	GU, Ahmedabad (11/08/1999)	Lecturer (17/11/2000)	—	33	—	0	No	25	Regular	NA
16	Mr. Jabbar V. Kureshi	M.E.	GU, Ahmedabad (03/07/2013)	Lecturer (20/10/2015)	—	16.6	—	0	No	15	Regular	NA
Total					363	215.09	437	12				

Note: a = % teaching load from own department/program; b = % load served to other programs from this department; c = remaining load (not counted for SFR).

5.1 Student-Faculty Ratio (SFR) (25)

Formula: $SFR = N/F$

- **N** = No. of students = Sanctioned Intake + Actually admitted lateral entry students
- **F** = No. of faculty = (a + b) for every assessment year
- **a** = Faculty of the specific program/department considering fractional load
- **b** = Faculty serving this program from other program/department considering fractional load

Note on Fractional load calculation:

1. Faculty taking physics course is having 50% of allocated load of first year civil engineering students, 25% load of first year mechanical engineering and 25% load of electrical engineering then the fractional load contribution will be 0.50 for civil engineering, 0.25 each for mechanical and electrical engineering.
2. Similarly fractional load to be calculated for inter department/program work load distribution.

Table 5.1.1: Student-Faculty Ratio

Year	N (Students)	F (Faculty)	SFR = N/F
2025-26 (CAY)	90	4.78	18.83
2024-25 (CAYm1)	90	4.65	19.35
2023-24 (CAYm2)	91	5.79	15.72
Average	90.33	5.07	17.97

Average SFR: 17.97 Self-Assessment Score: 25/25 (See Annexure A for FDP proofs)

5.1.1 Provide the information about the regular and contractual faculty as per the format mentioned below

Table 5.1.2: Regular and Contractual Faculty

Year	Regular Faculty	Contractual Faculty
2025-26 (CAY)	7	0
2024-25 (CAYm1)	11	0
2023-24 (CAYm2)	11	0

5.2 Faculty Qualification (25)

5.2.1 Faculty Qualification Index (20)

$FQ = 2.0 \times (10x + 7y)/F$ where x is no. of faculty with M.Tech. (in case of humanities and science M.Phil./Ph.D.) and y is no. of faculty with B.Tech. (in case of humanities and science MA/M.Sc.), F is no. of faculty required to comply 1:25 Faculty Student Ratio.

Table 5.2.1: Faculty Qualification Index (FQI)

Years	X	Y	F	$FQ=2.0 \times (10x+7y)/F$
2025-26	2	1	4	13.5
2024-25	2	1	4	13.5
2023-24	3	2	4	22
Average	2.33	1.33	4	16.33

Average Assessment: 16.33 Self-Assessment Score: 16.33/20

5.2.2 Availability of Faculty/principal of that discipline with Ph.D. Qualification (05)

The department has two faculty members with Ph.D. in ECE discipline:

- Dr. Laukikkumar K. Patel – Ph.D. in Machine Learning/ECE (SPU Mehsana, 2024)
- Dr. Ratansing N. Patel – Ph.D. in Antenna Design/ECE (GTU, 2019)

Self-Assessment Score: 5/5

5.3 Faculty Retention (20)

No. of regular faculty members in CAYm1 = 11 CAY = 7

Table 5.3.1: Faculty Retention

Description	2024-25 (CAYm1)	2025-26 (CAY)
No. of Faculty Retained	11	11
Total No. of Required Faculty	4	4
% of Faculty Retained	275	275

Average Retention: 275% (well above 100%, as more faculty serve the program than the minimum required) **Self-Assessment Score: 20/20**

Note: Scoring is based on % of required faculties retained averaged over the assessment period keeping CAYm2 as base year — $\geq 90\%$: 20 marks; $\geq 75\%$: 15 marks; $\geq 60\%$: 10 marks; $\geq 50\%$: 5 marks; $< 50\%$: 0 marks.

5.4 Faculty as participants in Faculty development/training activities (42)

5.4.1 Faculty as participants in Faculty development/training activities conducted by other organizations (30)

Participation Scoring Framework: A Faculty scores maximum five points for participation.

- Participant in 1 to 2 days Faculty/faculty development program: 1 Point
- Participant in 3 to 5 days Faculty/faculty development program: 2 Points
- Participant > 5 days Faculty/faculty development program: 5 Points

Formula: Assessment = $6 \times \text{Sum} / (0.5 \times \text{RF})$, limited to 30. Where **RF** = Number of Faculty required to comply with 25:1 Student-Faculty ratio as per 5.1. (See Annexure A for FDP Certificates)

Table 5.4.1: FDP Participation Points (Max 5 per Faculty per Year)

Faculty Name	2022-23 (CAYm3)	2023-24 (CAYm2)	2024-25 (CAYm1)
Dr. Bhupendra B Mor	5	5	5
Dr. Chirag S. Pandya	5	5	5
Dr. Jigna D. Modi	2	5	5
Dr. Laukikkumar K. Patel	2	5	5
Dr. Mahesh F. Tank	5	5	0
Dr. Ratansing N. Patel	2	5	5
Mr. Ashfaq M. Qureshi	5	5	5
Mr. Chetan P. Gehlot	5	5	5
Mr. Chirag M. Amin	0	5	5
Mr. Dhanraj P. Judal	0	4	5
Mr. Jabbar V. Kureshi	0	5	5
Mr. Mahesh J. Vadhvaniya	5	5	0
Mr. Milav J. Dabgar	0	2	5
Mr. Nirav J. Chauhan	2	5	5
Mr. Rahul C. Parmar	0	0	5
Mr. Rajesh L. Chaudhari	2	5	5
Mr. Ravindra P. Chavda	2	5	5
Mr. Sandip P. Mahant	5	5	5
Mr. Snehilkumar P. Joshiara	0	2	5
Mr. Sunil J. Chauhan	3	1	5
Mr. Tarun D. Modi	5	5	5
Ms. Mittal K. Pedhadiya	5	5	1
Sum	60	94	96
RF	3.64	3.6	3.6
Assessment	30	30	30

Self-Assessment Score: 30/30

Detailed Training Records (Year-wise)

The following tables list each training programme attended with individual point values. Each year's footer shows two cumulative totals: **Uncapped** (sum of all individual training points) / **Faculty-Capped** (each faculty limited to max 5 pts/year). Final assessment marks are derived in the scoring table above using the formula $6 \times \text{Sum} / (0.5 \times \text{RF})$, capped at 30.

Training Records: 2022-23

Table 5.4.2: FDP Training Records — 2022-23

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
1	Dr. Bhupendra B Mor	NBA Accrediatton and Teaching and Learning in Engineering NATE	1 Wk – 1 Mo.	23-01-2023 TO 14-04-2023	Inter Descipline	5
		Developing Pathways for Climate Change	1 Wk – 1 Mo.	27/02/2023 - 10/03/2023	Multidisciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						10 / 5
3	Dr. Chirag S. Pandya	NBA Accrediatton and Teaching and Learning in Engineering NATE	1 Wk – 1 Mo.	23-01-2023 TO 14-04-2023	Inter Descipline	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
4	Dr. Jigna D. Modi	Teaching and Learning in Engineering (TALE)	≤1 Week	23/01/2023 to 17/02/2023	Teaching and Learning in Engineering	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						2 / 2
5	Dr. Laukikkumar K. Patel	Innovation by Design	≤1 Week	25/07/2022 – 19/08/2022	Interdisciplinary	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						2 / 2
6	Dr. Mahesh F. Tank	Analytical Chemistry	1 Wk – 1 Mo.	25-07-2022 to 14-10-2022	Chemistry	5
		Nuclear and Radiochemistry	1 Wk – 1 Mo.	23-01-2023 TO 14-04-2023 (12 s)	Subjective	5
		Industrial Inorganic Chemistry	1 Wk – 1 Mo.	23-01-2023 TO 14-04-2023 (12 s)	Subjective	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						15 / 5
9	Dr. Ratansing N. Patel	Nano Technology and Nano Sensors	≤1 Week	29/08/2022 – 02/09/2022	Inter-discipline	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						2 / 2
10	Mr. Ashfaq M. Qureshi	Teaching and Learning in Engineering (TALE)	≤1 Week	23/01/2023 to 17/02/2023	Teaching and Learning in Engineering	2
		Introduction to Law on Electricity	1 Wk – 1 Mo.	July - Sep -2022	Interdisciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
12	Mr. Chetan P. Gehlot	NBA Accrediatton and Teaching and Learning in Engineering NATE	1 Wk – 1 Mo.	23-01-2023 TO 14-04-2023	Inter Descipline	5
		Governance and Management of Institutions	≤1 Week	29/08/2022 TO 02/09/2022	Inter Descipline	2

FDP Training Records — 2022-23 (Continued)

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
14	Mr. Mahesh J. Vad- hvaniya	Motivational Climate, Work Ethics, Positive Atti- tude & Time Management	≤1 Week	30/01/2023 TO 03/02/2023	Multi Disciplinary	2
		NBA Accreditation and Teaching and Learning in Engineering (NATE)	1 Wk – 1 Mo.	23/01/2023 TO 14/04/2023	Multi Disciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
16	Mr. Nirav J. Chauhan	Innovation by Design	≤1 Week	25/07/2022 – 19/08/2022	Interdisciplinary	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						2 / 2
17	Mr. Rajesh L. Chaudhari	Teaching and Learning in Engineering (TALE)	≤1 Week	23/01/2023 to 17/02/2023	Teaching and Learning in Engineering	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						2 / 2
18	Mr. Ravindra P. Chavda	Teaching and Learning in Engineering (TALE)	≤1 Week	23/01/2023 to 17/02/2023	Teaching and Learning in Engineering	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						2 / 2
19	Mr. Sandip P. Ma- hant	Manufacturing Process Technology 1 & 2	1 Wk – 1 Mo.	23/01/23 to 14/04/23	Manufacturing	5
		Fundamentals of Manufacturing Processes	1 Wk – 1 Mo.	25-07-2022 TO 14-10-2022	Manufacturing Technology	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						10 / 5
21	Mr. Sunil J. Chauhan	Design Link Incentives Scheme (DLI)	≤1 Week	17/10/2022	Multi Disciplanry	1
		Accreditation for Diploma Engg Programme (3 Credit Course, SWAYAM Online)	1 Wk – 1 Mo.	29/9/22	NBA	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						3 / 3
23	Mr. Tarun D. Modi	Fundamentals of Manufacturing Processes	1 Wk – 1 Mo.	25-07-2022 TO 14-10-2022	Manufacturing Technology	5
		Academic Leadership	≤1 Week	10-10-22 TO 14-10-22	Management	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
25	Ms. Mittal K. Ped- hadiya	Innovation by Design	≤1 Week	25/07/2022 – 19/08/2022	Interdisciplinary	2
		Enlighted Ed Faculty Development Program 2023	2 Days	17/06/2023 – 18/06/2023	Interdisciplinary	1
		VLSI and VHDL	≤1 Week	27/03/2023 – 31/03/2023	VLSI and VHDL	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
Year Totals (Uncapped / Faculty-Capped):						88 / 60

Training Records: 2023-24

Table 5.4.3: FDP Training Records — 2023-24

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
1	Dr. Bhupendra B Mor	Industrial Training	Ind. Training	10/06/2024 To 30/06/2024	Industry	5
		Accreditation and Outcome Based Learning	≤1 Week	21/08/2023 to 13/10/2023	NBA	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
3	Dr. Chirag S. Pandya	Industrial Training	Ind. Training	10-JUNE-2024 TO 30-JUNE-2024	Human Resource Management and Soft Skills	5
		Leadership and Team Effectiveness	1 Wk – 1 Mo.	January -April 2024	Inter Discipliney	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						10 / 5
5	Dr. Jigna D. Modi	Training and Development	1 Wk – 1 Mo.	22-01-2024 TO 28-04-2024	Training and Development	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
6	Dr. Laukikkumar K. Patel	Yoga and Positive Psychology for Managingcareer and Life	≤1 Week	22/01/2024 – 15/03/2024	Interdiscipline	2
		Training and Developement	1 Wk – 1 Mo.	22/01/2024 – 12/04/2024	Interdiscipline	5
		Industrial Training	Ind. Training	10/06/ 2024 to 30/06/2024	Automation	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						12 / 5
9	Dr. Mahesh F. Tank	Advanced Transition Metal Chemistry	1 Wk – 1 Mo.	24-07-2023 to 13-10-2023	Teaching Learning	5
		Interpretative Molecular Spectroscopy	1 Wk – 1 Mo.	22-01-2024 to 13-04-2024	Chemistry	5
		Industrial Training	Ind. Training	10-06-2024 to 30-06-2024	Latest Trends and Technology in Manufacturing	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						15 / 5
12	Dr. Ratansing N. Patel	Accreditation and Outcome Based Learning	≤1 Week	August - October 2023	Accreditation and OBL	2
		Leadership and Team Effectiveness	1 Wk – 1 Mo.	22/01/2024 – 12/04/2024	Leadership	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
14	Mr. Ashfaq M. Qureshi	The Joy of Computing using Python	1 Wk – 1 Mo.	24-07-23 TO 15-09-23	Interdeciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
15	Mr. Chetan P. Gehlot	Industrial Training	Ind. Training	10/06/2024 TO 30/06/2024	Inter Discipline	5

FDP Training Records — 2023-24 (Continued)

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
16	Mr. Chirag M. Amin	CNC Programming and Cad/cam Integration	≤1 Week	17/07/2023 TO 21/07/2023	Production	2
		Training and Development	1 Wk – 1 Mo.	22/01/2024 to 12/04/2024	Training and Development	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
18	Mr. Dhanraj P. Juddal	Welding using Industrial Robot (coe_23_4)	≤1 Week	24-07-2023 TO 28-07-2023	Mechanical	2
		Theory and Practice of Non Destructive Testing(noc24-mm14)	≤1 Week	22/01/2024 TO 15/03/2024	Mechanical	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						4 / 4
20	Mr. Jabbar V. Kureshi	Exploring Measurement and Control in Robotics using Arduino and IOT Devices	≤1 Week	31-07-2023 TO 04-08-2023	IOT	2
		The Joy of Computing using Python	1 Wk – 1 Mo.	27-07-2023 to 13-10-2023	Inter Disciplinary.	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
22	Mr. Mahesh J. Vadhvaniya	Training and Development	1 Wk – 1 Mo.	22-01-2024 TO 28-04-2024	Interdiscipline	5
		Leadership and Team Effectiveness	1 Wk – 1 Mo.	22-01-2024 TO 27-04-2024	Interdiscipline	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						10 / 5
24	Mr. Milav J. Dabgar	SEMIX – Train the Trainers	≤1 Week	06/11/2023 – 10/11/2023	Semiconductor Technology and Manufacturing (with Hands-on Training)	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						2 / 2
25	Mr. Nirav J. Chauhan	Soft Skills	1 Wk – 1 Mo.	24/07/2023 – 13/10/2023	Interdisciplinary	5
		Yoga and Positive Psychology for Managing Career and Life	≤1 Week	22/01/2024 – 15/03/2024	Inter Disciplinary	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
27	Mr. Rajesh L. Chaudhari	Design Development and Implementation of E-learning Courses	≤1 Week	31-07-2023 to 04-08-2023	Interdisciplinary	2
		Training and Development	1 Wk – 1 Mo.	22/01/2024 to 12/04/2024	Interdisciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
29	Mr. Ravindra P. Chavda	The Joy of Computing using Python	1 Wk – 1 Mo.	24/07/2023 TO 15/09/2023	Interdisciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5

FDP Training Records — 2023-24 (Continued)

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
30	Mr. Sandip P. Mahant	Entrepreneurship	1 Wk – 1 Mo.	JULY23 TO OCT23	Energy	5
		Leadership and Team Effectiveness	1 Wk – 1 Mo.	JANUARY TO APRIL 2024	Leadership	5
		Designing Learner Centric MOOC	1 Day	16/03/2024 to 16/03/2024	Designing Learner Centric MOOC	1
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						11 / 5
33	Mr. Snehilkumar P. Joshiara	Yoga and Positive Psychology for Managing Career and Life	≤1 Week	21/08/2023 – 13/10/2023	Inter Disciplinary	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						2 / 2
34	Mr. Sunil J. Chauhan	Preparing Youth for Tommorrow	1 Day	24/2/23	Interdiscipline	1
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						1 / 1
35	Mr. Tarun D. Modi	NBA Accreditation of Diploma/ug Programs	≤1 Week	11-09-2023 TO 15-09-2023	NBA Awareness	2
		Automation in Production Systems and Management	1 Wk – 1 Mo.	24-07-2023 To 13-10-2023	Industrial Automation	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
37	Ms. Mittal K. Pedhadiya	Semiconductor Technology and Manufacturing (with Hands-on Training)	≤1 Week	06/11/2023 – 10/11/2023	Semiconductor Technology and Manufacturing (VLSI)	2
		Industrial Training	Ind. Training	10/06/2024 – 30/06/2024	Automation Sector	5
		Problem Solving through Programming in C	1 Wk – 1 Mo.	22/01/2024 – 12/04/2024	Programming	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						12 / 5
Year Totals (Uncapped / Faculty-Capped):						148 / 94

Training Records: 2024-25

Table 5.4.4: FDP Training Records — 2024-25

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
1	Dr. Bhupendra B Mor	Training and Development	1 Wk – 1 Mo.	01/01/2025 – 30/04/2025	Interdisciplinary	5
		Leadership and Team Effectiveness	1 Wk – 1 Mo.	01/01/2025 – 30/04/2025	Interdisciplinary	5
		Enhancing Soft Skills and Personality	1 Wk – 1 Mo.	01/02/2025 – 30/04/2025	Interdisciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						15 / 5
4	Dr. Chirag S. Pandya	Developing Soft Skills and Personality	1 Wk – 1 Mo.	Aug – Oct 2024	Interdisciplinary	5
		Training and Development	1 Wk – 1 Mo.	01/01/2025 – 30/04/2025	Interdisciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						10 / 5
6	Dr. Jigna D. Modi	Education for Sustainable Development	1 Wk – 1 Mo.	20/01/2025 TO 11/04/2025	Inter Disciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
7	Dr. Laukikkumar K. Patel	Empowring Educators through Research and Incubation Excellence and NEP Insightss	≤1 Week	01/06/2025 – 06/06/2025	SSIP	2
		Industrial Training	Ind. Training	08/07/2024 – 28/07/2024	Automation	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
9	Dr. Ratansing N. Patel	Industrial Training	Ind. Training	24/06/2024 – 14/07/2024	Automation and PLC	5
		Enhancing Soft Skills and Personality	≤1 Week	01/02/2025 – 30/04/2025	Soft Skills	2
		Training and Development	1 Wk – 1 Mo.	01/01/2025 – 30/04/2025	Development	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						12 / 5
12	Mr. Ashfaq M. Qureshi	Industrial Training	1 Wk – 1 Mo.	08/07/2024 – 28/07/2024	Industrial Training (EC)	5
		Basics of Drone Design, Navigation, and Regulations	≤1 Week	18/11/2024 – 22/11/2024	Ece / Avionics	2
		Education for Sustainable Development	1 Wk – 1 Mo.	20/01/2025 – 11/04/2025	Interdisciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						12 / 5
15	Mr. Chetan P. Gehlot	Introduction to Abstract and Linear Algebra	1 Wk – 1 Mo.	22/07/2024 – 13/09/2024	Mathematics	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
16	Mr. Chirag M. Amin	Train the Trainer Program on Effective Implementation of NEP 2020	≤1 Week	14/10/2024 TO 18/11/2024	NEP 2020	2

FDP Training Records — 2024-25 (Continued)

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
		Industrial Training	Ind. Training	01/07/2024 TO 20/07/2024	Manufacturing	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						7 / 5
18	Mr. Dhanraj P. Judal	Industrial Training	Ind. Training	01-07-2024 to 21-07-2024	Milk Product	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
19	Mr. Jabbar V. Kureshi	Education for Sustainable Development	1 Wk – 1 Mo.	Jan – Apr 2025	Interdisciplinary	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
20	Mr. Milav J. Dabgar	Industrial Training	Ind. Training	08/07/2024 – 28/07/2024	Automation	5
		Aicte Qip Pg Certificate in Deep Learning: Fundamentals and Applications	1 Wk – 1 Mo.	16/06/2025 – 23/12/2025	Deep Learning / Ai	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						10 / 5
22	Mr. Nirav J. Chauhan	Industrial Training	Ind. Training	09/06/2025 – 27/06/2025	Industrial Training (EC)	5
		Industrial Training	Ind. Training	24/06/2024 – 14/07/2024	Industrial Training (EC)	5
		Recent Development in RF and Antenna Design for Various Applications	≤1 Week	27/01/2025 – 01/02/2025	Technical	2
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						12 / 5
25	Mr. Rahul C. Parmar	Industrial Training	Ind. Training	23/04/2025 – 13/05/2025	Industrial Training	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
26	Mr. Rajesh L. Chaudhari	Industrial Training	Ind. Training	01/07/2024 to 21/07/2024	Industrial Training	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						5 / 5
27	Mr. Ravindra P. Chavda	Industrial Training	Ind. Training	08/07/2024 To 28/07/2024	Electrical Machines	5
		MOOC- (“education for Sustainable Development-Noc25-hs12, 12 Week	1 Wk – 1 Mo.	20/01/2025 TO 11/04/2025	Learning in the Filed for Sustainable Development	5
Faculty Points (Uncapped) / Faculty Points (Capped to 5):						10 / 5
29	Mr. Sandip P. Mahant	Industrial Training	Ind. Training	08/07/2024 TO 28/07/2024	Mechanical Manufacturing	5
		Educational Reforms for Modern Work-force:integrating Industry and Research	1 Day	23/09/2024 to 23/09/2024	Mechanical Engineering	1

FDP Training Records — 2024-25 (Continued)

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
		Electric & Hybrid Vehicle Technology	≤1 Week	16/12/2024 TO 20/12/2024	Automobile	2
		Training and Development	1 Wk – 1 Mo.	20/01/2025 TO 11/04/2025	Training and Development	5
<i>Faculty Points (Uncapped) / Faculty Points (Capped to 5):</i>						13 / 5
33	Mr. Snehilkumar P. Joshiara	Education for Sustainability Development	1 Wk – 1 Mo.	20/01/2025 – 11/04/2025	Inter Disciplinary	5
		Industrial Training	Ind. Training	24/06/2024 – 14/07/2024	Industrial Training (EC)	5
<i>Faculty Points (Uncapped) / Faculty Points (Capped to 5):</i>						10 / 5
35	Mr. Sunil J. Chauhan	Semiconductor Electronics Design Automation(eda) Tools	≤1 Week	2/9 2024 to 6/9/2024	Semiconductor Electronics	2
		Study in India Orientation Programme	1 Day	30/11/2024	Higher Education	1
		Harnessing Artificial Intelligence for Academic Administration	1 Day	10/05/2024	Ai	1
		Workshop on NBA Reaccreditation	1 Day	23/2/24	NBA	1
		Workshop on Implementation of National Education Policy 2020 in Technical Education”	1 Day	23/10/2024	NEP 2020	1
		Skill Development Course in Semiconductor Industry	1 Day	05/02/2025	Semiconductor	1
<i>Faculty Points (Uncapped) / Faculty Points (Capped to 5):</i>						7 / 5
41	Mr. Tarun D. Modi	Industrial Training	Ind. Training	01-07-2024 TO 21-07-2024	Industrial Management & Process	5
		MOOC: Leadership and Team Effectiveness	1 Wk – 1 Mo.	20-01-2025 to 11-04-2025 (12 Week)	Faculty Development	5
		Educational Reforms for Modern Workface: Integrating Industry and Research	1 Day	23.9.2024 TO 23.9.2024	Nep-2020 (educational Reforms)	1
		(MOOC)title : Developing Soft Skills and Personality)	≤1 Week	19-08-2024 TO 11-10-2024 (8 WEEK)	Faculty Development	2
<i>Faculty Points (Uncapped) / Faculty Points (Capped to 5):</i>						13 / 5
45	Ms. Mittal K. Pedhadiya	Change the Lens:change the Life	1 Day	08/09/2024	Inter Disciplinary	1
<i>Faculty Points (Uncapped) / Faculty Points (Capped to 5):</i>						1 / 1
Year Totals (Uncapped / Faculty-Capped):						169 / 96

Training Records: 2025-26 (CAY — Reference Only)

Table 5.4.5: FDP Training Records — 2025-26 (CAY — for reference only, not scored)

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
1	Dr. Bhupendra B Mor	Ecology and Society	1 Wk – 1 Mo.	21/07/2025 – 10/10/2025	Interdisciplinary	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						5 / 5
2	Dr. Chirag S. Pandya	Ecology and Society	1 Wk – 1 Mo.	21/07/2025 – 10/10/2025	Interdisciplinary	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						5 / 5
3	Dr. Laukikkumar K. Patel	Entrepreneurship Development for the Space Sector	1 Wk – 1 Mo.	05/01/2026 – 10/01/2026	Entrepreneurship / Space Technology	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						5 / 5
4	Mr. Chetan P. Gehlot	Mathematics for Economics-1	1 Wk – 1 Mo.	21/07/2025 – 10/10/2025	Mathematics	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						5 / 5
5	Mr. Chirag M. Amin	Social Enterprise Management: Innovation, Impact, and Sustainability	1 Wk – 1 Mo.	15/09/2025 – 20/09/2025	Interdisciplinary	5
		Quantum Computing: Foundations to Future Avenues	≤1 Week	19/01/2026 – 23/01/2026	Emerging Technologies	2
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						7 / 5
7	Mr. Dhanraj P. Juddal	Advanced Machining Processes	1 Wk – 1 Mo.	18/08/2025 – 10/10/2025	Manufacturing Engineering	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						5 / 5
8	Mr. Jabbar V. Kureshi	Quantum Computing: Foundations to Future Avenues	≤1 Week	19/01/2026 – 23/01/2026	Emerging Technologies	2
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						2 / 2
9	Mr. Milav J. Dabgar	Quantum Computing: Foundations to Future Avenues	≤1 Week	19/01/2026 – 23/01/2026	Emerging Technologies	2
		Industrial Training Programme	1 Wk – 1 Mo.	18/05/2026 – 07/06/2026	Factory Automation, Electrical Consultancy, Commissioning	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						7 / 5

FDP Training Records — 2025-26 (Continued)

Sr.	Faculty	Training Programme	Duration	Period	Relevance Area	Pts
11	Mr. Rajesh L. Chaudhari	Basics of Tribology and Its Industrial Engineering Applications	≤1 Week	18/08/2025 – 22/08/2025	Mechanical Engineering	2
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						2 / 2
12	Mr. Sandip P. Mahant	Social Enterprise Management: Innovation, Impact, and Sustainability	1 Wk – 1 Mo.	15/09/2025 – 20/09/2025	Interdisciplinary	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						5 / 5
13	Mr. Sunil J. Chauhan	1 Day Visit in Space ,ISRO Ahmedabad	1 Day	20/8/25	Space Sector	1
		Artificial Intelligence (ai) for Management	1 Wk – 1 Mo.	Jan – Apr 2026	Emerging Area	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						6 / 5
15	Mr. Tarun D. Modi	Advanced Machining Processes	1 Wk – 1 Mo.	18/08/2025 – 10/10/2025	Manufacturing Engineering	5
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						5 / 5
16	Ms. Mittal K. Pedhadiya	Semiconductor Innovations; Empowering Faculty for Tomorrow’s Challenges (guj_25_15)	≤1 Week	04/08/2025 – 08/08/2025	VLSI / Semiconductor	2
		Swajan Mitra: a Psychological Wellness Program for Faculties	≤1 Week	09/02/2026 – 13/02/2026	Interdisciplinary	2
Faculty Total Points (Uncapped) / Faculty Total Points (Capped to 5):						4 / 4
Year Totals (Uncapped / Faculty-Capped):						63 / 58

5.4.2 Organized/ Conducted FDPs and STTP by this department at State / National Level (12)

Table 5.4.6: Expert Sessions / FDPs Organized

Sr.	Session Title	Expert	Designation	Institute/Company	Date
1	VLSI Low Power Techniques	Mr. Nishant Patel	Application Engineer B.E.E.C.	Synopsys Inc., California	03/03/2021
2	Digital Communication Basics Realization With MATLAB	Dr. Urvashi P. Shukla	Assistant Professor PhD EC	Bansanthali Vidhyapith	03/19/2021
3	Importance Of Programming	Mr. Pranav Dave	Associate Consultant MCA	TCS Gandhinagar	09/08/2021
4	NAVIC And Its Applications	Dr. Mehulkumar	Lecturer PhD EC	GGP Surat	01/29/2022
5	Future Of Electronics In Industries	Mr. Prakash Darji	Design Engineer BE EC	Google Bangalore	06/08/2022
6	Importance Of Communication In Industries	Mr. Jaimin Rami	Station Controller ME EC	JMRC, Ahmedabad	08/09/2022
7	Cyber Security	Mr. Sagar Hajare	Security Expert	Bank Of America	03/31/2023
8	Fabrication Of Solar Cell	Mr. Sandip Joshi	Jr. Engineer Diploma EC	Adani Power Ltd.	10/18/2023
9	Embedded System	Mr. Vishal Vadhher	Asst. Manager Training, B.E.E.C.	Sofcon India Pvt Ltd	03/13/2024
10	Web Development Technologies	Mr. Vishal Vadhher	Asst. Manager Training, B.E.E.C.	Sofcon India Pvt Ltd	03/13/2024
11	AI-ML: A New Era Of Future	Mr. Vishal Vadhher	Asst. Manager Training, B.E.E.C.	Sofcon India Pvt Ltd	09/30/2024
12	Internet Of Things	Dr. V K Thakar	Dean, Ph.D.	Indrashil University	10/22/2024
13	Career Guidance For EC Engineers	Mr. Krishna Panchal	Associate Engineer, B.E.E.C.	E-Infochips	11/10/2024
14	Ham Radio Workshop	Mr. N. B. Nadoda	Senior Lecturer	GGP, Ahmedabad	02/14/2025
15	Drone Technologies	Mr. Yuvrajsinh Rajput	Founder	Bee-Robokits Academy, Palanpur	02/15/2025
16	Cyber Crime Awareness	Mr. Manish S Chauhan	Assistant Professor	GEC Modasa	09/12/2025
17	IoT Applications with Node MCU & Raspberry Pi	Mr. Rishabh Prajapati	Co-Founder	Bee-Robokids Innovation Pvt Ltd	10/07/2025

Total: **17 Expert Sessions** organized (minimum 6 required). **Self-Assessment Score: 12/12**

Achievement Summary

- **17 Expert Sessions:** Comprehensive coverage of emerging technologies
- **Industry Collaboration:** 9 sessions by industry professionals from Google, TCS, Bank of America, Synopsys, etc.
- **Academic Partnership:** 8 sessions by academic experts from universities and research institutions
- **Contemporary Topics:** VLSI, IoT, AI-ML, Embedded Systems, Cyber Security, Drone Technology
- **Student Benefit:** Exposure to industry practices and career guidance



Figure 5.4.1: Expert Sessions Organised by EC Department



5.5 Product development, Consultancy, Manufacturing contracts, testing contracts (08)

Our faculty perform and serve various duties beyond classroom teaching, contributing actively to society, to GTU curriculum development, and to student career support. (See Annexure B for Duty Proofs) (See Annexure C for Syllabus Development Proofs)

Contributions Other Than Classroom Teaching

Civic Duties

- Citizen Service Support — RTO Help Center
- Democratic Engagement — Election Duties
- Public Service — Government Examination Duties

Educational Contributions

- Academic Contribution — Syllabus & Lab Manual Development (GTU)

Student Support & Career Development

- Career Facilitation — Placement Fair

Patents

Table 5.5.1: Patent Details

Faculty	Patent Type	Status	Application No.	Date
Shri N. J. Chauhan	Design	Awaiting Technical Examination	472301-001	03/09/2025
Dr. R. N. Patel	Design	Published	202341001043	05/01/2023
Dr. R. N. Patel	Design	Published	202241008305	25/02/2022
Dr. R. N. Patel	Design	Published	202141060958	21/01/2022

Contribution to Syllabus Development

Table 5.5.2: Faculty Contribution to Syllabus Development

Faculty	Dept.	Code	Subject Name	Year
Ms. M. K. Pedhadiya	EC	4321103	Electronic Circuits & Applications	2022-23
Shri Jabbarbhai V. Kureshi	IC	4341706	Industrial Power Control	2022-23
Shri Nirav J. Chauhan	EC	4321102	Digital Electronics	2022-23
Shri S. J. Chauhan	EC	4321101	Electronics Workshop	2022-23
Shri R. C. Parmar	EC	4331105	Industrial Electronics	2022-23
Dr. Laukikkumar K. Patel	EC	4351104	Mobile And Wireless Communication	2022-23
Shri Milav Dabgar	EC	4341104	Circuit Design Tools	2022-23
Ms. M. K. Pedhadiya	EC	4361102	VLSI	2023-24
Shri S. J. Chauhan	EC	4341108	Circuit Design Tools	2023-24
Shri Milav Dabgar	EC	4343203	Java Programming	2023-24
Shri S. J. Chauhan	EC	4361103	Electronic Project-II	2024-25
Shri Ashfaq M. Qureshi	EE	Di01000171	Basics of Electricals and Electronics Engg.	2024-25
Dr. Jigna D. Modi	S&H	Di01021011	Applied Chemistry	2024-25
Dr. Jigna D. Modi	S&H	Di01000071	Engineering Chemistry	2024-25
Shri Milav Dabgar	EC	4353207	Advance Java	2024-25
Shri Milav Dabgar	EC	Di04032021	Advance Java	2025-26

Duties Performed Outside GP Palanpur

Table 5.5.3: Duties Performed by Faculty Outside GP Palanpur

Faculty Name	Dept.	Acad. Year	Start	End	Type of Contribution	Role
Dr. Bhupendra Mor	Science & Humanities	2021-2022	2/13/22	2/13/22	Government Exam Duty (conduction)	Supervisor
Dr. Bhupendra Mor	Science & Humanities	2021-2022	3/23/22	3/24/22	Placement Fair Facilitation	Expenditure Committee
Shri C P Gelot	General	2021-2022	2/13/22	2/13/22	Government Exam Duty (conduction)	Supervisor
Dr. R N Patel	EC	2021-2022	10/1/22	10/5/21	Election Duty	Zonal/counting Supervisor
Dr. R N Patel	EC	2021-2022	3/23/22	3/24/22	Placement Fair Facilitation	Member of Media Committee

Faculty Name	Dept.	Acad. Year	Start	End	Type of Contribution	Role
Shri T D Modi	Mechanical	2021-2022	1/1/22	1/31/22	Rto Help Center Support	Member
Shri T D Modi	Mechanical	2021-2022	4/1/22	4/30/22	Rto Help Center Support	Member
Shri Nirav J Chauhan	EC	2021-2022	3/2/22	3/24/22	Placement Fair Facilitation	Student Registration Committee Coordinator
Shri J V Kureshi	Ic	2021-2022	3/2/22	3/25/22	Placement Fair Facilitation	Student Registration
Shri J V Kureshi	Ic	2021-2022	4/24/22	4/24/22	Government Exam Duty (conduction)	Invigilator
Shri J V Kureshi	Ic	2021-2022	10/1/21	10/31/21	Rto Help Center Support	Rto License Duty
Shri J V Kureshi	Ic	2021-2022	9/17/21	9/17/21	Other Consultancy/service Activity	Member
Shri Nirav J Chauhan	EC	2021-2022	10/1/21	10/31/21	Rto Help Center Support	Member
Shri Nirav J Chauhan	EC	2021-2022	1/1/22	1/31/22	Rto Help Center Support	Member
Shri Nirav J Chauhan	EC	2021-2022	4/1/22	4/30/22	Rto Help Center Support	Group Leader
Shri R C Parmar	Electronics and Communication	2021-2022	9/1/22	12/31/22	Election Duty	Zonal Officer
Shri Rajesh Chaudhari	Mechanical	2021-2022	7/1/21	6/30/22	Upssc Exam Center Duty	Supervisor
Shri Rajesh Chaudhari	Mechanical	2021-2022	7/1/21	6/30/22	Election Duty	
Dr. Bhupendra Mor	Science & Humanities	2022-2023	11/7/22	11/7/22	Election Duty	Zonal Officer
Dr. Bhupendra Mor	Science & Humanities	2022-2023	3/9/23	3/10/23	Placement Fair Facilitation	Expenditure Committee
Shri C P Gelot	General	2022-2023	3/9/23	3/10/23	Placement Fair Facilitation	Member
Dr. R N Patel	EC	2022-2023	12/7/22	12/8/22	Election Duty	Counting Supervisor
Dr. R N Patel	EC	2022-2023	3/9/23	3/10/23	Placement Fair Facilitation	Member of Media Committee
Shri T D Modi	Mechanical	2022-2023	10/1/22	10/31/22	Rto Help Center Support	Group Leader
Shri Nirav J Chauhan	EC	2022-2023	2/15/23	3/10/23	Placement Fair Facilitation	Student Registration Committee Coordinator
Shri T D Modi	Mechanical	2022-2023	7/1/22	6/30/23	Election Duty	Zonal Officer
Shri J V Kureshi	Ic	2022-2023	9/1/22	12/30/22	Election Duty	Zonal Officer
Shri Nirav J Chauhan	EC	2022-2023	1/7/23	1/8/23	Government Exam Duty (conduction)	Aayog Pratinidhi
Ms. M. K. Pedhadiya	EC	2022-2023	3/9/23	3/10/23	Placement Fair Facilitation	Member in Student-industry Mapping Committee

Faculty Name	Dept.	Acad. Year	Start	End	Type of Contribution	Role
Shri Rajesh Chaudhari	Mechanical	2022-2023	7/1/22	6/30/23	Rto Help Center Support	
Ms. M. K. Pedhadiya	EC	2022-2023	12/4/22	12/6/22	Election Duty	Presiding Officer
Ms. M. K. Pedhadiya	EC	2022-2023	3/9/23	3/10/23	Placement Fair Facilitation	Industry Student Mapping
Dr. Bhupendra Mor	Science & Humanities	2023-2024	10/15/23	10/15/23	Government Exam Duty (conduction)	Supervisor
Dr. Bhupendra Mor	Science & Humanities	2023-2024	3/12/24	3/13/24	Placement Fair Facilitation	Expenditure Committee
Shri C P Gelot	General	2023-2024	1/7/24	1/7/24	Government Exam Duty (conduction)	Takedari Supervisor
Shri C P Gelot	General	2023-2024	1/21/24	1/21/24	Government Exam Duty (conduction)	Takedari Supervisor
Dr. R N Patel	EC	2023-2024	12/18/23	1/30/24	Election Duty	Zonal Officer
Dr. R N Patel	EC	2023-2024	10/1/23	10/31/23	Rto Help Center Support	Member
Dr. R N Patel	EC	2023-2024	12/1/23	12/31/23	Rto Help Center Support	Member
Shri T D Modi	Mechanical	2023-2024	2/1/24	2/29/24	Rto Help Center Support	Group Leader
Shri Nirav J Chauhan	EC	2023-2024	2/26/24	3/13/24	Placement Fair Facilitation	Student Registration Committee Coordinator
Shri T D Modi	Mechanical	2023-2024	7/1/23	6/30/24	Election Duty	Zonal Officer
Shri T D Modi	Mechanical	2023-2024	7/1/23	6/30/24	Other Consultancy/service Activity	ACPDC Admission Awareness Programme (inst.cont.) (member)
Shri J V Kureshi	Ic	2023-2024	2/15/23	3/10/23	Placement Fair Facilitation	Student Registration
Shri J V Kureshi	Ic	2023-2024	2/20/24	3/13/24	Placement Fair Facilitation	Student Registration
Shri Nirav J Chauhan	EC	2023-2024	4/1/24	4/30/24	Rto Help Center Support	Member
Shri Nirav J Chauhan	EC	2023-2024	3/21/24	5/5/24	Election Duty	Presiding Officer
Shri Nirav J Chauhan	EC	2023-2024	1/17/24	1/21/24	Government Exam Duty (conduction)	Takedari Supervisor
Shri R C Parmar	Electronics and Communication	2023-2024	12/19/23	5/31/23	Election Duty	Zonal Officer
Shri S P Joshiara	Electronics & Comm. Engg.	2023-2024	9/1/23	9/30/23	Rto Help Center Support	Member
Shri Rajesh Chaudhari	Mechanical	2023-2024	7/1/23	6/30/24	Rto Help Center Support	
Shri Snehilkumar P Joshiara	EC	2023-2024	12/28/23	5/8/24	Election Duty	Zonal Officer
Ms. M. K. Pedhadiya	EC	2023-2024	5/6/24	5/8/24	Election Duty	Presiding

Faculty Name	Dept.	Acad. Year	Start	End	Type of Contribution	Role
Ms. M. K. Pedhadiya	EC	2023-2024	10/10/23	10/10/23	Government Exam Duty (conduction)	Vigilance Officer
Dr. Laukikkumar K Patel	EC	2023-2024	12/28/23	3/15/24	Election Duty	Zonal Officer
Dr. Bhupendra Mor	Science & Humanities	2024-2025	9/14/25	9/14/25	Government Exam Duty (conduction)	Center Incharge
Dr. Bhupendra Mor	Science & Humanities	2024-2025	4/19/25	4/19/25	Government Exam Duty (conduction)	Center Incharge
Dr. Bhupendra Mor	Science & Humanities	2024-2025	2/25/25	2/25/25	Placement Fair Facilitation	Expenditure Committee
Shri C P Gelot	General	2024-2025	5/7/24	5/7/24	Election Duty	Presiding Officer
Dr. R N Patel	EC	2024-2025	11/1/24	11/30/24	Rto Help Center Support	Member
Dr. R N Patel	EC	2024-2025	2/25/25	2/25/25	Placement Fair Facilitation	Member of Media Committee
Shri T D Modi	Mechanical	2024-2025	2/1/25	2/28/25	Rto Help Center Support	Group Leader
Shri Nirav J Chauhan	EC	2024-2025	1/28/25	2/25/25	Placement Fair Facilitation	Student Registration Committee Coordinator
Shri S J Chauhan	EC	2024-2025			Election Duty	Presiding Officer
Shri T D Modi	Mechanical	2024-2025	7/1/24	6/30/25	Election Duty	Zonal Officer
Shri T D Modi	Mechanical	2024-2025	7/1/24	6/30/25	Other Consultancy/service Activity	Amusement Rides & Gaming Zone Inspection Committee (member)
Shri T D Modi	Mechanical	2024-2025	7/1/24	6/30/25	Other Consultancy/service Activity	ACPDC Admission Awareness Programme (inst. Cont.) (member)
Shri Mahesh F Tank	General	2024-2025	5/6/24	5/8/24	Election Duty	Zonal Officer
Shri J V Kureshi	Ic	2024-2025	1/25/25	2/25/25	Placement Fair Facilitation	Student Registration
Shri Nirav J Chauhan	EC	2024-2025	12/20/24	12/22/24	Government Exam Duty (conduction)	Takedari Supervisor
Ms. M. K. Pedhadiya	EC	2024-2025	2/25/25	2/25/25	Placement Fair Facilitation	Industry Student Mapping
Shri C P Gelot	General	2025-2026	4/19/25	4/19/25	Government Exam Duty (conduction)	Strong Room Incharge
Dr. R N Patel	EC	2025-2026	9/10/25	9/14/25	Government Exam Duty (conduction)	Representative of Commission for Gsssb Exam
Shri T D Modi	Mechanical	2025-2026	2/1/26	2/28/26	Rto Help Center Support	Group Leader
Shri Nirav J Chauhan	EC	2025-2026	1/28/26	2/24/26	Placement Fair Facilitation	Student Registration Committee Coordinator
Shri T D Modi	Mechanical	2025-2026	7/1/21	3/1/25	Placement Fair Facilitation	Member

Faculty Name	Dept.	Acad. Year	Start	End	Type of Contribution	Role
Shri J V Kureshi	Ic	2025-2026	1/28/26	2/24/26	Placement Fair Facilitation	Student Registration
Shri J V Kureshi	Ic	2025-2026	9/1/25	9/30/25	Rto Help Center Support	Rto License Duty
Shri Nirav J Chauhan	EC	2025-2026	9/1/25	9/30/25	Rto Help Center Support	Member
Shri S P Joshiara	Electronics & Comm. Engg.	2025-2026	12/1/25	12/31/25	Rto Help Center Support	Member
Mr. Milav J. Dabgar	EC	2021-2022	2/2/22	2/2/22	Rto Help Center Support	Member
Mr. Milav J. Dabgar	EC	2021-2022	3/1/22	3/31/22	Placement Fair Facilitation	Member
Mr. Milav J. Dabgar	EC	2022-2023	12/1/22	12/31/22	Election Duty	Member
Mr. Milav J. Dabgar	EC	2022-2023	2/15/23	3/10/23	Placement Fair Facilitation	Member
Mr. Milav J. Dabgar	EC	2022-2023	7/1/22	6/30/23	Other Consultancy/service Activity	ACPDC Admission Awareness Programme (member)
Mr. Milav J. Dabgar	EC	2023-2024	11/1/23	11/30/23	Election Duty	Member
Mr. Milav J. Dabgar	EC	2023-2024	2/1/24	3/13/24	Placement Fair Facilitation	Member
Mr. Milav J. Dabgar	EC	2024-2025	1/28/25	2/25/25	Placement Fair Facilitation	Member
Mr. Milav J. Dabgar	EC	2024-2025	7/1/24	6/30/25	Other Consultancy/service Activity	ACPDC Admission Awareness Programme (member)
Mr. Milav J. Dabgar	EC	2025-2026	1/28/26	2/24/26	Placement Fair Facilitation	Member
Mr. Milav J. Dabgar	EC	2025-2026	7/1/26	7/31/26	Rto Help Center Support	Member

Self-Assessment Score: 8/8

5.6 Faculty Performance Appraisal and Development System (FPADS) (30)

Being a government institution, faculty appraisal is conducted annually through the **Karmyogi portal** (<https://karmyogi.gujarat.gov.in/>), replacing the earlier SATHI portal.

A. A well-defined FPADS instituted for all the assessment years (05)

Being a government institution, the faculty appraisal system is well-defined, objective and transparent. Faculty fill their Performance Appraisal Report (PAR) annually in April through the **Karmyogi portal** (<https://karmyogi.gujarat.gov.in/>), replacing the earlier SATHI portal (used until March 2023).

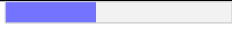
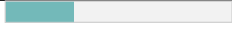
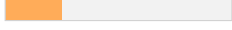
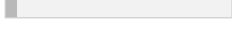
The PAR (Schedule-1 form) is structured into four sections (Table 5.6.1). Section II is filled in by the faculty member as a self-appraisal (8 items). Section III is scored independently by the Reporting Authority (HOD) and Reviewing Authority (Principal) across **18 quantitative parameters** grouped into four weighted categories totalling **100**

marks — Assessment of Work Output (40, scale 1–10), Personal Attributes (30, scale 1–5), Functional Competency (25, scale 1–5) and Organizational Discipline (5, point-based) — along with qualitative remarks on integrity, significant failures/disciplinary action and a pen-picture. Section IV records the Reviewing Authority's concurrence and the final score out of 100. Table 5.6.2 summarises how the 100-mark Section III score is distributed across the four categories; Table 5.6.3 lists the 18 quantitative parameters in detail; Table 5.6.4 lists the descriptive Self-Appraisal (Section II) and qualitative remark items (Section III/IV) that are not part of the 100-mark score.

Table 5.6.1: Performance Appraisal Report (PAR) Format — Sections and Filling Authority

Sr.	Section Name	Filled By
1	Section I - Basic Information	Establishment section
2	Section II - Self Appraisal	Faculty himself/herself
3	Section III - Appraisal	Head of Department
4	Section IV - Review	Head of Institution

Table 5.6.2: PAR Scoring Rubric — Marks Distribution (100 Marks)

Category (Section III)	Marks	Distribution (/100)	Scale	Params
B. Assessment of Work Output	40		1–10	4
C. Assessment of Personal Attributes	30		1–5	6
D. Assessment of Functional Competency	25		1–5	5
E. Organizational Discipline	5		Point-based	3
Total (Section III Score)	100		—	18

Note: Bar length is proportional to marks out of 100; the Total row shows the combined 100-mark composition in the same colours.

Table 5.6.3: PAR Quantitative Scoring Rubric

Category	Parameter	Assess Scale
B. Assessment of Work Output (40 Marks)	Accomplishment of planned work	1-10
	Quality of output	1-10
	Accomplishment of extraordinary work	1-10
	Analytical ability	1-10
C. Assessment of Personal Attributes (30 Marks)	Attitude to work	1-5
	Sense of responsibility	1-5
	Inter-personal relation & emotional stability	1-5
	Communication skills	1-5
	Moral courage	1-5
D. Assessment of Functional Competency (25 Marks)	Leadership qualities	1-5
	Knowledge of laws/rules/procedures/IT skills	1-5
	Decision making ability	1-5
	Initiative	1-5
	Coordination ability	1-5
E. Organizational Discipline (5 Marks)	Ability to motivate & team spirit	1-5
	Property return filed before 31 January	0 or 2 marks
	Own PAR submitted before 15 May	0 or 1 mark
	85% or more subordinates' PARs sent before 15 June	0 or 2 marks

Table 5.6.4: PAR Self-Appraisal & Qualitative Assessment Items

Category	Parameter	Evaluated By	Assess Scale	Purpose
A. Self-Appraisal (Sec. II)	Brief description of duties (about 100 words)	Faculty	Descriptive	Role clarity and responsibilities
	Annual work plan & achievements (4 work areas)	Faculty	Tabular	Goal setting and accomplishment
	Extraordinary contribution claimed (if any)	Faculty	Descriptive	Recognition of exceptional work
	Factors that hindered performance	Faculty	Descriptive	Obstacle identification
	Training needs (3 areas)	Faculty	3 areas listed	Skill development planning
	Declaration: property return, medical check-up, subordinates' PARs	Faculty	Yes/No + dates	Statutory compliance
	Additional charge held for 3+ months (Annexure-4)	Faculty	If applicable	Administrative contribution
	Training programmes attended (Sec. I)	Faculty / Establishment	Tabular	Professional development tracking
F. Qualitative Remarks (Sec. III/IV)	Agreement with Section II self-appraisal	Reporting Authority	Yes/No	Validation of self-claims
	Significant failure / disciplinary action during the year	Reporting Authority	Yes/No	Conduct monitoring
	Integrity remark	Reporting Authority	Descriptive	Ethical conduct assessment
	Pen-picture (about 100 words)	Reporting Authority	Descriptive	Overall qualitative profile
	Domain assignment recommendation (tick any 4)	Reporting Authority	Multi-select	Future role planning



Figure 5.6.1: Karmyogi Portal — Home Page

Appraisal Id	Document Name	Status	Sub Status	Period From	Period To	Download PAR
PAR/202425/02001350789	Gazetted officer PAR Click here to open PAR document	Completed	Submitted to CCA	01/04/2024	31/03/2025	
PAR/202324/00000253268	Gazetted officer PAR Click here to open PAR document	Completed	Submitted to CCA	01/04/2023	31/03/2024	
PAR/202223/00000081603	Gazetted officer PAR Click here to open PAR document	Completed	Submitted to CCA	01/04/2022	31/03/2023	
PAR/202122/00000081602	Gazetted officer PAR Click here to open PAR document	Completed	Submitted to CCA	01/04/2021	31/03/2022	
PAR/202021/00000232257	Gazetted officer PAR Click here to open PAR document	Completed	Submitted to CCA	01/04/2020	31/03/2021	
PAR/201920/02001259026	Gazetted officer PAR Click here to open PAR document	Completed	Submitted to CCA	01/04/2019	31/03/2020	

Figure 5.6.2: Karmyogi Portal — Employee PAR List

Key Features of the System

- **Comprehensive Coverage:** 18 quantitative parameters across 4 weighted categories (Work Output 40, Personal Attributes 30, Functional Competency 25, Organizational Discipline 5) totalling 100 marks
- **Dual Assessment:** Faculty self-appraisal (Section II) combined with independent scoring by both Reporting Authority (HOD) and Reviewing Authority (Principal)
- **Quantitative Rating:** 1–10 and 1–5 scales with a deviation flag enable objective, comparable scoring
- **Transparency:** Faculty review their reports and may accept or represent against the assessment before finalization
- **Grievance Mechanism:** Objection/representation provision ensures fairness
- **Career Linkage:** Score directly connected to promotions and AGP advancement

Self-Assessment Score: 5/5

B. Its implementation and effectiveness (15)

The department uses **two distinct digital portals** for faculty appraisal and career advancement, each serving a specific and separate purpose:

- **Karmyogi Portal** (<https://karmyogi.gujarat.gov.in/>) — Used *annually* by every faculty member for submitting the Performance Appraisal Report (PAR). Faculty fill the PAR each year in April; the report passes through the Reporting Officer (HOD) and Reviewing Authority (Principal) before being submitted to the Commissionerate of Technical Education (CTE). Lecturer (Class 2) PARs are retained at CTE; HOD (Class 1) PARs are forwarded to the Education Department.
- **Cogent Portal** — Used *only when a faculty member becomes eligible* for Career Advancement Scheme (CAS) under the AICTE guidelines. Applications for AGP advancement are submitted through this portal, reviewed by the CAS Committee, and forwarded to the Commissionerate. Eligibility is based on PBAS points accumulated during the assessment period; a minimum score of $\geq 60/100$ in each of the last five PARs is required.

Table 5.6.5: AGP Scale Movement Eligibility

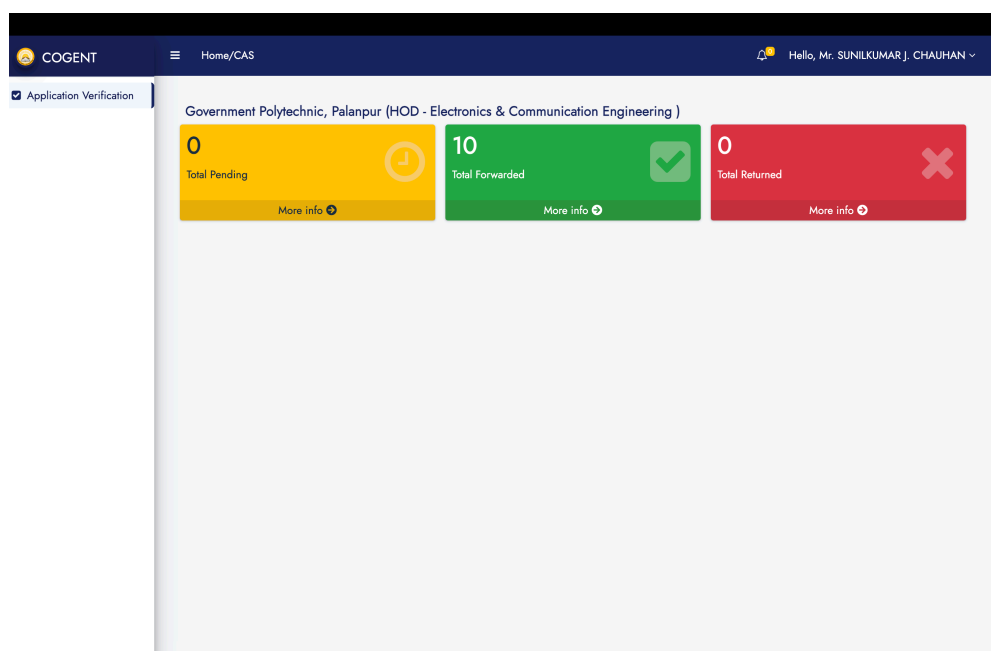


Figure 5.6.3: Cogent Portal — CAS Feature (HoD Role)

Degree	AGP Scale	Eligibility Criteria
B.E.	5400	At the time of appointment
B.E.	6000	After acquiring ME or 6 years
B.E.	7000	After completing 3 years
B.E.	8000	After completing 5 years
B.E.	9000	After completing 3 years
M.E./M.Tech	6000	At the time of appointment
M.E./M.Tech	7000	After completing 5 years
M.E./M.Tech	8000	After completing 5 years
M.E./M.Tech	9000	After completing 3 years

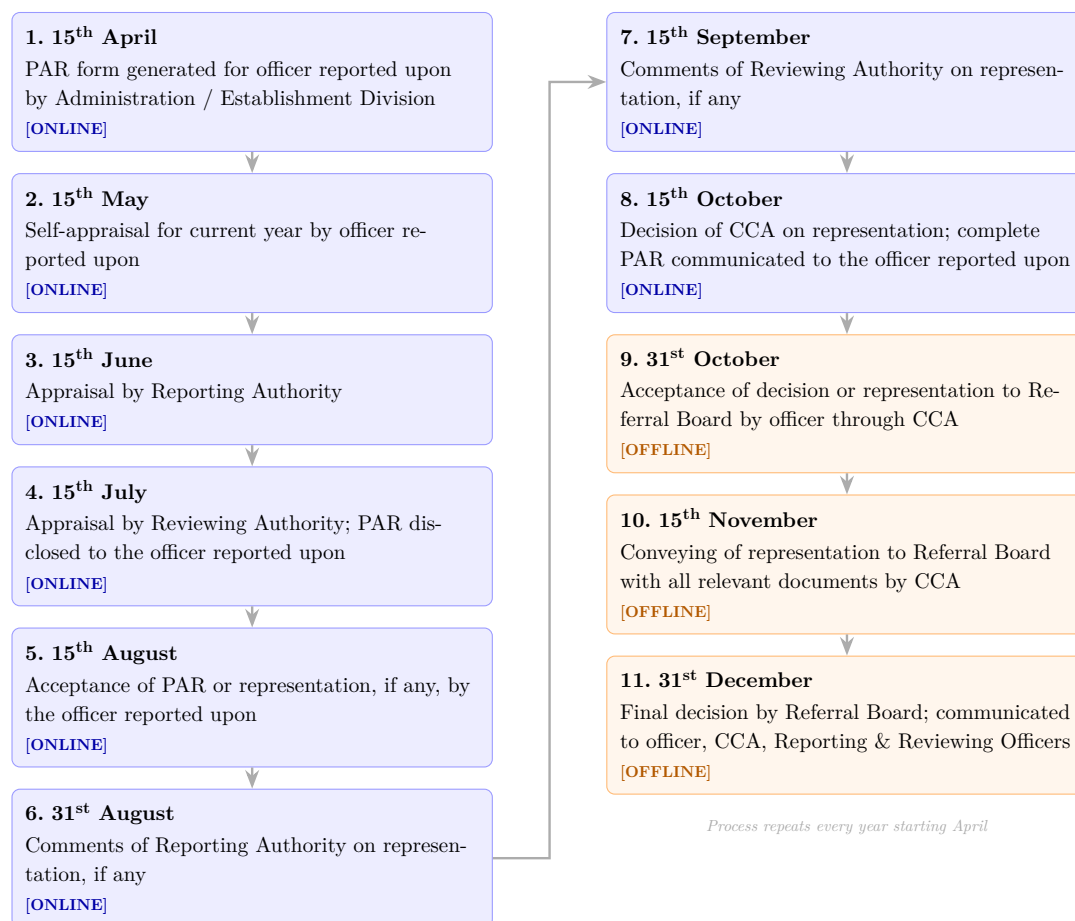
Table 5.6.6: Career Advancement Under CAS

Sr.	Faculty Name	Eligibility Date	AGP Movement	Status
1	Mr. Nirav J. Chauhan	01/07/2022	L10-L11	Complete
2	Miss Mittal K. Pedhadiya	08/05/2018	15600-39100 (6000) to (7000)	Complete
3	Mr. Snehilkumar P. Joshiara	25/05/2022	L9A-L10	Complete
4	Mr. Rahul C. Parmar	11/06/2021	L10-L11	Complete
5	Mr. Milav J. Dabgar	02/11/2021	L10-L11	Complete
6	Miss Mittal K. Pedhadiya	26/04/2017	15600-39100 (5400) to (6000)	Complete
7	Dr. Ratansing N. Patel	28/10/2020	15600-39100 (6000) to (7000)	Complete
8	Mr. Laukikkumar K. Patel	09/05/2016	15600-39100 (6000) to (7000)	Complete

Sr.	Faculty Name	Eligibility Date	AGP Movement	Status
9	Dr. Laukikkumar K. Patel	09/05/2021	L11-L12	Complete

PAR Process Timeline

Annual PAR Process Cycle — Government of Gujarat (Parishisht 2)



Process Timeline

- **Step 1:** Faculty self-appraisal (April annually)
- **Step 2:** HOD evaluation and grading (April–May)
- **Step 3:** Principal review and finalization (May)
- **Step 4:** Faculty acknowledgment with objection window (May–June)
- **Step 5:** CTE processing and career advancement eligibility (June onwards)

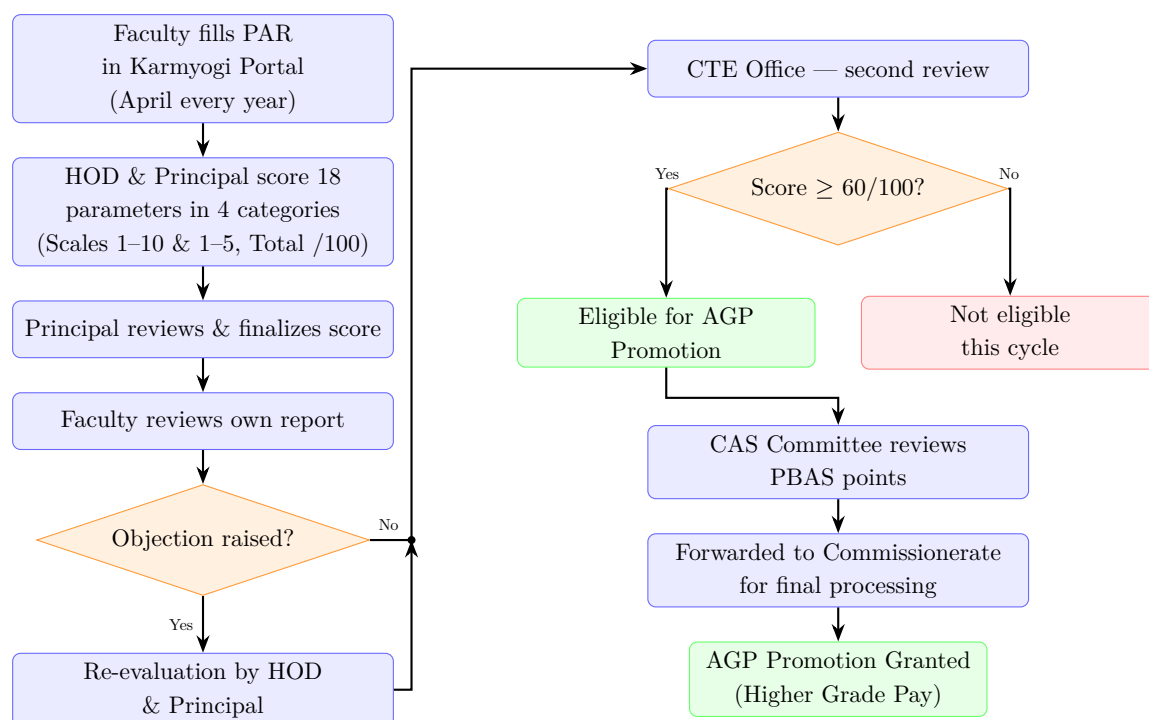
Key Decision Points

- Score $\geq 60/100$ required for AGP promotion eligibility
- Last 5 years' PARs reviewed for career advancement
- PBAS points assessed by CAS Committee for promotion

પરિશિષ્ટ-૨
કામગીરી મૂલ્યાંકન અહેવાલ પૂર્ણ કરવા માટેનું સમયપત્રક :

No. સમ	Activity પ્રવૃત્તિઓ	Cut off Dates તારીખ કે તે પહેલાં કામગીરી પૂર્ણ કરવી	
1	PAR form to be generated of the officer reported upon by the Administration / Establish Division.	15 th April	On line
2	Self-appraisal for current year	15 th May	On line
3	Appraisal by reporting authority	15 th June	On line
4	Appraisal by reviewing authority and discloser of PAR to officer reported upon	15 th July	On line
5	Acceptance of PAR or representation if any by officer reported upon.	15 th August	On line
6	Comments of the Reporting Authority on representation if any	31 st August	On line
7	Comments of the Reviewing Authority on representation if any	15 th September	On line
8	Decision of CCA about the representation and communication of the same alongwith complete PAR to the officer reported upon.	15 th October	On line
9	Acceptance of decision or representation if any to the Referral Board by the officer reported upon through CCA	31 st October	Off line
10	Conveying of representation to the Referral Board alongwith all relevant documents by CCA	15 th November	Off line
11	Decision and communication to the officer reported upon by the referral Board and end of entire PAR process (Copy of the decision to CCA, reporting officer and reviewing officer)	31 st December	Off line

Figure 5.6.4: GAD Guidelines — PAR Schedule (Parishisht~2)

FPADS Process Flow

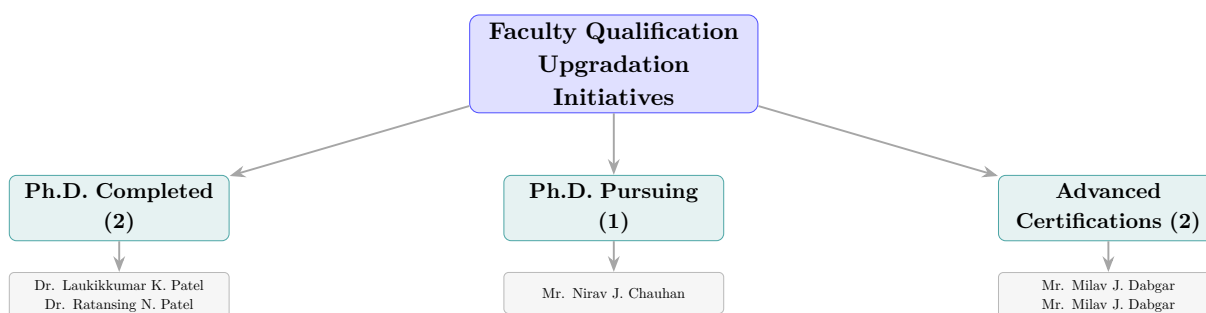
Self-Assessment Score: 15/15

C. Details of qualification up-gradation of faculty (10)

Faculty are sponsored for higher studies on seniority basis.

Table 5.6.7: Faculty Qualification Upgradation

Sr.	Faculty	Degree	Area	University	Duration
1	Dr. Laukikkumar K. Patel	Ph.D.	Feature based image registration using machine learning	SPU, Mehsana	2019-2024
2	Dr. Ratansing N. Patel	Ph.D.	Rectangular Microstrip Patch Antenna Design for Satellite image vision system	GTU, Ahmedabad	2014-2019
3	Mr. Nirav J. Chauhan	Ph.D.	Design of Compact Wide-band Microstrip Patch Antenna for Wireless Applications	GTU, Ahmedabad	2022-Continue
4	Mr. Milav J. Dabgar	AICTE QIP PG Certificate	Deep Learning	NIT, Surat	2025-2025
5	Mr. Milav J. Dabgar	B.S.	Data Science & Applications	IIT, Madras	2021-Continue



Self-Assessment Score: 10/10

Criterion 5 Score Summary

Table 5.6.8: Criterion 5 Self-Assessment Score Summary

Section	Title	Max Marks	Self-Assessment
5.1	Student-Faculty Ratio	25	25
5.2.1	Faculty Qualification Index	20	16.33
5.2.2	PhD Faculty Availability	5	5
5.3	Faculty Retention	20	20
5.4.1	FDP Participation	30	30
5.4.2	Expert Sessions Organized	12	12
5.5	Consultancy / Outside Contributions	8	8
5.6a	FPADS - Well-defined System	5	5
5.6b	FPADS - Implementation	15	15
5.6c	Qualification Upgradation	10	10

<i>Section</i>	<i>Title</i>	<i>Max Marks</i>	<i>Self-Assessment</i>
TOTAL	Criterion 5	150	146.33

Criterion 6

Facilities and Technical Support (100)

Total Marks: 100

Table 6.0.1: Sub-Criteria and Marks Distribution – Criterion 6: Facilities and Technical Support (Total 100 Marks)

No.	Sub-Criterion	Marks
6.1	Availability of adequate, well-equipped classrooms to meet the curriculum requirements	10
	A Adequacy of number of classrooms	–
	B Adequate classroom infrastructure checklist <i>Area sheet of class room</i>	–
6.2	Availability of adequate and well-equipped workshops, Laboratories and Technical manpower to meet the curriculum requirements	40
	A Adequacy <i>Area sheet of laboratory</i>	10
	B Quality of Labs/workshop	20
	Technical Manpower support – Eligible and Adequate	10
	C <i>Laboratory utilization (weekly/per term)</i>	
	<i>Lab assistant order</i>	
	<i>Purchase order of major equipments</i>	
6.3	Additional facilities created for improving the quality of learning experience in laboratories	20
	A Facilities <i>Purchase summary of equipments</i>	10
	B Effective Utilization <i>Utilization register of laboratory</i>	5
	C Relevance to POs/PSOs	5
	<i>Additional learning resource record (Departmental Library book record/Department's Google Drive/ONOS Digital Platform/Expert talk/Workshop/Seminar/Industrial visit)</i>	
6.4	Laboratories: Maintenance and overall ambiance <i>Equipment history card/maintenance/AMC record</i>	10
6.5	Availability of computing facility in the department	10
	· Availability and Adequacy	10
6.6	Language lab	10
	· Availability and effective utilization	10
Total Marks – Criterion 6		100

6.1 Availability of adequate, well-equipped classrooms to meet the curriculum requirements (10)

[A] Adequacy of number of classrooms in department

Course duration: 03 Year

Number of available classrooms: 05

Adequacy: Yes, Adequate

The Electronics and Communication Engineering Department of Government Polytechnic, Palanpur, is equipped with five (05) well-furnished classrooms, each designed to facilitate effective teaching-learning processes. These classrooms are:

- **Adequate in number and capacity** to conduct lectures, tutorials, and other academic activities as per curriculum requirements, ensuring compliance with NBA's emphasis on infrastructure sufficiency.
- **Well-equipped with modern teaching aids** such as whiteboards, projection facilities, and audio-visual support, thereby enhancing student engagement and meeting the NBA criterion of effective delivery of curriculum.
- **Integrated with CCTV surveillance systems**, which not only strengthen institutional discipline and security but also align with NBA's focus on creating a safe and conducive learning environment.
- **Designed to support inclusivity and accessibility**, ensuring that students from diverse backgrounds can benefit equally, in line with NBA's quality benchmarks for equity in education.
- **Maintained to high standards of cleanliness and ergonomics**, contributing to student comfort and concentration, which indirectly supports NBA's concern for student-centric learning outcomes.

Table 6.1.1: List of Classroom/Tutorial Room with Amenities

Sr. No.	Building Name Room No.	Seating Capacity	Area (m ²)	Facilities						
				Projector	Chalk Board/ White Board	Benches	Internet/ Wi-Fi	Laptop/ PC (when required)	Fan	Light
1	BADP Building Ground Floor (B007)	60	45	Portable projector	Yes	Yes	CWAN (Wired and Wireless)	Laptop	Yes	Yes
2	BADP Building Ground Floor (B011)	60	45	Fixed Projector with Screen	Yes	Yes	CWAN (Wired and Wireless)	PC	Yes	Yes
3	BADP Building First Floor (B108)	60	45	Portable projector	Yes	Yes	CWAN (Wired and Wireless)	Laptop	Yes	Yes
4	BADP Building First Floor (B109)	90	75	Portable projector	Yes	Yes	CWAN (Wired and Wireless)	Laptop	Yes	Yes

Sr. No.	Building Name Room No.	Seating Capacity	Area (m ²)	Facilities						
				Projector	Chalk Board/ White Board	Benches	Internet/ Wi-Fi	Laptop/ PC (when required)	Fan	Light
5	BADP Building First Floor (B111)	60	45	Portable projector	Yes	Yes	CWAN (Wired and Wireless)	Laptop	Yes	Yes

[B] Adequate classroom infrastructure checklist

[1] Class room: B007

Table 6.1.2: Adequate Classroom B007 Infrastructure Checklist

Sr. No.	Parameter	Criteria / Norms	Available (Yes/No)	Quantity / Details	Remarks / Evidence Attached
1	Size & Seating Capacity	Minimum 33 sqm per class, 30 seats	Yes	45 Sqm	Area sheet of Institute
2	Ventilation & Lighting	Adequate lighting airflow, fans/windows functional	Yes	Entry & Exit Doors, 4 windows	Photographs
3	ICT Infrastructure	Projector / Internet / Audio system	Yes	Portable projector CWAN (Wired and Wireless)	Photographs
4	Furniture	Comfortable Benches/chairs, Black board, clean layout	Yes	20 Benches, 1 Chair, 1 Table, 1 Blackboard	Photographs
5	Cleanliness	Regularly cleaned maintained	Yes	Regularly cleaning of each classroom	Register/ Contract letter
6	Safety Measures	Fire extinguisher, emergency exits, CCTV, first aid	Yes	CCTV Camera, MCBs, Fire extinguisher near entrance	Photographs
7	Network Connectivity	LAN / Wi-Fi present functional	Yes	CWAN (Wired and Wireless)	Photographs
8	Evidence of Academic Use	Photos, logs, lecture sessions	Yes	As per timetable Muster	Timetable file
9	Display of Academic Information	Timetables, course outcomes, notices displayed	Yes	Notice board available near entrance	Photographs
10	Academic Ambience	Posters, charts, inspirational content	Yes	Posters, charts, inspirational content	Photographs

[2] Class room: B011

Table 6.1.3: Adequate Classroom B011 Infrastructure Checklist

Sr. No.	Parameter	Criteria / Norms	Available (Yes/No)	Quantity / Details	Remarks / Evidence Attached
1	Size & Seating Capacity	Minimum 33 sqm per class, 30 seats	Yes	45 Sqm	Area sheet of Institute
2	Ventilation & Lighting	Adequate lighting airflow, fans/windows functional	Yes	Entry & Exit Doors, 4 windows	Photographs
3	ICT Infrastructure	Projector / Internet / Audio system	Yes	Fixed Projector with Screen (OHP), CWAN (Wired and Wireless)	Photographs
4	Furniture	Comfortable Benches/chairs, Black board, clean layout	Yes	20 Benches, 1 Chair, 1 Table, 1 Blackboard	Photographs
5	Cleanliness	Regularly cleaned maintained	Yes	Regularly cleaning of each classroom	Register/ Contract letter
6	Safety Measures	Fire extinguisher, emergency exits, CCTV, first aid	Yes	CCTV Camera, MCBs, Fire extinguisher near entrance	Photographs
7	Network Connectivity	LAN / Wi-Fi present functional	Yes	CWAN (Wired and Wireless)	Photographs
8	Evidence of Academic Use	Photos, logs, lecture sessions	Yes	As per timetable Muster	Timetable file
9	Display of Academic Information	Timetables, course outcomes, notices displayed	Yes	Notice board available near entrance	Photographs
10	Academic Ambience	Posters, charts, inspirational content	Yes	Posters, charts, inspirational content	Photographs

[3] Class room: B108

Table 6.1.4: Adequate Classroom B108 Infrastructure Checklist

Sr. No.	Parameter	Criteria / Norms	Available (Yes/No)	Quantity / Details	Remarks / Evidence Attached
1	Size & Seating Capacity	Minimum 33 sqm per class, 30 seats	Yes	45 Sqm	Area sheet of Institute
2	Ventilation & Lighting	Adequate lighting airflow, fans/windows functional	Yes	Entry & Exit Doors, 4 windows	Photographs
3	ICT Infrastructure	Projector / Internet / Audio system	Yes	Portable projector CWAN (Wired and Wireless)	Photographs

Sr. No.	Parameter	Criteria / Norms	Available (Yes/No)	Quantity / Details	Remarks / Evidence Attached
4	Furniture	Comfortable Benches/chairs, Black board, clean layout	Yes	20 Benches, 1 Chair, 1 Table, 1 Blackboard	Photographs
5	Cleanliness	Regularly cleaned maintained	Yes	Regularly cleaning of each classroom	Register/ Contract letter
6	Safety Measures	Fire extinguisher, emergency exits, CCTV, first aid	Yes	CCTV Camera, MCBs, Fire extinguisher near entrance	Photographs
7	Network Connectivity	LAN / Wi-Fi present functional	Yes	CWAN (Wired and Wireless)	Photographs
8	Evidence of Academic Use	Photos, logs, lecture sessions	Yes	As per timetable Muster	Timetable file
9	Display of Academic Information	Timetables, course outcomes, notices displayed	Yes	Notice board available near entrance	Photographs
10	Academic Ambience	Posters, charts, inspirational content	Yes	Posters, charts, inspirational content	Photographs

[4] Class room: B109

Table 6.1.5: Adequate Classroom B109 Infrastructure Checklist

Sr. No.	Parameter	Criteria / Norms	Available (Yes/No)	Quantity / Details	Remarks / Evidence Attached
1	Size & Seating Capacity	Minimum 33 sqm per class, 30 seats	Yes	75 Sqm	Area sheet of Institute
2	Ventilation & Lighting	Adequate lighting airflow, fans/windows functional	Yes	1 Door, 5 windows	Photographs
3	ICT Infrastructure	Projector / Internet / Audio system	Yes	Portable projector CWAN (Wired and Wireless)	Photographs
4	Furniture	Comfortable Benches/chairs, Black board, clean layout	Yes	30 Benches, 1 Chair, 1 Table, 1 Blackboard	Photographs
5	Cleanliness	Regularly cleaned maintained	Yes	Regularly cleaning of each classroom	Register/ Contract letter
6	Safety Measures	Fire extinguisher, emergency exits, CCTV, first aid	Yes	CCTV Camera, MCBs, Fire extinguisher near entrance	Photographs

Sr. No.	Parameter	Criteria / Norms	Available (Yes/No)	Quantity / Details	Remarks / Evidence Attached
7	Network Connectivity	LAN / Wi-Fi present functional	Yes	CWAN (Wired and Wireless)	Photographs
8	Evidence of Academic Use	Photos, logs, lecture sessions	Yes	As per timetable Muster	Timetable file
9	Display of Academic Information	Timetables, course outcomes, notices displayed	Yes	Notice board available near entrance	Photographs
10	Academic Ambience	Posters, charts, inspirational content	Yes	Posters, charts, inspirational content	Photographs

[5] Class room: B111

Table 6.1.6: Adequate Classroom B111 Infrastructure Checklist

Sr. No.	Parameter	Criteria / Norms	Available (Yes/No)	Quantity / Details	Remarks / Evidence Attached
1	Size & Seating Capacity	Minimum 33 sqm per class, 30 seats	Yes	45 Sqm	Area sheet of Institute
2	Ventilation & Lighting	Adequate lighting airflow, fans/windows functional	Yes	Entry & Exit Doors, 3 windows	Photographs
3	ICT Infrastructure	Projector / Internet / Audio system	Yes	Portable projector CWAN (Wired and Wireless)	Photographs
4	Furniture	Comfortable Benches/chairs, Black board, clean layout	Yes	20 Benches, 1 Chair, 1 Table, 1 Blackboard	Photographs
5	Cleanliness	Regularly cleaned maintained	Yes	Regularly cleaning of each classroom	Register/ Contract letter
6	Safety Measures	Fire extinguisher, emergency exits, CCTV, first aid	Yes	CCTV Camera, MCBs, Fire extinguisher near entrance	Photographs
7	Network Connectivity	LAN / Wi-Fi present functional	Yes	CWAN (Wired and Wireless)	Photographs
8	Evidence of Academic Use	Photos, logs, lecture sessions	Yes	As per timetable Muster	Timetable file
9	Display of Academic Information	Timetables, course outcomes, notices displayed	Yes	Notice board available near entrance	Photographs
10	Academic Ambience	Posters, charts, inspirational content	Yes	Posters, charts, inspirational content	Photographs



Figure 6.1.1 Photographs _B007



Figure 6.1.2 Photographs _B011



Figure 6.1.3 Photographs _B108



Figure 6.1.4 Photographs _B109



Figure 6.1.5 Photographs _B111

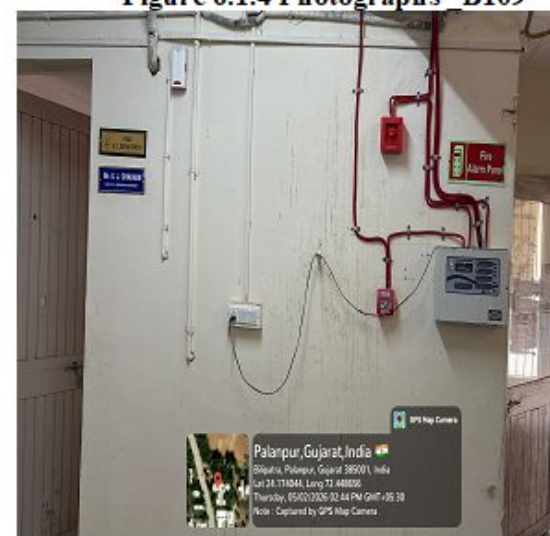


Figure 6.1.6 Fire extinguisher

6.2 Availability of adequate and well-equipped workshops, Laboratories and Technical manpower to meet the curriculum requirements (40)

A. Adequacy (10)

The Electronics and Communication Engineering Department of Government Polytechnic, Palanpur, demonstrates strong institutional support through its well-established workshops and laboratories, which are sufficient in number and quality to meet curriculum requirements. In alignment with NBA Criterion 6, the following aspects are noteworthy:

Adequacy and Availability of Laboratories: The department has ensured that laboratories are not only adequate in number but also accessible during scheduled sessions and flexible hours. This reflects effective governance and commitment to student-centric learning.

Modern Equipment and Consumables: Laboratories are furnished with efficient, modern instruments and consumables, systematically stored and tagged for easy identification. This indicates proper financial allocation and resource management.

Hands-on and Experiential Learning: Students are encouraged to engage in practical activities beyond scheduled sessions, fostering innovation and independent learning. This demonstrates institutional support for outcome-based education.

Infrastructure and Facilities: Each laboratory is equipped with adequate furniture, display boards, and charts for essential student information. This reflects governance that prioritizes student welfare and academic preparedness, ensuring that infrastructure supports both teaching and learning processes.

Scheduling and Utilization: Laboratory sessions are systematically scheduled in accordance with curriculum requirements, ensuring optimal utilization of resources. This highlights effective planning and governance practices.

Financial and Administrative Support: The availability of modern equipment and consumables, along with proper maintenance and upgrades, reflects the institution's commitment to continuous improvement.

Number of laboratories required as per AICTE Guideline: 2 Laboratory per year

Duration of course (Electronics and Communication Department): 3 years

Total number of laboratories required: 06

Total number of laboratories available in department: 09

Adequacy: Yes, Adequate

[1] List of adequate Laboratory with course incorporated

Table 6.2.1: Adequate Laboratory with Course Incorporated

Sr. No.	Name of Laboratory	Building Name Room No.	Subject wise utilization	Semester
1	Computer Lab-1	BADP Building Ground Floor Room No: B002	Software Practice	5
			Renewable Energy & Emerging Trends in Electronics	6
			VLSI	6
2	Computer Lab-2	BADP Building Ground Floor Room No: B008	Basic of Computer & information Technology	1
			Microprocessor & Microcontroller	4
			Embedded System	5
3	Computer Lab-3	BADP Building Ground Floor Room No: B009	Fundamentals of Information Communication Technology	1
			Circuit Design Tools	4
			OOPS & Python Programming	5
			Computer Network & Data Communication	6
4	Computer Lab-4	BADP Building Ground Floor Room No: B014	Programming In C	3
			Android App Development	6
			Project-I	5
			Project-II	6
5	Electronics Lab-1	BADP Building Ground Floor Room No: B010	Fundamental of Electronics	1
			Electronics Circuit Application (ECA)	2
			Linear Integrated Circuit (Analog Electronics)	4
6	Electronics Lab-2	BADP Building Ground Floor Room No: B013	Fundamental of Electrical Engineering	1
			PCB Designing & Electronics workshop	2
			Electronics Circuit Network & Measurement	3
			Project-I	5
			Project-II	6
			Applied Electronics	4
7	Electronics Lab-3	BADP Building First Floor Room No: B106	Consumer Electronics & Maintenance	4
			Digital Logic Design	3
8	Communication Lab-1	BADP Building First Floor Room No: B101	Digital Communication	4
			Fiber Optics Communication	4
			Mobile & Wireless Communication	5
9	Communication Lab-2	BADP Building First Floor Room No: B105	Principles of Electronic Communication	3
			Antenna Wave Propagation	4
			Microwave & Radar Engineering	5

[2] *Facility available in Laboratory*

Table 6.2.2: Facility Available in Laboratory

Name of Laboratory	Location	Room area available (meter square)	Amenities
Computer Lab-1	BADP Building Ground Floor Room No: B002	25.5	• Computer, Internet port • CWAN (Wired and Wireless) • White board/Lab Table and Stool • Faculty Table and Faculty Chair • Display chart.
Computer Lab-2	BADP Building Ground Floor Room No: B008	75	• Computer, Internet port • CWAN (Wired and Wireless) • White board/Lab Table and Stool • Faculty Table and Faculty Chair • Display chart.
Computer Lab-3	BADP Building Ground Floor Room No: B009	90	• Computer, Internet port • CWAN (Wired and Wireless) • White board/Lab Table and Stool • Faculty Table and Faculty Chair • Display chart.
Computer Lab-4	BADP Building Ground Floor Room No: B014	25.5	• Computer, Internet port • CWAN (Wired and Wireless) • White board/Lab Table and Stool • Faculty Table and Faculty Chair • Display chart.
Electronics Lab-1	BADP Building Ground Floor Room No: B010	75	• Equipment/Trainer kit • CWAN (Wired and Wireless) • Black board/Lab Table and Stool • Faculty Table and Faculty Chair • Cupboard and display chart.
Electronics Lab-2	BADP Building Ground Floor Room No: B013	81	• Equipment/Trainer kit • Computer and Internet port • CWAN (Wired and Wireless) • White board/Lab Table and Stool • Faculty Table and Faculty Chair • Cupboard and display chart.
Electronics Lab-3	BADP Building First Floor Room No: B106	81	• Equipment/Trainer kit • CWAN (Wired and Wireless) • Black board/Lab Table and Stool • Faculty Table and Faculty Chair • Cupboard and display chart.
Communication Lab-1	BADP Building First Floor Room No: B101	81	• Equipment/Trainer kit • CWAN (Wired and Wireless) • Black board/Lab Table and Stool • Faculty Table and Faculty Chair • Cupboard and display chart.
Communication Lab-2	BADP Building First Floor Room No: B105	25.5	• Equipment/Trainer kit • Computer and Internet port • CWAN (Wired and Wireless) • White board/Lab Table and Stool • Faculty Table and Faculty Chair • Cupboard and display chart.

B. Quality of Labs/workshop (20)

The Electronics and Communication Engineering Department of Government Polytechnic, Palanpur, demonstrates strong governance and institutional support through its nine (09) well-equipped laboratories, which are sufficient in number and quality to meet curriculum requirements. In line with NBA Criterion 6, the following aspects highlight effective governance and resource management:

Adequacy of Laboratories and Equipment: The department maintains nine laboratories furnished with sufficient trainer kits and modern equipment, ensuring compliance with curriculum requirements. This reflects proper planning and allocation of financial resources to sustain academic quality.

ICT and Networking Facilities: Computer laboratories are equipped with Local Area Network (LAN) facilities, enabling students to access digital resources and fostering collaborative learning. This demonstrates institutional support for ICT integration.

Accessibility and Student-Centric Governance: Laboratories are kept open beyond timetable hours, allowing students to carry out project work and academic activities. This flexible access reflects governance practices that prioritize student learning outcomes and innovation.

Procurement and Resource Management: The purchase process for equipment and computers is carried out regularly, ensuring laboratories remain updated with modern technology. This highlights transparent financial management and continuous improvement.

Faculty Guidance and Academic Discipline: Practical sessions are conducted under the supervision of faculty members, with students required to maintain proper records and readings. This structured approach reflects governance that ensures accountability, discipline, and quality in academic delivery.

Cleanliness and Maintenance: Laboratories are maintained with regular cleanliness practices, reflecting institutional commitment to providing a safe and conducive learning environment.

Safety and Risk Management: Safety measures such as first-aid boxes and fire extinguishers are available in the department.

[1] Basic Laboratory details

Table 6.2.3: Basic Laboratory Details

Sr. No.	Name of Laboratory	Lab In charge	Maximum No. of Students per Batch
1	Computer Lab-1	Ms. M.K. Pedhadiya	20 students per batch in 1 st & 2 nd year and 15 students per batch in 3 rd year
2	Computer Lab-2	Dr. L.K. Patel	
3	Computer Lab-3	Mr. M.J. Dabgar	
4	Computer Lab-4	Mr. S.P. Joshiyara	
5	Electronics Lab-1	Mr. N.J. Chauhan	
6	Electronics Lab-2	Mr. R.C. Parmar	
7	Electronics Lab-3	Mr. N.J. Chauhan	
8	Communication Lab-1	Dr. R.N. Patel	
9	Communication Lab-2	Dr. R.N. Patel	

[2] Facility available in Laboratory

Table 6.2.4: Facility Available in Laboratory

Sr. No.	Parameter	Yes/No	Remarks / Evidence Available
1	Equipment available as per curriculum	Yes	Concerned Register
2	Availability of lab manual	Yes	Lab Manuals
3	Lab timetable with student allocation	Yes	Timetable file
4	Technician available per lab	Yes	One Lab Assistant per Department
5	Safety equipment present (fire extinguisher, first aid)	Yes	Available in the department
6	Internet / ICT-enabled tools (e.g. virtual labs, simulations)	Yes	In concern subject lab manuals
7	Availability of SOPs / experiment list	Yes	Chart in lab
8	Usage of laboratory equipments	Yes	Utilisation register

[3] Laboratory equipments details (Subject wise utilization)

Table 6.2.5: Laboratory Equipments Details with Subject Wise Utilization

Sr. No.	Name of Laboratory	Building Name and Room No	List of Equipments	Subject wise Utilization
1	Computer Lab-1	BADP Building Ground Floor Room No: B002	• Computer System (LAN Connected) • Open-Source Software • VLSI Trainer kit	• Software Practice • Renewable Energy & Emerging Trends in Electronics • VLSI
2	Computer Lab-2	BADP Building Ground Floor Room No: B008	• Computer System (LAN Connected) • Open-Source Software • 8085 microprocessor Trainer • Microprocessor with 8253 Trainer kit • Microprocessor Dynalog 8085 Trainer kit • Microcontroller Dynalog 8051 Trainer kit • Embedded Trainer kit • Microprocessor trainer with A to D converter CARD	• Basic of Computer & information Technology • Microprocessor & Microcontroller • Embedded System
3	Computer Lab-3	BADP Building Ground Floor Room No: B009	• Computer System (LAN Connected) • Open-Source Software • Crimping tool	• Fundamentals of ICT • Circuit Design Tools • OOPS & Python Programming • Computer Network & Data Communication
4	Computer Lab-4	BADP Building Ground Floor Room No: B014	• Computer System (LAN Connected) • Open-Source Software	• Programming In C • Android App Development • Project-I & II

Sr. No.	Name of Laboratory	Building Name and Room No	List of Equipments	Subject wise Utilization
5	Electronics Lab-1	BADP Building Ground Floor Room No: B010	• Multimeter • Function Generator/CRO • PN/Zener/LED/LASER/Photo Diode characteristics Trainer • Half/Full/Bridge wave Rectifier Trainer kit • Astable/Monostable/Bistable multivibrator Trainer kit • Ohm Law/KVL/KCL Trainer • Oscillator/ BJT/FET Trainer • Transistor amplifier Trainer • Photo transistor Trainer kit • IC555 Timer Trainer kit • RC Coupled 2 stage transistor amplifier Trainer kit • OPAMP Trainer kit • Passive filter Trainer kit	• Fundamental of Electronics • Electronics Circuit Application (ECA) • Linear Integrated Circuit (Analog Electronics)

Sr. No.	Name of Laboratory	Building Name and Room No	List of Equipments	Subject wise Utilization
6	Electronics Lab-2	BADP Building Ground Floor Room No: B013	• Soldering Iron • Multimeter/LCR Meter • Function Generator • CRO/DSO • Scientific test lab (electronic workstation)/Work bench • Diode characteristics Trainer • Rectifier Trainer kit • RC Phase-shift/Colpitt/Hartly/ Wein-bridge/Crystal Oscillator Trainer kit • Voltage Doubler Trainer kit • Voltage Regulator Trainer kit • H Parameter of PNP Transistor in CE Trainer kit • Transistor as CC Trainer kit • Integrating & differentiating & clamping circuit Trainer kit • Network theorem & laws kit • Bread Board with Power Supplies Trainer kit • Discrete Component Trainer • Transistors characteristics kit • Biasing Techniques of Transistor (BJT) Trainer kit • Constant K type low/high pass filter Trainer kit • Series & parallel resonance Trainer kit • Maxwell's/Wein/Schering bridge Trainer kit • Clip on meter/Clamp meter • Variac/Dimmer state/Auto Transformer Single Phase SCR, Diac & Triac Characteristics • RTD/ Thermocouple/ LVDT Trainer kit • Series inverter Trainer kit • IGBT Characteristic Trainer k • Universal Chopper Trainer kit • Phase shift circuit for firing SCR using UJT Trainer kit • Optical power meter • Moving iron ammeter 0-2 amp • Watt meter low power factor	• Fundamental of Electrical Engineering • PCB Designing & Electronics workshop • Electronics Circuit Network & Measurement • Project-I • Project-II • Applied Electronics

Sr. No.	Name of Laboratory	Building Name and Room No	List of Equipments	Subject wise Utilization
7	Electronics Lab-3	BADP Building First Floor Room No: B106	• Multimeter • Function Generator • CRO • IC breadboard with built in power supply • Digital logic trainer with power supply • RS/D/JK flip flop form IC 7400 Trainer kit • Verification of N gate as universal gate Trainer kit • BCD to 7 segment trainer board • Digital to analog converter Trainer kit • Analog to digital converter Trainer kit • Decade counter Trainer kit • Digital trainer for verification of TT & Logic gates Trainer kit • 8 Channel analog multiplexer Trainer kit • 8 Channel analog demultiplexer Trainer kit • BCD to Decimal converter Trainer kit • Decimal to BCD Converter Trainer kit • BCD to excess-3 converter Trainer kit • Excess-3 to BCD converter Trainer kit • Half/full adder Trainer kit • 4-Bit Counters (Syn. Asyn.) Trainer kit • Digital trainer for Logic gates Trainer kit • Digital IC tester Trainer kit	• Consumer Electronics & Maintenance • Digital Logic Design

Sr. No.	Name of Laboratory	Building Name and Room No	List of Equipments	Subject wise Utilization
8	Communication Lab-1	BADP Building First Floor Room No: B101	• Multimeter • CRO/Function Generator • Mobile communication Trainer kit • CDMA mobile phone trainer • PWM/Digital communication Trainer kit • Delta Modulation Demodulation Trainer kit • Pulse Code Mod De-mod Trainer kit • PAM-PPM-PWM Trainer kit • Time/ Frequency Division Mux Demux Trainer kit • Delta modulation Trainer kit • DSB/SSB AM receiver Trainer kit • Frequency modulation & demodulation Trainer kit • ASK/FSK/PSK Modulation Demodulation Trainer kit • DC regulated power supply 0-30v/2amp • Color pattern generator • Regulated power supply	• Digital Communication • Fiber Optis Communication • Mobile & Wireless Communication
9	Communication Lab-2	BADP Building First Floor Room No: B105	• Multimeter/LCR Meter • CRO/DSO • Function Generator • Antenna Trainer kit • Transmission line Trainer kit • GSM Trainer kit • ITI SMPS Trainer kit • Microwave bench with VSWR Meter • AM/FM modulation/ demodulation Trainer kit • SSB modulation & demodulation Trainer kit • DSB/SSB AM Receiver Trainer kit • AGC trainer • AM/FM transmitter & receiver Trainer kit • AM-FM Radio Trainer kit • PAM-PPM-PWM Trainer kit • DC regulated multi output power supply	• Principles of Electronic Communication • Antenna and Wave Propagation • Microwave & Radar Engineering

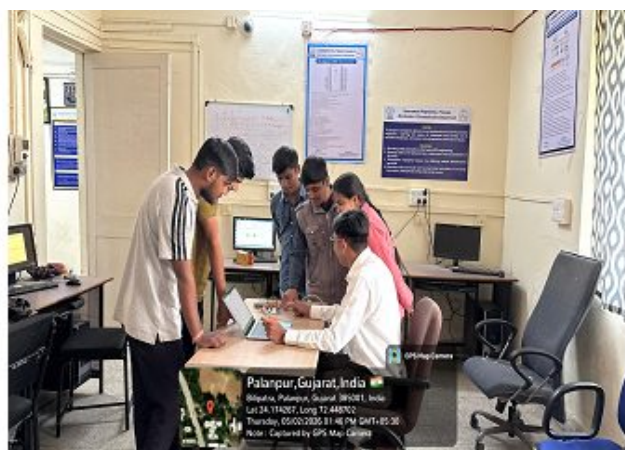


Figure 6.2.1 Photographs_B002



Figure 6.2.2 Photographs_B008



Figure 6.2.3 Photographs_B009



Figure 6.2.4 Photographs_B014



Figure 6.2.5 Fire extinguisher



Figure 6.2.6 Photographs _B010



Figure 6.2.7 Photographs _B013



Figure 6.2.8 Photographs _B101



Figure 6.2.9 Photographs _B105



Figure 6.2.10 Photographs _B106



Figure 6.2.11 Fire extinguisher

C. Technical Manpower support – Eligible and Adequate (10)

The list mentions the major equipment in the department. Besides these, many other equipment items costing less than ₹30,000 are also available.

Table 6.2.6: Laboratory Equipment Details Technical Manpower Support

Sr. No.	Name of the Laboratory	No. of students per set-up (Batch Size)	Name of the Important equipment (costing more than Rs.30,000)	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1	Computer Lab-1 BADP Building Ground Floor Room No: B002	20 in 1 st & 2 nd year, and 15 in 3 rd year	Computer System	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering
2	Computer Lab-2 BADP Building Ground Floor Room No: B008	20 in 1 st & 2 nd year, and 15 in 3 rd year	Computer System	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering
3	Computer Lab-3 BADP Building Ground Floor Room No: B009	20 in 1 st & 2 nd year, and 15 in 3 rd year	Computer System	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering
4	Computer Lab-4 BADP Building Ground Floor Room No: B014	20 in 1 st & 2 nd year, and 15 in 3 rd year	Computer System	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering
5	Electronics Lab-1 BADP Building Ground Floor Room No: B010	20 in 1 st & 2 nd year, and 15 in 3 rd year	Function Generator	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering
6	Electronics Lab-2 BADP Building Ground Floor Room No: B013	20 in 1 st & 2 nd year, and 15 in 3 rd year	CRO/DSO and Function Generator	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering
7	Electronics Lab-3 BADP Building First Floor Room No: B106	20 in 1 st & 2 nd year, and 15 in 3 rd year	Function Generator	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering

Sr. No.	Name of the Laboratory	No. of students per set-up (Batch Size)	Name of the Important equipment (costing more than Rs.30,000)	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
8	Communication Lab-1 BADP Building First Floor Room No: B101	20 in 1 st & 2 nd year, and 15 in 3 rd year	PAM-PPM-PWM Trainer kit and Mobile Trainer kit	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering
9	Communication Lab-2 BADP Building First Floor Room No: B105	20 in 1 st & 2 nd year, and 15 in 3 rd year	Antenna Trainer kit and Microwave bench	As per Time table.	Mr. V.S. Sama	Lab Assistant	BE in IC Engineering

Table 6.2.7: Laboratory-Wise Utilization – Subject, Semester and Weekly/Semester Hours

Name of Subject	Sem	Hrs/Week	Hrs/Sem
Lab Utilization			
Computer Lab-1 (B002)			
Software Practice	5	4	56
Renewable Energy & Emerging Trends in Electronics	6		
VLSI	5		
Computer Lab-2 (B008)			
BICT/FICT	1	6	84
Microprocessor & Microcontroller	4		
Embedded System	5		
Computer Lab-3 (B009)			
Circuit Design Tools	4	4	56
OOPS & Python Programming	5		
Computer Network & Data Communication	6		
Electronics Lab-1 (B010)			
Fundamental of Electronics	1	4	56
Electronics Circuit and Application (ECA)	2		
Linear Integrated Circuit (Analog Electronics)	4		
Electronics Lab-2 (B013)			
Fundamental of Electrical Engineering	1	8	112
PCB Designing & Electronics workshop	2		
Electronics Circuit Network & Measurement	3		
Applied Electronics	4		
Project-I&II	5		
Computer Lab-4 (B014)			
Programming In C	3	4	56
Android App Development	6		
Project-I&II	5		
Communication Lab-1 (B101)			
Digital & Data Communication	4	4	56
Optical Communication	4		
Mobile & Wireless Communication	5		
Communication Lab-2 (B105)			
Principles of Electronic Communication	3	4	56
Antenna And Wave Propagation	4		
Microwave & Radar Engineering	5		
Electronics Lab-3 (B106)			
Consumer Electronics & Maintenance	4	2	28
Digital Logic Design	3		

6.3 Additional facilities created for improving the quality of learning experience in laboratories (20)

A. Facilities (10)

The Electronics and Communication Engineering Department of Government Polytechnic, Palanpur, demonstrates strong institutional support and effective governance through the provision of additional facilities that enhance the teaching-learning experience in laboratories. These initiatives reflect the department's commitment to fostering student creativity, technical skills, and outcome-based education.

Regular Procurement and Upgradation: Laboratory equipment is procured regularly in accordance with university circulars, ensuring that facilities remain updated and well-equipped. This reflects transparent governance and effective financial resource utilization.

Department Library Managed by Students: A dedicated departmental library, managed by students, provides supplementary learning resources. This initiative encourages self-directed learning, peer collaboration, and student participation in governance.

High-Speed CWAN Internet Facility: The department provides wired and wireless CWAN internet connectivity with a bandwidth of 200 Mbps. This robust infrastructure supports seamless access to online academic resources, research databases, and collaborative platforms, demonstrating institutional support for ICT-enabled learning.

LAN Connectivity in Laboratories: All laboratories are equipped with LAN facilities, ensuring reliable network access for experiments, simulations, and academic work. This reflects governance that prioritizes digital integration and resource accessibility.

ICT-Enabled Teaching Tools: Projectors with screens installed in laboratories (Room No. B008 and B009) support effective teaching-learning practices. These facilities enable faculty to deliver interactive sessions and allow students to present project work efficiently.

Student-Centric Governance and Support: By providing these additional facilities, the department ensures that students have access to resources beyond the minimum curriculum requirements. This reflects governance practices that prioritize innovation, creativity, and holistic student development.

[1] *Purchase summary report*

Table 6.3.1: Departmental Purchase Summary

 Government Polytechnic, Palanpur Department of Electronics & Communication 						
Purchase summary report						
Purchase amount before year 2022-2023 in Rs						1881763
Total Write off amount in Rs						217434
Purchase summary of year from 2022-23 to 2025-26						
Year	Total Purchase Amount		Purchase items count		Furniture	Total (Rs)
	Equipment	IT items	Equipment	IT items		
2022-23	420432	00	47	00	11722	432154
2023-24	126938	00	14	00	00	126938
2024-25	74440	677842	3	11	44783	797065
2025-26	8990	00	1	00	202543	211533
Total	630800	677842	65	11	259048	1567690
Total Amount of Purchase excluding write-off in Rs						3232019
						32.32 lacs

[2] Year-wise Equipment purchase detail from 2022-23 to 2025-26

Table 6.3.2: Year-Wise Equipment Purchase Detail

Sr. No.	Expandable Register			GeM Contract No.	Item description	Order Date	CRAC Amount	Qt.	Order amount
	Register	Page No.	Sr. No.						
Year 2022-23									
1	E	13	63	GEMC-511687745186103	10000 KHz Digital Multimeter (Metrix plus) Model Metrix+ 171TRMS+	06-10-2022	18683	5	18683
2	E	13	64	GEMC-511687701684512	Manual Digital LCD Display LCR Meter, Warranty 1 year (Metravi) Model METRAVI-451	06-10-2022	4416	1	4485
3	E	13	65	GEMC-511687724579264	Schering Bridge (LINKER) Model Schering Bridge Trainer	07-01-2023	9890	1	9990
4	E	13	66	GEMC-511687794982138	ITI SMPS Trainer (LINKER) Model ITI SMPS Trainer	07-01-2023	11870	1	11990
5	E	14	67	GEMC-511687718480531	Strain Gauge Trainer kit (BTC Instruments) Model REX-652	07-01-2023	12477	1	12540
6	E	14	68	GEMC-511687788409647	Digital To Analog Trainer Kit (BTC Instruments) Model DTOA	07-01-2023	3546	1	3600
7	E	14	69	GEMC-511687703126381	PSK Modulation Demodulation Trainer Kit (BTC Instruments) Model PSK Modulation Demodulation Trainer Kit	20-01-2023	6965	1	7000
8	E	14	70	GEMC-511687762161725	Variac/ Dimmer state/ Auto Transformer Single Phase, 2Amp (LABSURGE) Model PH 258/1	17-01-2023	5200	1	5200
9	E	15	71	GEMC-511687758178501	Frequency Modulation & Demodulation Trainer (BTC Instruments) Model	17-01-2023	6965	1	7000
10	E	15	72	GEMC-511687701214990	LCR Resonance Circuit with Built in Sine Wave Oscillator (BTC Instruments) Model LCR Resonance Circuit with Built in Sine Wave Oscilloscope	07-01-2023	7683	1	7800
11	E	15	73	GEMC-511687767236975	Thermocouple Charterstics Apparatus (BTC Instruments) Model Thermocouple Charterstics Apparatus	17-01-2023	7462	1	7500
12	E	15	74	GEMC-511687734702929	FSK Modulation Demodulation Trainer Kit (BTC Instruments) Model BTC- FSK	20-01-2023	7462	1	7500

Sr. No.	Expandable Register			GeM Contract No.	Item description	Order Date	CRAC Amount	Qt.	Order amount
	Register	Page No.	Sr. No.						
13	E	16	75	GEMC-511687764423059	AM-FM Radio Trainer Kit (BTC Instruments) Model AM-FM Radio Trainer Kit	17-01-2023	7960	1	8000
14	E	16	76	GEMC-511687785615046	4-Bit Counters (Synchronous Asynchronous) (BTC Instruments) Model 4-Bit Counters (Syn-Asynchronous)	17-01-2023	5472	1	5500
15	E	16	77	GEMC-511687709631263	Maximum Power Transfer Theorem (BTC Instruments) Model Maximum Power Transfer Theorem	17-01-2023	3781	1	3800
16	E	16	78	GEMC-511687704999223	Ohms Law Apparatus with Power Supply (BTC Instruments) Model GTC-027	17-01-2023	1791	1	1800
17	E	17	79	GEMC-511687769798184	Pulse Width Modulation Kit (BTC Instruments) Model Pulse Width Modulation Kit	17-01-2023	7462	1	7500
18	E	17	80	GEMC-511687736533145	PAM-PPM-PWM Trainer kit (BTC Instruments) Model PAM-PPM-PWM Trainer kit	17-01-2023	13432	1	13500
19	E	17	81	GEMC-511687784546022	Colpitts Oscillator Trainer (BTC Instruments) Model BTC - Colpitt Oscillator	17-01-2023	2985	1	3000
20	E	17	82	GEMC-511687738110995	Discrete Component Trainer (BTC Discrete Component Trainer Kit	17-01-2023	8955	1	9000
21	E	18	83	GEMC-511687718215498	DSB/SSB AM Receiver Kit (LINKER)Model DSB/SSB AM Receiver Kit	17-01-2023	18705	1	18900
22	E	18	84	GEMC-511687700193534	Delta Modulation Demodulation Trainer Kit (LINKER)Model Delta Modulation Demodulation Trainer Kit	17-01-2023	10825	1	10990
23	E	18	85	GEMC-511687721350332	Crystal Oscillator (BTC Instruments) Model Crystal Oscillator	17-01-2023	3447	1	3500
24	E	18	86	GEMC-511687798174000	ASK Modulation Demodulation Trainer (BTC Instruments) Model Amplitude Shift Keying Modulation Demodulation	17-01-2023	5970	1	6000
25	E	19	87	GEMC-511687777573807	Analog To Digital Trainer (BTC Instruments) Model BTC09	07-01-2023	3546	1	3600
26	E	19	88	GEMC-511687703860557	Bread Board with Power Supplies Trainer (BTC Instruments) Model BTC-Bread Board Trainer	17-01-2023	3940	1	4000
27	E	19	89	GEMC-511687790732628	555 Timer Trainer Kit (BTC Instruments) Model 555 Timer Trainer Kit	17-01-2023	5472	1	5500

Sr. No.	Expandable Register			GeM Contract No.	Item description	Order Date	CRAC Amount	Qt.	Order amount
	Register	Page No.	Sr. No.						
28	E	19	90	GEMC-511687745528097	Frequency Division Multiplexing & Demultiplexing Trainer KIT (LINKER)Model Frequency Division Multiplexing & Demultiplexing	17-01-2023	11810	1	11990
29	E	20	91	GEMC-511687757224366	Biasing Techniques of Transistor (BJT) (BTC Instruments) Model BTC789	17-01-2023	5771	1	5800
30	E	20	92	GEMC-511687721951312	UPS Trainer (BTC Instruments) Model BTC UPS Trainer	17-01-2023	16915	1	17000
31	E	20	93	GEMC-511687771659081	FET Characteristics Apparatus (BTC Instruments) Model REX-535D	10-01-2023	4058	1	4099
32	E	20	94	GEMC-511687757551010	Operational Amplifier Trainer With 1 Digital Meter (BTC Instruments) Model OPAMP Trainer	17-01-2023	3940	1	4000
33	E	21	95	GEMC-511687716316202	H' Parameter of PNP Transistor in Common Emitter Mode (BTC Instruments) Model H' Parameter of PNP Transistor in Common Emitter M	18-01-2023	4776	1	4800
34	E	21	96	GEMC-511687751792519	Voltage Doubler Trippler Circuit (BTC Instruments) Model BTC09	17-01-2023	5565	1	5650
35	E	21	97	GEMC-511687789825392	SCR, Diac & Triac Characteristics Trainer (BTC Instruments) Model SCR, Diac & Triac Characteristics Trainer	17-01-2023	12312	1	12500
36	E	21	98	GEMC-511687791146601	RTD Temperature Transducer Trainer (BTC Instruments) Model RTD Temperature Transducer Trainer	17-01-2023	9357	1	9500
37	E	22	99	GEMC-511687763697444	Pulse Code Modulation Demodulation Trainer Kit (BTC Instruments) Model Pulse Code Modulation Demodulation Trainer Kit	17-01-2023	10835	1	11000
38	E	22	100	GEMC-511687779200273	Unbred 20-megahertz 2 channels Analog Oscilloscope (NA) Model Unitec-OD20	07-01-2023	19998	1	19998
39	E	22	101	GEMC-511687741762420	Hartley Oscillator Kit (BTC Instruments) Model BTC-908	17-01-2023	2985	1	3000
40	E	22	102	GEMC-511687727095212	RC Phase Shift Oscillator (BTC Instruments) Model BTC- RC Phase Shift	17-01-2023	2985	1	3000
41	E	23	103	GEMC-511687747281772	Wein Bridge Oscillator (BTC Instruments) Model Wein Bridge Oscillator	17-01-2023	2587	1	2600

Sr. No.	Expandable Register			GeM Contract No.	Item description	Order Date	CRAC Amount	Qt.	Order amount
	Register	Page No.	Sr. No.						
42	E	23	104	GEMC-511687750692974	Push Pull Amplifier Kit (BTC Instruments) Model BTC- PPL	07-01-2023	2985	1	3000
43	E	23	105	GEMC-511687757163770	Time Division Multiplexing Demultiplexing Kit (LINKER) Model Time Division Multiplexing Demultiplexing Kit	20-01-2023	12795	1	12990
44	E	23	106	GEMC-511687765263840	KVL & KCL Trainer Kit (BTC Instruments) Model SP-KVL	17-01-2023	3781	1	3800
45	E	24	107	GEMC-511687716964975	Uno R3 Board without Cable compatible with Arduino (14140) (Robu.in) Model ROBU.IN - Uno R3 Board without Cable compatible with Arduino (14140)	03-03-2023	3945	5	3945
46	E	24	108	GEMC-511687739675914	10 MHz to 25 MHz Frequency 2 channel function generator (GWINSTEK) Model GWINSTEK AFG-2225	28-02-2023	31970	1	31970
47	E	24	109	GEMC-511687727874530	Analog Digital (Mixed Signal) 100 MHz NA Digital Storage Oscilloscope (HTC) Model HTC 100 MHz Digital Oscilloscope	20-03-2023	44700	2	44700
Total							420432	56	
Year 2023-24									
1	E	24	110	GEMC-511687717049199	1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Series current feedback in transistor amplifier AP	01-09-2023	5742	1	5800
2	E	25	111	GEMC-511687712919456	1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Power amplifier Trainer	01-09-2023	6633	1	6700
3	E	25	112	GEMC-511687755658427	1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Opto-coupler (MCT-2E) Trainer	01-09-2023	5742	1	5800
4	E	25	113	GEMC-511687723023039	1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Decade Counter Trainer	02-09-2023	5544	1	5600
5	E	25	114	GEMC-51168778851536	1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Reciprocity/Super Postion/Thevenin Trainer	27-09-2023	11300	1	11300

Sr. No.	Expandable Register			GeM Contract No.	Item description	Order Date	CRAC Amount	Qt.	Order amount
	Register	Page No.	Sr. No.						
6	E	26	115	GEMC-511687749591854	1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Maxwell's bridge Trainer kit	01-09-2023	10741	1	10850
7	E	26	116	GEMC-511687764565814	1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Digital IC Tester	01-09-2023	10780	1	11000
8	E	26	117	GEMC-511687794428477	UNI-T 4.5-digit Backlit LCD Hand Held True Rms Clamp Meter (UNI-T) Model UT211B	02-09-2023	17820	3	18000
9	E	26	118	GEMC-511687751160025	1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Universal Chopper trainer	11-10-2023	17640	1	18000
10	E	27	119	GEMC-511687755707891	1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model IGBT Characteristic trainer	11-10-2023	9800	1	10000
11	E	27	120	GEMC-511687795448484	1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model DIGITAL MOSFET characteristics trainer kit	11-10-2023	4179	1	4200
12	E	27	121	GEMC-511687761016473	1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Norton's theorem trainer	26-10-2023	5174	1	5200
13	E	27	122	GEMC-511687702876555	1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Two stage "RC" coupled amplifier using Transistor	01-09-2023	5148	1	5200
14	E	28	123	GEMC-51168776635913	1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Wheatstone Bridge	27-09-2023	10695	1	11500
Total							126938	16	
Year 2024-25									
1	E	32	139	GEMC-511687744418451	Ring Topology for Networking Trainer Kit Ivesty Mobile Phone Trainer	06-09-2024	24990	1	24990
2	E	32	140	GEMC-511687719258644	FPGA Development and Evaluation Board Model KTPLVLS-01 (VLSI Trainer with XILINX FPGA Spartan 6)	14-10-2024	24774	1	24899
3	E	32	141	GEMC-511687756696973	FPGA Development and Evaluation Board, Model KTPLE87-04 (ATMEGA32 AVR Embedded Trainer Kit)	14-10-2024	24676	1	24800
Total							74440	3	

Sr. No.	Expandable Register			GeM Contract No.	Item description	Order Date	CRAC Amount	Qt.	Order amount
	Register	Page No.	Sr. No.						
Year 2025-26									
1	Expandable	33	142	GEMC-511687778080969	Bluetooth Speaker with Total Power Rating 100-125 (T-SERIES)	08-09-2025	8990	1	8990
Total							8990	1	

[3] Purchase Process documents and orders

[3.1] Purchase order

	Government Polytechnic, Palanpur સરકારી પોલીટેકનીક, પાલનપુર	
માલજી દરવાજા બહાર, પાલનપુર-૩૮૫૦૦૧ Phone : (02742) 245219 / 262115 ક્રમાંક: GPP/Local Purchase/EC/43	Outside Malan Gate, Palanpur-385001 E-mail : gp-palanpur-dte@gujarat.gov.in	સત્યમેવ જયતે Date : 06/01/2023

Reference No.: સપોપા/નવીબાબત /૨૦૨૨-૨૩ /GeM/ખરીદી/ ૨૦૦૦૦ સુધી/૨૯
 Date : 08/01/2023

Purchase Order

As per above stated reference number and considering power delegated to purchase to institution head(Principal) ,it is granted to purchase following stated item from GEM portal.

DEMAND NO - 511687718480531

Sr. no.	Name of Item (with specification)	Date	Price/item	Quantity	Total Price
1	Strain Gauge Trainer kit (- Can perform practical of Strain Gauge. - On board packaging with proper circuit notation.)	5/01/2023	12540	1	12540

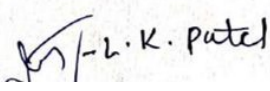



Figure 6.3.1: Year 2022-23 (Sr. No. 5 Equipment) Purchase Order

[3.2] GeM sanction letter for Purchase

GeM Government e Marketplace
75 Azadi Ka Amrit Mahotsav

Sanction Order

Sanction No: 511687718480531
Sanction Date: 07-Jan-2023

Sanction of the competent authority is hereby conveyed for incurring an expenditure of amount as under towards the cost of Purchase order/Contract placed on the Seller for Supply of Goods/Services as per the contract for making payment to the Seller subject to deduction of TDS as applicable:

Organisation Details		Buyer Details	
Type:	State Government.	Name:	Sunilkumar J Chauhan
Ministry:		Designation:	HOD EC
Department:	Education Department Gujarat	Email ID:	hodec-gpp-pln@gujarat.gov.in
Organisation Name:	Commissionerate of Technical Education	GSTIN:	
Office Name:	Government Polytechnic Palanpur	Address:	NEAR MALAN GATE, PALANPUR BANASKANTHA GUJARAT - 385001

Financial Approval Detail	
Designation of official providing Administration approval:	PRINCIPAL GOVERNMENT POLYTECHNIC PALANPUR
IFD Concurrence / Competent Authority (HOD / Head of Office) Approval Required?	NO
Get availability	YES
Designation of official providing Financial approval:	PRINCIPAL GOVERNMENT POLYTECHNIC PALANPUR

Seller Details	
Company Name:	BATRA TRADING COMPANY
Email ID:	batratrading.37@gmail.com
Address:	BATRA TRADING COMPANY Ambala HARYANA - 133001

Product Details						
#	Item Description	Model	Ordered Quantity	Unit	Price per Unit inclusive of all Duties and Taxes (In INR)	Total Price (inclusive of all Duties and Taxes (In INR))
1	Strain Gauge Trainer kit	REX-652	1	pieces	12540.0	12540.0
Total Order Value (in INR)						12540.0

Consignee Details						
S.No	Consignee	Item	Lot No.	Quantity	Delivery Start After	Delivery To Be Completed By
1	Sunilkumar J Chauhan hodec-gpp-pln@gujarat.gov.in NEAR MALAN GATE, PALANPUR BANASKANTHA GUJARAT - 385001	Strain Gauge Trainer kit	-	1	07-Jan-2023	22-Jan-2023

Terms & Conditions	
1. This issues under the power delegated to Ministries/Department of the Government of India/organization/state vide Annexure to schedule V of the Delegation of Financial Power Rules, 1978 as amended from time to time or as per applicable delegation of financial power rules as approved	

Figure 6.3.2: Year 2022-23 (Sr. No. 5 Equipment) GeM Sanction Letter

[3.3] Purchase Invoice

14/67

 **GeM**
Government e Marketplace
Efficient • Transparent • Include





Invoice

SELLER DETAILS:
Address: **BATRA TRADING COMPANY**
2759-20 TIMBER MARKET, ambala, Ambala, HARYANA,
133001
Email Id: **BATRATRADING.37@GMAIL.COM**
Contact No : 08295848444
GSTIN: 06AAAYFB8367K1ZK

GeM Invoice No: GEM-27044607
GeM Invoice Date: 02-Feb-2023

Order No: GEMC-511687718480531
Order Date: 07-Jan-2023

[Click here to download seller invoice](#)

SHIPPING TO:
Consignee Name: Sunilkumar J Chauhan
Address: NEAR MALAN GATE, PALANPUR BANASKANTHA
GUJARAT 385001

BILL TO:
Buyer Name: Sunilkumar J Chauhan
Address: NEAR MALAN GATE, PALANPUR BANASKANTHA
GUJARAT 385001

Seller Tax Invoice Number	Seller Tax Invoice Date	Dispatch Mode	Dispatch Date
B607	23-Jan-2023	Manual	23-Jan-2023

Place of Supply	Place of Supply State (State/UT Code)	Supply Type	Buyer GSTIN Number
Buyer Location	Gujarat / 24	Inter-State	

Product Description	HSN Code	Measurement Unit	Supplied Qty	Unit Price	Total Price inclusive all Taxes
Strain Gauge Trainer kit	9027	pieces	1	Rs. 12540.00	Rs. 12540.00
				Taxable Amount	Rs. 10627.12
				Tax Rate (%)	18
				IGST	Rs. 1912.88
				Cess Rate (%)	0.000
				Cess Amount	Rs. 0.00
				Cess in Quantum	Rs. 0.00
				Rounding Off	Rs. 0.00
Grand Total					Rs. 12540.00

I/We hereby declare that our firm/company has been specifically excluded from the requirement to comply with GST e-invoicing provisions vide Notification number 13/2020-Central Tax dated 21 March 2020, as amended up to date. Accordingly, at present, we are not covered under the ambit of GST e-invoicing provisions. We do hereby declare that once the said provisions are made applicable to us, we shall issue the duly complied e-Invoice under GST Law.

All GST invoice or document issued by us shall be properly and timely reported under respective returns under GST by us in line with the notified provisions and the applicable tax collected from Buyer shall be timely and correctly paid to the respective Government by us.

In case the Input Tax Credit of GST is denied or demand is recovered from Buyer on account of any act/ omission of us in this regard, we shall be liable in respect of all claims of tax, penalty and/or interest, loss, damages, costs, expenses and liability that

Figure 6.3.3: Year 2022-23 (Sr. No. 5 Equipment) Invoice

[3.4] Inspection report

GOVERNMENT POLYTECHNIC, PALANPUR
DETAILS AND INSPECTION REPORT

NAME OF ITEM	Strain gauge Trainer kit
SHORT DESCRIPTION	Strain gauge
BUYER NAME	Sunil Kumar J. Chauhan.
SUPPLIER NAME	Batra Trading Company
CONTRACT NO.	GEMC-511687718480531
CONTRACT DATE	07/01/2023
ITEM DELIVERED ON	06/02/2023
ITEM INSPECTED ON	06/02/2023 07/02/2023
RECEIVED QTY.	01
ACCEPTED QTY	01
REJECTED QTY	00
DEPT. REGISTER PAGE NO. AND ITEM NO.	Expandable Reg.No-2 (I-67, P-14)

INSPECTION REPORT

Above item received and found OK.

INSPECTED BY - DATE - 07/02/2023

[Signature]
6.8.2023

SIGNATURE OF BUYER

[Signature]

Head of ~~Electrical & Comm. Engg. Dept.~~
Government Polytechnic
PALANPUR-385 001 (B.K.)

Figure 6.3.4: Year 2022-23 (Sr. No. 5 Equipment) Inspection Report

[3.5] Payment sanction letter

FROM TO BE ATTACHED ALONGWITH THE BILLS

Reference Bill No - B-607. dt 23-1-2023
 Strain gauge trainer M/s. Batra Trading Company

Our Order No GEMC-57168 771848053 dt 07-10-2023

Comparative Statement No - - dt -

GSPCA 1 No - - dt -

To be paid from Conti. grant

Plan Non Plan, Equipment Furniture, Library, Contingences)

6. Certified that the Materials received are in accordance With the specification and other conditions of the quotation/A T of Order and that the Bill is checked verified found correct

7. Certified that the charges of sales tax Insurance, freight packing and forwarding ect if any charged in the Bill are admissible.

8. Certified that no penalty for that supply etc. is to be deducted from the billve except as under .

9. Certified that all the materials of this bill have been correctly entered In Dead Stock/Expendable/Consumable Register on page No. 014 at Item: 0-067.

10. Certified that This is In Part/Full Payment.

11. Certified that Amount relating to this bill passed as below has not been passed as below has not been passed before

12. Recommended for Payment of Rs 12477/- Twelve-Thousand four Hundred Seventy-Seven-only

(FOR USE OF GENERAL STORE)

Enter in, 6128

Page No 30 at Item No. 872

Registered By: [Signature]

Checked By: [Signature]

(FOR OFFICE USE)

Passed for payment of Rs 12477 = 00

(Rupees Twelve thousand four hundred seventy Seven only)

Date / / 200

Principal
 Government Polytechnic College,
 Palanpur-365001 (N. G.)

B. R. Singh 75/556

Figure 6.3.5: Year 2022-23 (Sr. No. 5 Equipment) Payment Sanction Letter

B. Effective Utilization (05)

For efficient and effective utilization of the available resources, the following measures have been implemented:

- An *Equipment Utilization Register* is maintained as per the format provided in the table below.
- Internet usage is monitored and regulated during working hours to ensure academic and administrative effectiveness.

[1] Lab Utilization format

Table 6.3.3: Laboratory Equipment Utilization Format

 Government Polytechnic, Palanpur Department of Electronics & Communication 						
Lab Utilization Register –Format						
Academic term:						
Name of laboratory and Room No.:						
Name of Subject with code:						
Sr. No.	Date	Time Duration	Semester	Batch	Name of Equipment	Name and sign of Faculty
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

[2] Lab Utilization report



**GOVERNMENT POLYTECHNIC
PALANPUR (B.K.)**
ESTD. 1984
सा विद्या या विमुक्तये

Government Polytechnic, Palanpur
Department of Electronics & Communication



Government Polytechnic Palanpur

Lab Utilization Register

Academic term: 2024-25 Even term

Name of laboratory and Room No.: Communication lab - 2 (Room No - 8105)

Name of Subject with code: (434106) Antenna & Wave Propagation

Sr. No.	Date	Time Duration	Semester	Batch	Name of Equipment	Name and Sign of Faculty
1	18/12/24	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
2	01/1/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
3	8/1/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
4	15/1/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
5	22/1/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
6	29/1/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
7	5/2/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
8	12/2/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
9	19/2/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
10	5/3/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
11	12/3/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
12	19/3/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
13	26/3/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
14	2/4/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
15	9/4/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
16	16/4/25	3 to 5:10	4 th EC	A1	Antenna trainer kit	A (CNP/24)
17						

Figure 6.3.6: Laboratory Utilization Report

C. Relevance to POs/PSOs (05)

The details regarding the effective utilization of facilities created to enhance the quality of teaching-learning processes, with specific relevance to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs), are presented in the table below.

[1] Year wise Equipment/Component purchase detail for additional facilities

Table 6.3.4: Year-Wise Equipment/Component Purchase Detail for Additional Facilities

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
Year 2022-23						
1	Digital Multimeter	Measurement of electrical parameters such as voltage (AC and DC), current, resistance, continuity and diode & transistor testing	- Provides hands-on experience that reinforces theoretical concepts in electronics - Enables students to verify laws and formulas through real-time measurement - Helps students learn systematic fault diagnosis & troubleshoot in circuits	- Electronic Lab -1, 2 &3 - Comm Lab -1&2	- Diagnose faulty components and circuits - Identify wiring errors - Verify theoretical calculations experimentally	PO1 PO2 PO4 PO5 PO7 PSO1
2	Digital LCD Display LCR Meter	Accurately measurement of the electrical properties of inductance, capacitance and resistance	- Helps students practically understand the behaviour of L, C & R beyond theoretical concepts - Correct use of test instruments to verify component values for laboratory experiments and project work	- Electronic Lab -1, 2 &3 - Comm Lab -1&2	- Analysing measured data - Identifying tolerances - Understanding of accuracy & reliability in measurements	PO1 PO2 PO4 PO5 PO7 PSO1
3	Different Types of Connectors, Electronics Components, Semiconductor Devices and Relays	Connector, IC, Register, Inductor, Diode, Transistor, Relay	- Supports hands-on learning - Helping students develop component selection, circuit assembly, soldering, testing, and troubleshooting skills	- Electronic Lab -1, 2 &3 - Comm Lab -1&2	- Component identification, testing, and debugging - Ability to design, and analyse circuits using components	PO1 PO2 PO3 PO4 PO5 PO7 PSO1 PSO2

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
4	Discrete Component Trainer	Resistors, capacitors, inductors, Diode, LED, Zener diode, BJT, FET with connecting/ measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to verify theoretical concepts through hands-on experiments - Provides practical exposure to circuit building, testing, and analysis using individual components - Allows students to design and modify simple electronic circuits independently	Electronic Lab -1, 2 &3	- Logical thinking to identify and rectify circuit faults - Conceptual clarity and hands-on skills - Awareness of proper handling, ratings, and safety precautions	PO1 PO2 PO3 PO4 PO5 PSO1
5	Bread Board with Power Supplies Trainer	Breadboard with connecting/ measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to verify theoretical concepts through hands-on experiments - Provides practical exposure to circuit building, testing, and analysis using individual components - Allows students to design and modify simple electronic circuits independently	Electronic Lab -1, 2 &3	- Logical thinking to identify and rectify circuit faults - Conceptual clarity and hands-on skills	PO1 PO2 PO3 PO4 PO5 PSO1
6	Schering Bridge Trainer	Trainer kit with connecting/ measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Practically perform experiments reinforcing theoretical concepts taught in class - Students gain direct experience with AC bridge balancing methods, phase relationships, and impedance calculations	- Electronic Lab -1&2	- Practical knowledge of precision measurement of capacitance - Ability to balance AC bridges accurately	PO1 PO2 PO4 PSO1
7	SMPS Trainer	Adjustable output voltage and load conditions with test points and indicators	- To provide students with real-time experience beyond theoretical classroom learning - Learning how output voltage regulation is achieved under varying load and input conditions	Comm Lab - 2	- Clear understanding of switching devices - To develop technical, analytical, and troubleshooting skills	PO1 PO2 PO4 PO5 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
8	Digital to Analog Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs	- Enables students to understand how digital signals are converted into analog signals in real systems - Helps bridge the gap between theoretical concepts such as binary numbers, resolution, and quantization with practical outcomes	Electronic Lab - 3	- Better understanding of binary numbers, digital codes, and logic levels - Clear insight into how digital data is transformed into continuous analog signals	PO1 PO2 PO4 PSO1
9	Analog to Digital Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs	- Hands-on experience in observing input analog signals and corresponding digital outputs - Learning the stages of sampling, quantization, and encoding	Electronic Lab - 3	- Clear understanding of continuous signals & their representation in digital form - Skills in interfacing ADCs with MP and MC	PO1 PO2 PO4 PSO1
10	Frequency Modulation & Demodulation Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave with frequency adjustable notch	- Hands-on exploration of FM signal generation, Spectral characteristics of FM, Demodulation techniques - Helps students develop operating signal generators, oscilloscopes, measuring frequency deviation, bandwidth, and distortion skills	Comm Lab -1&2	- Fundamental understanding, signal analysis & interpretation - Experimental & analytical thinking - Troubleshooting & problem-solving ability	PO1 PO2 PO4 PSO1
11	ASK Modulation & Demodulation Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave with amplitude adjustable notch	- Hands-on exploration of FSK signal generation, Spectral characteristics of FSK, Demodulation techniques - Helps students develop operating signal generators, oscilloscopes, measuring amplitude skills	Comm Lab -1&2	- Fundamental understanding, signal analysis & interpretation - Learning in circuit operation & measurement - Experimental & analytical thinking	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
12	PSK Modulation & Demodulation Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave with phase shift adjustable notch	- Hands-on exploration of PSK signal generation, Spectral characteristics of PSK, Demodulation techniques - Helps students develop operating signal generators, oscilloscopes, measuring phase difference skills	Comm Lab -1&2	- Fundamental understanding, signal analysis & interpretation - Learning in circuit operation & measurement - Experimental & analytical thinking	PO1 PO2 PO4 PSO1
13	FSK Modulation & Demodulation Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave with frequency adjustable notch	- Hands-on exploration of FSK signal generation, Spectral characteristics of FSK, Demodulation techniques - Helps students develop operating signal generators, oscilloscopes, measuring frequency skills	Comm Lab -1&2	- Fundamental understanding, signal analysis & interpretation - Learning in circuit operation & measurement - Experimental & analytical thinking	PO1 PO2 PO4 PSO1
14	LCR Resonance Circuit Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave with frequency adjustable notch	- Hands-on exploration of RLC circuit signal characteristics resonance BW - Helps students develop operating signal generators, oscilloscopes, measuring frequency skills	Electronic Lab - 2	- Fundamental understanding, signal analysis & interpretation - Learning in circuit operation and measurement - Experimental & analytical thinking	PO1 PO2 PO4 PSO1
15	Thermocouple Characteristics Trainer	Trainer kit with connecting/measurement point, patch cords and DC voltage outputs	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding - Measurement and Analysis Skills	Electronic Lab - 2	- Fundamental understanding, signal analysis & interpretation - Learning in circuit operation, measurement & instrumentation proficiency - Experimental & analytical thinking	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
16	AM-FM Radio Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave with frequency adjustable notch	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding - Measurement and Analysis Skills	Comm Lab - 2	- Fundamental understanding, signal analysis & interpretation - Learning in circuit operation, measurement & instrumentation proficiency - Experimental & analytical thinking	PO1 PO2 PO4 PO5 PSO1
17	4-Bit Counters (Synchronous & Asynchronous) Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Strengthening Digital Fundamentals - Clear Distinction Between Counter Types, Timing, Delay, and Clock Analysis	Electronic Lab - 3	- Design-Oriented Learning - Instrumentation and Measurement Skills - Troubleshooting and Logical Thinking	PO1 PO2 PO4 PSO1 PSO2
18	Maximum Power Transfer Theorem Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	Electronic Lab - 2	- Network theorem application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
19	Ohms Law Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	Electronic Lab - 1&2	- Network law application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
20	Pulse Width Modulation Trainer	Trainer kit with connecting/ measurement point, patch cords and AC sine wave with frequency/ amplitude adjustable notch	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	Comm Lab - 1	- PWM application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
21	Colpitts Oscillator Trainer	Trainer kit with connecting/ measurement point, patch cords and AC sine wave	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding - Measurement and Analysis Skills	Electronic Lab - 2	- Oscillator application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
22	Crystal Oscillator Trainer	Trainer kit with connecting/ measurement point, patch cords and AC sine wave	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 2	- Oscillator application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
23	555 Timer Trainer	Trainer kit with Patch points, sockets, patch cords, LED indicators and regulated DC power supply	- Enables students to experimentally verify multivibrator circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1	- Conceptual Understanding - Improved ability to use equipment correctly and safely - Ability to evaluate data & interpret results	PO1 PO2 PO4 PO5 PSO1
24	Frequency Division Multiplexing & Demultiplexing Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding - Measurement and Analysis Skills	Comm Lab - 1	- FDM application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
25	Biasing Techniques of Transistor Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- Transistor biasing application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
26	FET Characteristics trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- FET application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
27	OPAMP Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding - Measurement and Analysis Skills	- Electronic Lab 1&2	- OPAMP application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
28	Voltage Doubler & Tripler Circuit Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- Clamper circuit application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PO5 PSO1
29	RTD Temperature Transducer Trainer	Trainer kit with RTD sensor, connecting/measurement point, patch cords and Regulated power supply	- Enables students to understand the working principle of RTDs and relationship between temperature and resistance - Perform calibration and linearization	- Electronic Lab 2	- Understanding the working principle of RTD sensors - Temperature Measurement Techniques - Data Interpretation, Error Analysis and Accuracy	PO1 PO2 PO4 PO5 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
30	Hartley Oscillator Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 2	- Oscillator application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
31	RC Phase Shift Oscillator Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 2	- Oscillator application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
32	Wein Bridge Oscillator Trainer	Trainer kit with connecting/measurement point, patch cords and AC sine wave	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & understanding	- Electronic Lab 2	- Oscillator application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
33	Push pull amplifier Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & understanding	- Electronic Lab 1&2	- Push pull amplifier application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
34	KVL & KCL Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- Law application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
35	Uno R3 Board without Cable compatible with Arduino	On-board USB-to-serial interface, reset button, Digital I/O Pins, Analog Input Pins and status LEDs	- Enables students to understanding Microcontroller Fundamentals - Students gain practical experience in writing, compiling, and uploading programs using the Arduino IDE - Learning Hardware software Integration - Enables students to design and implement mini-projects such as sensor-based systems, automation tasks, and IoT prototypes	- Electronic Lab – 2 - Computer Lab 4	- Debugging and Troubleshooting Skills - Project-Based Learning - Exposure to Open-Source Platforms - Cost-Effective Learning Facility	PO1 PO2 PO4 PSO1 PSO2
Year 2023-24						
1	Digital IC Tester	Tests a wide range of logic families (74xx, etc), ZIF (Zero Insertion Force) socket for easy and safe IC placement, display and regulated power supply	- To help students quickly check whether a digital IC is working or faulty before using it in experiments - Better Understanding of Digital Logic - prevents loss of time caused by using defective ICs during practical sessions	- Electronic Lab 3	- Development of Troubleshooting Skills - Hands-On Laboratory Skills - Observation and Analytical Skills - Time Management in Experiments	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
2	4.5-digit Backlit LCD Hand Held True rms Clamp Meter	4.5-Digit Display, Backlit LCD, True RMS Measurement, and Clamp Function	- Accurate measurement of AC/DC voltage and current using True RMS capability - Understanding True RMS Measurements - Time Efficiency in Measurements	- Electronic Lab 1&2	- Electrical Measurement Skills - Hands-On Practical Skills - Troubleshooting and Diagnostic Skills	PO1 PO2 PO4 PO5 PSO1
3	Series current feedback in transistor amplifier Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- Feedback amplifier application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
4	Power amplifier Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & understanding	- Electronic Lab 1&2	- Power amplifier application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PO5 PSO1
5	Opto-coupler Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Helps students learn how opto-couplers transfer signals without direct electrical contact, protecting sensitive circuits - Enhances ability to design and test switching circuits, LED drivers, and relay interfaces using opto-couplers	- Comm Lab 1	- Innovation and Project Development - Troubleshooting and Diagnostic Skills - Signal Analysis and Observation - Switching and Control Applications	PO1 PO2 PO3 PO4 PO5 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
6	DECADE Counter Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Helps students learn proper use of clock signals, resets, and outputs in counting circuits - Enables students to understand Flip-Flops and Counters and Digital Counting Fundamentals	- Electronic Lab 3	- Practical Circuit Building Skills - Digital Counting Fundamentals - Troubleshooting and Diagnostic Skills - Logic Level Understanding - Problem-Solving and Critical Thinking	PO1 PO2 PO4 PSO1 PSO2
7	Reciprocity Theorem Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- Network theorem application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
8	Super Postion Theorem Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- Network theorem application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
9	Thevenin Theorem Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory	- Electronic Lab 1&2	- Network theorem application & validation - Analytical and graphical interpretation of results	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
10	Norton's Theorem Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- Network theorem application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
11	Maxwell's bridge Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- Maxwell's bridge application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
12	IGBT Characteristic Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & conceptual understanding	- Electronic Lab 1&2	- IGBT application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
13	MOSFET characteristics Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcomes - Experimental validation of theory & understanding - Measurement and Analysis Skills	- Electronic Lab 1&2	- MOSFET application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
14	Transistor two stage RC coupled amplifier Trainer	Trainer kit with connecting/measurement point, patch cords and regulated power supply	- Enables students to experimentally verify circuit, transforming a fundamental analytical result into observable and measurable outcome - Experimental validation of theory & understanding	- Electronic Lab 1&2	- RC coupled application & validation - Analytical and graphical interpretation of results - Experimental planning & execution	PO1 PO2 PO4 PSO1
15	Wheatstone bridge Trainer	Trainer kit with connecting/measurement point, patch cords and multiple DC voltage outputs (+5V, $\pm 12V$, or adjustable voltages)	- Practically perform experiments and reinforcing theoretical concepts taught in class - Students gain direct experience with AC bridge balancing methods, phase relationships, and impedance calculations	- Electronic Lab 1&2	- Practical knowledge of precision measurement of resistance - Ability to balance AC bridges accurately	PO1 PO2 PO4 PSO1
Year 2024-25						
1	Ring Topology for Networking Trainer	Trainer kit with Ring Topology Setup, Multiple Node Support, Data Flow Observation, and Power and Connectivity	- Helps students learn the principles of ring topology, including data flow, token passing, and network structure - Enables students to set up and configure network devices	- Electronic Lab 2 - Comm Lab 2	- Problem-Solving and Analytical Thinking - Troubleshooting and Fault Analysis - Protocol and Configuration Understanding	PO1 PO2 PO4 PSO1 PSO2
2	VLSI Trainer with XILINX FPGA Spartan 6	Trainer kit with Xilinx Spartan-6 FPGA, On-Board I/O Interfaces, Memory, Peripheral Access and On-board regulated power supply	- Helps students learn to write, simulate, and debug VHDL for digital circuit design, FPGA architecture, pin configuration, and I/O interfacing - Reinforces theoretical concepts of VLSI design, and sequential logic with hands-on FPGA experiments	- Computer Lab-1	- HDL Language and FPGA Programming Skills - Troubleshooting and Debugging - Project and Design Skills - Critical Thinking and Analytical Skills	PO1 PO2 PO3 PO4 PSO1 PSO2

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
3	AVR Embedded Trainer	Trainer kit with AVR Microcontroller, On-Board I/O Devices, Peripheral Interfaces, and On-board regulated DC power supply	- Helps students understanding of AVR microcontroller internal architecture, including CPU, memory (RAM, ROM/Flash), timers, and I/O ports - Gain hands-on experience with LEDs, switches, relays, sensors, and displays - Understand real-time control and scheduling in embedded systems	- Computer Lab-1	- Embedded System Programming skills - Troubleshooting and Debugging Skills - Hands-On Project Development - Critical Thinking and Analytical Skills	PO1 PO2 PO4 PSO1 PSO2
Year 2025-26						
1	General Purpose Board	GPB with Breadboard Area, Connectivity and Terminals	- Enables students to assemble, modify, and test circuits safely, reinforcing theoretical concepts - Helps students understand component behaviour, circuit connections, and signal flow in real circuits	Electronic Lab - 1, 2 & 3	- Circuit Assembly and Wiring - Digital and Analog Circuit Design - Troubleshooting and Fault Analysis	PO1 PO2 PO3 PO4 PO5 PSO1
2	Soldering iron and Desoldering pump	Hand tool that heats up to melt solder, allowing the formation of electrically and mechanically strong connections between components & PCB tracks, and remove molten solder from PCB joints	- Enables students to learn proper handling of a soldering iron and safe soldering techniques - Helps students understand the use of solder wire, flux, and soldering tips for different components - Learn how to replace faulty components without damaging the PCB - Enhance manual dexterity, precision, and careful handling of small components	Electronic Lab - 1, 2 & 3	- Basic Soldering Skills - Component Handling and Placement - Circuit Assembly and Repair - Thermal Management Awareness - Hand-Eye Coordination and Precision - Safety Practices - Troubleshooting and Maintenance	PO1 PO2 PO3 PO4 PO5 PO7 PSO1

Sr. No.	Facility Name	Description	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
3	Digital ICs, CRO Probes, Different rating Cell and Capacitors	ICs 74xx for digital logic gate, 78xx & 79xx for $\pm V$ power supply, passive probes with attenuation factors like 1x & 10x, Different Rating Cells (1.5V, 3V, 6V, 9V, 12V, etc.), Capacitance ranges from picofarads (pF) to farads (F)	- Enables students Building, testing, and modifying real circuits - Enables students Diagnosing and correcting faults in components and circuits - Enables students analyse electrical signals using CRO probes - Enables students selecting components for functionality and motivate them for small hands-on project development	- Electronic Lab 1, 2 & 3 - Comm Lab 1&2	- Troubleshooting & Analytical Thinking - Hands-On Practical Skills - Integration of Components - Instrumentation & Measurement Skills - Circuit Design Awareness - Safety & Professional Practices - Hands-On Project Development	PO1 PO2 PO4 PSO1
4	T-SERIES Bluetooth Speaker with Total Power Rating 100-125	Speaker with Total Power Rating (100–125 W), Bluetooth Wireless Connectivity, Multi-Mode Playback, Portable Design and Enhanced Audio Features	- Helps students learn about amplifiers, speakers, crossovers, and sound output circuitry - Provides practical experience in Bluetooth pairing, signal transmission, and wireless audio streaming - Hands-On Learning with Power Systems - Allows students to explore various input sources like AUX, USB, memory cards, and FM radio	Comm Lab - 1&2	- Understanding amplifiers, speaker drivers, crossovers, sound output circuitry, Bluetooth pairing, signal transmission, and wireless audio protocols - Troubleshooting and Maintenance Skills - Integration of Theory with Practice	PO1 PO2 PO4 PO5 PSO1

[2] Additional Learning Resources for Students

The department provides access to a departmental library and central library, along with internet/Wi-Fi facilities, e-learning platforms such as NPTEL, ONOS, the department's Google Drive, and SWAYAM, online study materials, and well-equipped laboratory resources to support self-learning and academic enrichment.

The additional learning resources available to students include:

1. Departmental Library

- Houses reference books, textbooks, and supplementary study materials tailored to the curriculum.
- Provides easy access within the department, reducing dependency on central facilities and ensuring students can quickly consult subject-specific resources.
- Supports continuous learning and exam preparation, especially with GTU-aligned materials.

2. Department's Google Drive

- Functions as a digital academic repository containing syllabus, lab manuals, assignments, lecture notes, and GTU question papers.
- Ensures transparency and accessibility—students can retrieve materials anytime, anywhere.
- Promotes organized documentation, which is crucial for accreditation and outcome-based education.

3. Central Library

- Offers a wide spectrum of resources: books, journals, magazines, e-books, and digital learning platforms.
- Strengthens research culture by providing access to scholarly publications and databases.
- Encourages students to go beyond textbooks and engage with current trends and innovations.

4. ONOS Digital Platform

- Designed to foster innovation and research through digital tools.
- Provides opportunities for students to collaborate on projects, access advanced resources, and explore new technologies.
- Aligns with institutional goals of digital adoption and modernization.

5. SSIP Cell (Student Startup & Innovation Policy)

- Encourages students to develop entrepreneurial skills and pursue innovative ideas.
- Provides mentorship, funding opportunities, and incubation support for startups.
- Strengthens the institution's role in industry collaboration and innovation culture.

6. CWAN (Campus Wired and Wireless Network)

- Ensures seamless internet connectivity across campus.
- Facilitates access to online learning materials, research papers, and educational websites.
- Supports ICT-enabled learning, a key requirement for modern education.

7. E-learning Platforms (NPTEL & SWAYAM)

- Provide MOOCs, video lectures, and tutorials for self-paced learning.
- Enable students to learn from IITs and national-level experts, enhancing academic depth.
- Encourage lifelong learning and flexibility, aligning with global educational standards.

8. Laboratory and Computing Facilities

- Well-equipped labs allow students to conduct experiments, simulations, and hands-on projects.
- Strengthen practical knowledge and application of theory, a cornerstone of outcome-based education.
- Computing facilities support software-based learning, coding, and digital simulations.

9. Workshops, Seminars & Guest Lectures

- Provide exposure to industry practices and academic advancements.
- Enable students to interact with experts, gain insights into emerging technologies, and develop professional skills.
- Strengthen industry-academia collaboration, enhancing employability and innovation.

GPP EC Google Drive for Study Materials

Link

https://drive.google.com/open?id=12Y-TdswTtsWz4CxeDIK8owbw4Ktg6_J8&usp=drive_fs

QR Code



Figure 6.3.7: QR Code for the GPP EC Google Drive Study-Material Repository

Table 6.3.5: Additional Learning Resources and Facilities for Students

Sr. No.	Facility Name	Details	Reason(s) for Creating Facility	Utilization	Area in which Students are Expected to Have Enhanced Learning	Relevance to POs / PSOs
1	Department Library	Reference books, textbooks, solved examples, previous years' question papers	Easy access to subject-specific learning resources	Used for coursework and exam preparation	Conceptual understanding, self-learning	PO1 PO2 PSO1
2	Department's Google Drive	Syllabus, lab manuals, assignments, lecture notes, GTU question papers	Anytime access to academic materials	Downloading study materials and lab preparation	Independent learning, digital literacy	PO1 PO5 PSO1 PSO2
3	Central Library	Books, journals, magazines, e-books, digital databases	Support advanced learning and research	Reference for projects and research	Research aptitude, lifelong learning	PO2 PO4 PSO1 PSO2
4	ONOS Digital Platform	Online academic and innovation resources	Enhance innovation and exposure to advanced knowledge	Learning new technologies and research trends	Innovation, critical thinking	PO4 PO5 PO7 PSO2
5	SSIP Cell	Startup support, innovation mentoring, funding	Encourage entrepreneurship and innovation	Project development and startup activities	Entrepreneurship skills	PO3 PO5 PO7 PSO2
6	CWAN (Wired and Wireless network)	Campus-wide high-speed internet	Access online educational and research resources	E-learning and research access	Self-directed learning	PO5 PO7 PSO2
7	E-learning Platforms (NPTEL, SWAYAM)	Online courses, video lectures, certifications	Supplement classroom teaching	Concept clarity and certifications	Lifelong learning	PO1 PO7 PSO2
8	Laboratory and Computing Facilities	Well-equipped labs, hardware, software, simulation tools	Hands-on experiential learning	Experiments, simulations, projects	Practical skills, problem-solving	PO1 PO2 PO7 PSO1 PSO2
9	Workshops, Seminars, Guest Lectures	Expert talks, hands-on workshops, industry interaction	Industry-academia exposure	Participation in technical events	Professional and communication skills	PO1 PO7 PSO1 PSO2

6.4 Laboratories: Maintenance and overall ambiance (10)

[A] Maintenance of Physical Facilities

The institution/department ensures systematic maintenance and optimal utilization of laboratory infrastructure through well-defined procedures:

- Regular inspection and preventive maintenance of laboratory equipment are carried out prior to the commencement of each semester as and when required.
- Minor repairs are handled internally by the Laboratory Assistant and concerned faculty members, while major repairs and servicing are outsourced through institutional procedures if required.
- Computer laboratories are maintained through periodic checking before the start of the semester by concern lab in charge assisted by laboratory assistant.
- Minor hardware and software issues are resolved by departmental staff, whereas major maintenance and repair work is outsourced by the Institute on a call basis (AMC).
- The department is supported by CWAN (Central Wide Area Network) connectivity with both wired and wireless internet facilities, which are regularly maintained to support teaching-learning, research, and administrative activities for students and faculty.
- Laboratory models, equipment, and student projects are systematically stored and preserved to ensure safety, accessibility, and long-term usability.
- A Laboratory Utilization Register is maintained for all laboratories to monitor effective usage, scheduling of practical sessions, and compliance with institutional norms.
- Major electrical and civil maintenance works related to laboratory infrastructure are carried out by the Roads & Buildings (R&B) Department, ensuring compliance with safety and quality standards.

[1] Equipment maintenance history card

GOVERNMENT POLYTECHNIC, PALANPUR
ELECTRONICS AND COMMUNICATION DEPARTMENT
EQUIPMENT HISTORY CARD

Name of Equipment	Antenna Trainers kit	Make/Model	Scientech - 2261
Category of purchase	CTE /MHRD/CSS/MODROB/Local Purchase	Serial No.	26
Purchase Order No:	CTE/CSS/AT-435/ROYAL/B-10/3/2014-15/9301	Unit Total Price	73185/-
Register (DS/Expa) Name & Registered Number	MHRD - 9/26	Warranty Period	1 Yrs
GPR No. (Institute level)	11/64	Ph. Number of supplier	9824412130 (Rajesh Chohan)
Date of Purchase/ Installation	18/03/2015		
Name of Supplier	Royal Electronics, Vadodra		
Address of Supplier	Royal House, 1 Raj Luxoni Society, Nr HCG Cancer Center, Atladara, Tandalya, Vadodra - 390012		
Details			
Category of Equipment	Testing & Measurement/ Trainer Kit/ If phereferal		
Subject Used (Name Of Subject):	Antenna & Wave propagation (AWP)	Code No:	3331101

Equipment Examination Details

Date	Examination Details	Status		Examined By	Remarks
		Working	Non Working		
18/03/15	Testing	✓		R.N. Patel	Working with manual & software setup of ST2261M
11/10/15	Functional verification & testing	✓		R.N. Patel	Software setup is not working properly
10/03/16	Functional verification & testing	✓		R.N. Patel	H/W & S/W are fully working
13/12/17	Functional verification & Testing (end of term)	✓		R.N. Patel	H/W & S/W are working
15/10/19	Functional verification & Testing	✓		R.N. Patel	H/W & S/W working
26/12/15	Functional verification & Testing all setup	✓		R.N. Patel	H/W & S/W working

Figure 6.4.1: Equipment Maintenance History Card

[2] Overall Ambiance of Laboratories

The department provides a learner-friendly, safe, and well-equipped laboratory environment that effectively supports curriculum delivery and experiential learning:

- The department has adequate number of laboratories , which are utilized as per the approved academic time-table to meet curriculum and practical requirements.
- All laboratories are well-equipped with adequate and functional equipment to conduct prescribed experiments as per the university syllabus.
- Each laboratory is provided with essential teaching learning facilities such as white/chalk boards, CWAN (Central Wide Area Network) connectivity with both wired and wireless internet facilities, and other instructional aides to support effective practical demonstrations.
- Soft copies of laboratory manuals through G – Drive are made available for all laboratories for easy access by students and faculty.
- Laboratories are furnished with adequate furniture, including tables, stools, and chairs, ensuring comfort and proper ergonomics for students.
- The laboratories have an effective lighting system, supplemented with sufficient natural light, creating a conducive working environment.
- Safety instructions, including Do's and Don'ts, are prominently displayed in each laboratory to ensure safe laboratory practices.
- First-aid kits and fire extinguisher are available across department to handle minor medical emergencies.
- Students are permitted and encouraged to use laboratories and computer centres beyond regular practical hours for final-year project work, promoting experiential learning and innovation.

6.5 Availability of computing facility in the department (10)

- The department provides sufficient computing infrastructure with 75 computer terminals housed in four computer laboratories, maintaining a healthy student-to-computer ratio.
- All systems are installed with Windows Professional operating systems, Microsoft Office, and relevant open-source software and simulators to meet curriculum and project requirements.
- The department is supported by CWAN (Central Wide Area Network) connectivity with both wired and wireless internet facilities with 200 Mbps internet connectivity and a robust internal network comprising 90 high-speed LAN ports, ensuring seamless access to digital resources for students and faculty.
- Adequate peripheral facilities such as printers, a multifunction device, and projectors further enhance academic and instructional activities.

[1] Computer facilities

Table 6.5.1: Computer Facilities

No. of computer terminals	Students Com-puter ratio	Details of legal software	Details of networking	Details of Print-ers/Scanners etc.
10 Terminals (PCs) in Computer Lab - 1 (Room No: B002)	2 students per PC	- Windows Professional (Factory Loaded) - Microsoft Office - Open-Source Software - Open-Source simulator	- CWAN connectivity with both wired and wireless internet facilities (200 Mbps) - Total 90 High Speed LAN ports	- 2 Printer - 2 Multifunction Printer - 3 Projector
22 Terminals (PCs) in Computer Lab - 2 (Room No: B008)				
22 Terminals (PCs) in Computer Lab - 3 (Room No: B009)				
11 Terminals (PCs) in Computer Lab - 4 (Room No: B014)				

[2] Inventory Records

- The department maintains systematic inventory records of computing facilities to support effective teaching learning and practical exposure.
- The department has four dedicated computer laboratories, which are utilized for conducting practical sessions, project work, and simulation-based learning as per the curriculum requirements.
- The computer laboratories are located on the ground floor of the BADP Building and include:
 - Computer Laboratory - 1: Room No. B002
 - Computer Laboratory - 2: Room No. B008
 - Computer Laboratory - 3: Room No. B009
 - Computer Laboratory - 4: Room No. B014
- All laboratories are equipped with adequate computer systems, and open-source software, and necessary peripherals in accordance with the prescribed curriculum.
- Detailed information regarding hardware and software inventory is maintained and provided in Annexure 1.
- These laboratories facilitate subject specific practical, project development activities, and simulation-based learning, thereby enabling students to acquire essential technical competencies.
- The availability and effective utilization of these computing resources contribute significantly to the attainment of Program Outcomes (POs) and alignment with industry and technological requirement.

[3] Details of Computer Laboratories

Table 6.5.2: Details of Computer Laboratories

Sr. No.	Name of Laboratory	No. of Computer	Location	Specification
1	Computer Lab - 1	10	BADP Building Ground Floor Room No: B002	As per annexure 1
2	Computer Lab - 2	22	BADP Building Ground Floor Room No: B008	As per annexure 1
3	Computer Lab - 3	22	BADP Building Ground Floor Room No: B009	As per annexure 1
4	Computer Lab - 4	11	BADP Building Ground Floor Room No: B014	As per annexure 1

Annexure 1

Table 6.5.3: Specification of Computer

Sr. No.	Computer Terminals (PCs)	Specification
1	Acer Desktop Veriton Computer system	• Processor: AMD Ryzen 7 5000 series or higher • Graphics Type: Integrated • Keyboard Connectivity: Wired • Mouse Connectivity: Wired • Total internal storage capacity: 1 TB NVME • Operating System (Factory Pre-Loaded): Windows 11 Professional • RAM Size (GB): 16 with 1 DIMM slot free.
2	HCL Desktop Computer system	• Processor: Intel Core i3 • Graphics Type: Integrated • Keyboard Connectivity: Wired • Mouse Connectivity: Wired • Total internal storage capacity: 512 GB HDD • Operating System (Factory Pre-Loaded): Windows 7 Professional • RAM Size (GB): 4 with 1 DIMM slot free.
3	SIS Desktop Computer system	• Processor: AMD Phenom III • Graphics Type: Integrated • Keyboard Connectivity: Wired • Mouse Connectivity: Wired • Total internal storage capacity: 320 GB HDD • Operating System (Factory Pre-Loaded): Windows 7 Professional • RAM Size (GB): 4 with 1 DIMM slot free.

[4] Details of Printer, Scanner and Projector

- The department is equipped with adequate printing and projection facilities to support academic, administrative, and instructional activities.
- A total of four printers is available for document preparation, examination work, and laboratory records.
- A total of three projectors is utilized in classrooms and laboratories to facilitate effective teaching learning through presentations, demonstrations, and multimedia content.

Table 6.5.4: Details of Printer/Scanner and Projector

Sr. No.	Item	Quantity
1	Printer	4
2	Projector	3

[5] Specification of Printer/Scanner and Projector

Table 6.5.5: Specification of Printer/Scanner and Projector

Sr. No.	Particular	Specification
1	Canon MF3010 Scanner/Printer (Room no B006)	• Type: Monochrome laser Print/Scan/Copy • Print speed: 18–19 ppm (A4) , first print ~ 7.8 s • Print quality: 600×400 dpi (up to 1200×600 dpi refined) • Scan: flatbed CIS, up to 600×600 dpi optical , 9600 dpi enhanced • Paper input/output: 150-sheet tray / 100-sheet output • Memory: 64 MB , connectivity via USB-2.0
2	Canon MF244 DW Scanner/Printer (Room no B001)	• Type: Mono-laser all-in-one (print, copy, scan) with duplex and ADF • Print speed: Up to 27 ppm (A4), duplex at ~15 ipm. • Print quality: 600×600 dpi native, up to 1200×1200 dpi with refinement • Copying: supports 2-on-1, 4-on-1, ID-card copy • Scanning: CIS flatbed + 35-sheet ADF, optical 600×600 dpi, enhanced up to 9600×9600 dpi \ • Paper handling: 250-sheet tray + 1-sheet multipurpose + 100-sheet output; duplex supports A4, Letter, Legal etc. • Connectivity: USB 2.0, Ethernet, Wi-Fi 802.11b/g/n, Wi-Fi Direct, • Memory: 512 MB RAM

Sr. No.	Particular	Specification
3	Samsung laser ML 1640/1866 Laser Printer (Room no. B005)	• Type: Compact monochrome laser printer for A4/Letter pages • Print Speed: Up to 16 ppm (A4) / 17 ppm (Letter), first page in <10 s • Resolution: Up to 1,200 × 600 dpi • Memory & Processor: 150 MHz CPU with 8 MB RAM • Interface: USB 2.0 connectivity • Paper Handling: 150-sheet input tray, 100-sheet output; supports up to A4/Legal • Duty Cycle: Up to 5,000 pages/month.

[6] Computer Laboratory



Figure 6.5.1 Photograph_B002



Figure 6.5.2 Photograph_B008



Figure 6.5.3 Photograph_B009



Figure 6.5.4 Photograph_B014

Figure 6.5.1: Computer Laboratories in Use – B002, B008, B009 and B014

[7] List of courses conducted in computer laboratory for practical work

- The computer laboratory is extensively utilized for conducting practical sessions across various semesters to strengthen students' hands-on skills and application-oriented learning.
- The listed courses cover fundamental computing, programming, software development, electronics design tools, communication systems, microprocessors, networking, VLSI, and emerging technologies.
- Through these laboratory sessions, students gain practical exposure to industry-relevant tools, programming environments, simulation software, and project development practices,

thereby enhancing their technical competence, problem-solving abilities, and readiness for higher studies and professional careers.

Table 6.5.6: List of Courses Conducted in Computer Laboratory

Sr. No.	Term	Semester	Course
1	Odd	1	Fundamentals of Information and Communication Technology
2	Odd	1	Basic of Computer & Information Technology
3	Odd	3	Programming In C
4	Odd	5	OOPS & Python Programming
5	Odd	5	Software Practice
6	Odd	5	Project I
7	Even	4	Circuit Design Tools
8	Even	4	Microprocessor & Microcontroller
9	Even	6	Android App Development
10	Even	6	Project II
11	Even	6	Computer Network & Data Communication
12	Even	6	VLSI
13	Even	6	Renewable Energy & Emerging Trends in Electronics

[8] ICT Tools and Software Used for Teaching Learning Process

Table 6.5.7: ICT Tools and Software Details

Sr. No.	ICT Tools / Software	Usage Details
1	Multisim Live	Subject: Circuit Design Tools (4341104), Sem 4 Purpose: Online circuit design and simulation.
2	Keil Free version/ Proteus Demo version	Subject: Microprocessor & Microcontroller, Sem 4 Purpose: Instruction-level simulation.
4	Scratch	Subject: Fundamentals of ICT (1313201), Sem 1 Purpose: Block-based programming for beginners.
5	Electric Circuit Studio	Subject: Analog Electronics (4341105), Sem 4 Purpose: Mobile-based circuit simulation.
6	MIT App Inventor	Subject: Android App Development (4361104), Sem 6 Purpose: Block-based Android app development.
7	Code Block	Subject: Programming in C (4331105), Sem 4 Purpose: Compile and test C programs.
8	CISCO Packet Tracer	Subject: Computer Networks (4361101), Sem 6 Purpose: Network design and simulation.
9	Scilab	Subject: Digital Communication (4341102), Sem 4 Purpose: Signal processing experiments.
10	Scilab	Subject: Software Practices (4351105), Sem 5 Purpose: Numerical and simulation labs.
11	Quartus Free version	Subject: VLSI (4361105), Sem 6 Purpose: HDL simulation and VLSI design.

6.6 Language lab (10)

Language Laboratory – Systematic Development of Communication Skills

1. Infrastructure & ICT Facilities

- The Language Lab is equipped with modern ICT infrastructure including computers, microphones, headphones, and audio-visual aids.
- Provides a user-friendly, interactive environment that supports both individual and group learning.
- Technology-enabled tools allow real-time monitoring, recording, and feedback, ensuring systematic skill development.

2. Focus on LSRW Skills

- The lab is designed to strengthen Listening, Speaking, Reading, and Writing (LSRW) skills.
- Students engage in structured exercises that improve pronunciation, fluency, comprehension, and vocabulary.
- Activities also emphasize non-verbal communication such as body language, gestures, and tone modulation.

3. Pedagogical Functions

- Supports a wide range of instructional functions:
- Recording & Playback: Students can record their speech and analyze areas of improvement.
- Test Preparation: Facilitates practice for competitive exams, interviews, and presentations.
- Teacher–Student Interaction: Enables personalized guidance and corrective feedback.
- Group Activities & Conferencing: Encourages collaborative learning and peer evaluation.

4. Professional & Global Readiness

- Enhances confidence, fluency, and clarity of communication, preparing students for professional environments.
- Builds competencies required for multinational organizations, where effective communication is a key employability skill.
- Promotes global citizenship by exposing learners to diverse accents, cultural contexts, and communication styles.

5. Experiential Learning & Innovation

- Interactive sessions simulate real-world scenarios such as interviews, group discussions, and presentations.
- Students gain hands-on experience in communication practices, bridging the gap between theory and application.

- Encourages self-learning and continuous improvement, aligning with outcome-based education principles.

The Language Laboratory is a well-equipped facility designed to facilitate systematic and scientific learning of languages and communication skills.

- It is furnished with modern ICT infrastructure such as computers, microphones, headphones, and audio-visual aids, providing a user-friendly environment for effective teaching-learning.
- The laboratory offers ample opportunities for students to develop Listening, Speaking, Reading, and Writing (LSRW) skills, along with verbal and non-verbal communication competencies.
- Through interactive and technology-enabled practices, the language laboratory helps students enhance fluency, pronunciation, comprehension, and confidence, thereby preparing them to become effective communicators, global citizens, and competent professionals suitable for employment in multinational organizations.
- The laboratory supports various instructional functions including recording, test preparation, student monitoring, teacher-student interaction, group activities, and conferencing.

[1] *Facility detail*

Table 6.6.1: Laboratory Facility Details

Sr. No.	Facility	Availability Status
1	Laboratory Location and Area	New Academic Building, Room No G008, 76.56sqm area
2	ICT Facilities and Furniture	30 computer terminals with LAN & Internet connectivity (ACER-17 + HCL-13)
		30 Head Phone with Mike
		30 Computer table and chair
		1 LCD Projector with screen
3	Lab register	Separately maintain
4	Software	Open-source software such as AUDACITY and other relevant online platforms/tools used for language learning and skill development

[2] *List of Activities Conducted in the Language*

- The Language Laboratory is systematically utilized for topic-wise communication skill activities as scheduled in the academic timetable.
- Each practical session is conducted under faculty supervision using allocated ICT resources such as computers, headphones with microphones, and projector facilities.
- Activities such as role-plays, telephonic conversations, situational dialogues, and interactive speaking exercises are regularly practiced listed below.
 - Self-introduction and personal profiling
 - Speaking about family and relationships
 - Weather discussion and descriptive speaking

- Seeking permission and making polite requests
- Talking about hobbies and interests
- Seeking information at public places (railway station/airport)
- Fixing and taking appointments
- Role-play: Conversation with cashier (college/bank)
- Discussing holiday and travel plans
- Shopping-related conversations and bargaining skills
- Telephonic conversation practice
- Admission enquiry and formal interaction
- Greeting and wishing on social occasions
- Speaking about favourite sports and recreational activities
- Listening comprehension using audio clips
- Pronunciation and accent practice
- Group discussions and pair conversations
- Recording and playback for self-evaluation
- Vocabulary building exercises
- Mock interviews and basic professional communication

[3] Websites used for Communication Practice

Lesson

- Listening Level Test: <https://www.oxfordonlineenglish.com/english-level-test/listening>
- Vocabulary Level Test: <https://www.oxfordonlineenglish.com/english-level-test/vocabulary>
- Reading Level Test: <https://www.oxfordonlineenglish.com/english-level-test/reading>
- Grammar Level Test: <https://www.oxfordonlineenglish.com/english-level-test/grammar>
- English Listening Lesson: <https://www.oxfordonlineenglish.com/free-english-listening-lessons>
- English Vocabulary Lessons: <https://www.oxfordonlineenglish.com/free-english-vocabulary-lessons>
- Spoken English Lessons: <https://www.oxfordonlineenglish.com/free-spoken-english-lessons>
- English Pronunciation Lessons: <https://www.oxfordonlineenglish.com/free-english-pronunciation-lessons>
- English Writing Lesson: <https://www.oxfordonlineenglish.com/free-english-writing-lessons>

Skills

- Listening: <https://learnenglish.britishcouncil.org/skills/listening/beginner-a1>, <https://learnenglish.britishcouncil.org/skills/listening/pre-intermediate-a2>
- Reading: <https://learnenglish.britishcouncil.org/skills/reading>, <https://learnenglish.britishcouncil.org/skills/reading/pre-intermediate-a2>
- Writing: <https://learnenglish.britishcouncil.org/skills/writing/beginner-a1>, <https://learnenglish.britishcouncil.org/skills/writing/pre-intermediate-a2>
- Speaking: <https://learnenglish.britishcouncil.org/skills/speaking/beginner-a1>, <https://learnenglish.britishcouncil.org/skills/speaking/pre-intermediate-a2>
- Grammar: <https://learnenglish.britishcouncil.org/skills/speaking/pre-intermediate-a2>
- Vocabulary: <https://learnenglish.britishcouncil.org/vocabulary/beginner-to-pre-intermediate>
- Business English: <https://learnenglish.britishcouncil.org/business-english/english-for-emails>
- General English: <https://learnenglish.britishcouncil.org/general-english>

Online Activities

- <https://www.cambridgeenglish.org/learning-english/activities-for-learners/?skill=grammar&rows=12>
- Grammar: https://www.myenglishpages.com/site_php_files/grammar.php
- Vocabulary: https://www.myenglishpages.com/site_php_files/vocabulary.php
- Speaking: https://www.myenglishpages.com/site_php_files/speaking.php
- Reading: https://www.myenglishpages.com/site_php_files/reading.php
- Listening: https://www.myenglishpages.com/site_php_files/listening.php
- Writing: https://www.myenglishpages.com/site_php_files/writing.php
- Exercises and Tests: https://www.myenglishpages.com/site_php_files/exercises.php



Figure 6.6.1: Photograph of Language Lab G008

Criterion 7

Continuous Improvement (75)

Total Marks: 75

Table 7.0.1: Sub-Criteria and Marks Distribution – Criterion 7: Continuous Improvement (Total 75 Marks)

No.	Sub-Criterion	Marks
7.1	Actions taken based on the results of evaluation of each of the POs & PSOs	25
A	Documentary evidence of POs and PSOs attainment levels	10
B	Gaps identified /shortfalls/improvement from continuous improvement perspective	5
C	Plan of action to bridge the gap and its Implementation	10
7.2	Improvement in Success Index of Students without the backlog	10
·	Assessment shall be proportional to improvement	10
7.3	Improvement in Placement and Higher Studies	10
·	Assessment is based on Nos., Quality Placements, Core Companies and Pay Packages	10
7.4	Improvement in Academic Performance in Final Year	10
·	Assessment shall be proportional to improvement	10
7.5	Internal Academic Audits to Review Complete Academics & to Implement Corrective Actions on Continuous Basis	10
A	Audit Criteria	–
B	Frequency	–
C	Methodology	–
D	Effectiveness	–
E	Action Plan	–
7.6	New Facility created in the program	10
·	Relevance	10
Total Marks – Criterion 7		75

7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (25)

Identify the areas of weaknesses in the program based on the analysis of evaluation of POs & PSOs attainment levels. Measures identified and implemented to improve POs & PSOs attainment levels for the assessment years.

Actions to be written as per table in 3.3.2.

Target Value Calculation

We have set the initial target value at 66.67% of the Program Articulation Matrix average for each PO and PSO, aligned with the attainment level of 2 (i.e., 66.67% of the maximum attainment level of 3) established for PO/PSO mapping under Criteria-2.

For the next academic year, the target value will be revised by $\pm 3\%$ of the previous year's target—increased if the target is achieved and decreased if it is not achieved.

Table 7.1.1: Summary: Program Articulation Matrix and Target Values

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
Program Articulation Matrix Average	2.67	1.89	1.92	2.05	1.73	1.75	2.01	2.44	2.07
2023-24 (66.67%)	1.78	1.26	1.28	1.37	1.15	1.17	1.34	1.63	1.38
2024-25 (70%)	1.87	1.32	1.34	1.44	1.21	1.23	1.41	1.71	1.45
2025-26 (73%)	1.95	1.38	1.40	1.50	1.26	1.28	1.47	1.78	1.51

Table 7.1.2: Detailed Program Articulation Matrix

Sr. No.	Course Code	Code ID	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
1	4300001	C111.1	Mathematics	3	1.25	1	-	-	-	1	-	-
2	4300002	C112.1	Communication Skills in English	1.75	-	-	-	-	2	1.8	-	-
3	4300005	C113.1	Physics	3	1	1	2	1	-	1	1.6	-
4	4300010	C114.1	Basics of Information and Communication Technology	2.8	2	2	2	1.25	2	2.4	2.5	2.5
5	4300015	C115.1	Sports and Yoga	2.4	-	-	-	1	-	2	-	-
6	4311101	C116.1	Fundamentals of Electrical Engineering	3	2	-	1	3	1	2	3	1
7	4311102	C117.1	Fundamentals of Electronics	3	1.2	1.6	2.2	1.67	1.25	1	3	1
8	4300003	C121.1	Environment and Sustainability	2	1.8	1.6	1	1.8	1.25	1.4	2	-
9	4300012	C122.1	Engineering Drawing and Computer Aided Design	3	1.5	2.75	2.5	2	2	2	-	1
10	4300016	C123.1	Indian Constitution	-	1	1	-	2	1	2	-	-
11	4320002	C124.1	Engineering Mathematics	3	1	1	-	-	-	1	-	-
12	4321101	C125.1	Electronics Workshop	2.6	2.2	2.4	2.8	1.6	1.4	2.2	2.6	2.6
13	4321102	C126.1	Digital Electronics	3	1.8	1.8	1.8	2	1.8	1.2	2.6	1
14	4321103	C127.1	Electronic Circuits & Applications	3	2.2	2.4	2.4	1.5	2.8	1.6	2.2	2.6
15	4330001	C231.1	Summer Internship-I	1.4	1	1.5	1.2	1	1	1	1.5	1
16	4331101	C232.1	Electronic Circuits & Networks	3	2.8	2.6	2.2	1.6	1.8	2.2	3	2
17	4331102	C233.1	Electronic Measurements & Instruments	3	2	2.5	2.8	2	1	1.2	3	1.33
18	4331103	C234.1	Industrial Electronics	3	2	2	2.4	1.66	2.4	1.4	2.8	2.6
19	4331104	C235.1	Principle of Electronic Communication	2.8	2	1.6	2.2	1.6	1	2.6	1.6	1
20	4331105	C236.1	Programming In C	2.6	2.25	2	2.4	1.6	1.6	2.2	-	3
21	4340003	C241.1	Integrated Personality Development Course	1	1	1	-	2.67	2.33	2.8	-	-
22	4341101	C242.1	Microprocessor & Microcontroller	3	2	2.2	2.2	1	2.2	2.4	2.5	1.8
23	4341102	C243.1	Digital Communication	3	1.4	1.4	2.4	1.6	1.8	2.6	2.8	2.6
24	4341107	C244.1	Consumer Electronics and Maintenance	3	2.2	2	2.6	2.6	1.8	3	3	1
25	4341104	C245.1	Circuit Design Tools	2.5	2.67	2.67	3	1.67	1	1.25	3	2.5
26	4341105	C246.1	Linear Integrated Circuit (Analog Electronics)	3	2.6	2.4	2.2	2	2.8	2.4	2.6	2.8
27	4341106	C247.1	Antenna & Wave Propagation	3	2.8	2.6	2.2	1.6	1.8	2.2	3	1.4

Sr. No.	Course Code	Code ID	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
28	4300021	C351.1	Entrepreneurship and Start-ups	2.8	2	1.8	1.25	1.25	2.4	2.6	2	2
29	4351102	C352.1	Embedded System	3	2.4	2	2	1.67	2.2	2.4	2.2	2
30	4351103	C353.1	Microwave and Radar Communication	2.2	1.6	2.2	2	2	2	1.8	2.4	2.2
31	4351104	C354.1	Mobile & Wireless Communication	2.8	2	1.8	2	1.6	2	2.4	3	2.33
32	4351105	C355.1	Software Practices	3	2.2	2	2.4	1	1.33	3	-	3
33	4351106	C356.1	Summer Internship-II	1.6	2	1.8	1.2	2.2	1.6	2	2.4	2.33
34	4351107	C357.1	Electronics and Communication Engineering Project-I	3	2	1.4	1.6	1.8	1.4	3	2	2.2
35	4351108	C358.1	OOPS & Python Programming	2.25	2	2	1.75	-	1.25	2.5	-	3
36	4361101	C361.1	Computer Networks & Data Communication	3	2.2	1.8	1.6	1.4	2.2	2.8	2.4	2.8
37	4361102	C362.1	VLSI	2.6	2.4	2	2.2	2.67	2.33	2.2	2.4	2.5
38	4361103	C363.1	Electronics & Communication Engineering Project-II	3	1	2.33	1.8	2	2	2	2.2	2
39	4361104	C364.1	Android App Development	2.2	2.4	3	2.4	1.6	1.4	1	1	2
40	4361106	C365.1	Renewable Energy & Emerging Trends in Electronics	3	2	2	2	1.75	2	2.75	3	3
Average Attainment				2.67	1.89	1.92	2.05	1.73	1.75	2.01	2.44	2.07

A. Documentary evidence of POs and PSOs attainment levels (10)

Table 7.1.3: Summary: POs and PSOs Attainment Levels

Year	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CAYm2 2023-24	1.93	1.44	1.61	1.67	1.44	1.53	1.62	1.83	1.72
CAYm1 2024-25	2.04	1.60	1.62	1.62	1.38	1.56	1.68	1.90	1.71
CAY 2025-26	2.22	1.71	1.75	1.84	1.52	1.70	1.88	2.15	1.98

Table 7.1.4: POs and PSOs Attainment for the CAYm2 2023-24

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4300001	C111	0.91	0.37	0.29	-	-	-	0.3	-	-
4300002	C112	1.51	-	-	-	-	1.71	1.53	-	-
4300005	C113	1.68	0.57	0.56	1.12	0.53	-	0.56	0.9	-
4300010	C114	2.53	1.80	1.81	1.80	1.13	1.81	2.17	2.25	2.35
4300015	C115	2.31	-	-	-	0.96	-	1.92	-	-
4311101	C116	1.90	0.95	-	0.61	2.09	0.63	1.27	1.90	0.63
4311102	C117	0.59	0.24	0.33	0.44	0.26	0.24	0.18	0.59	0.21
4300003	C121	1.17	1.08	0.95	0.62	1.04	0.71	0.84	1.17	-
4300012	C122	2.82	1.4	2.58	2.35	1.87	1.87	1.88	-	0.95
4300016	C123	-	0.95	0.95	-	1.89	0.95	1.89	-	-
4320002	C124	1.35	0.45	0.43	-	-	-	0.44	-	-
4321101	C125	2.32	1.96	2.15	2.51	1.26	0.90	1.79	2.32	2.32
4321102	C126	2.16	1.29	1.28	1.28	1.42	1.28	0.86	1.86	0.72
4321103	C127	1.76	1.30	1.42	1.40	0.92	1.63	0.93	1.23	1.48
4330001	C231	1.23	0.86	1.29	1.04	0.86	0.86	0.86	2.59	2.42
4331101	C232	1.52	1.45	1.31	1.12	0.80	0.90	1.13	1.52	1.02
4331102	C233	1.27	0.84	1.08	1.18	0.77	0.42	0.51	1.27	0.54
4331103	C234	1.11	0.74	0.74	0.90	0.56	0.90	0.53	1.04	0.98
4331104	C235	1.39	0.97	0.81	1.08	0.78	0.47	1.27	0.81	0.50
4331105	C236	1.26	1.15	1.04	1.20	0.80	0.78	1.07	-	1.45
4340003	C241	0.97	0.97	0.97	-	2.57	2.25	2.70	-	-
4341101	C242	2.47	1.61	1.80	1.78	0.81	1.81	1.93	2.15	1.43
4341102	C243	2.53	1.19	1.17	2.04	1.36	1.52	2.17	2.36	2.17
4341104	C244	2.40	1.93	1.93	2.86	1.18	0.95	1.20	0.69	2.40
4341105	C245	1.80	1.56	1.45	1.33	1.20	1.67	1.42	1.56	1.67

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4341106	C246	1.61	1.50	1.41	1.18	0.87	0.97	1.18	1.61	0.74
4341107	C247	1.50	1.06	1.00	1.27	1.27	0.89	1.50	1.50	0.48
4300021	C351	1.57	1.02	0.98	0.62	0.67	1.32	1.44	1.10	0.84
4351102	C352	2.35	1.90	1.62	1.62	1.34	1.77	1.94	2.22	1.64
4351103	C353	1.27	1.04	1.27	1.24	1.45	0.99	1.10	1.36	1.36
4351104	C354	2.33	1.73	1.57	1.68	1.38	1.68	1.97	2.50	2.08
4351105	C355	2.85	2.09	1.90	2.28	0.95	1.26	2.85	-	2.85
4351106	C356	1.52	1.90	1.71	1.14	2.09	1.52	1.90	2.28	2.22
4351107	C357	2.68	1.79	1.26	1.43	1.61	1.25	2.68	1.79	1.97
4351108	C358	1.66	1.45	1.38	1.21	-	0.90	1.79	-	2.15
4361101	C361	2.63	1.91	1.59	1.42	1.22	1.87	2.44	2.10	2.43
4361102	C362	1.76	1.72	1.51	1.51	1.95	1.81	1.45	1.70	0.74
4361103	C363	2.79	0.93	2.19	1.70	1.86	1.92	1.91	2.08	1.89
4361104	C364	2.08	2.27	2.84	2.28	1.52	1.33	0.95	0.95	1.89
4361106	C365	2.81	1.85	1.85	1.85	1.63	1.85	2.57	2.81	2.74
Direct Attainment of POs/PSOs		1.85	1.31	1.36	1.44	1.24	1.26	1.47	1.67	1.53
Indirect Attainment of POs/PSOs		2.25	2	2.63	2.63	2.25	2.63	2.25	2.50	2.50
Final Attainment of POs/PSOs (80% Direct + 20% Indirect)		1.93	1.44	1.61	1.67	1.44	1.53	1.62	1.83	1.72

Table 7.1.5: POs and PSOs Attainment for the CAYm1 2024-25

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4300001	C111	1.49	0.62	0.48	-	-	-	0.45	-	-
4300002	C112	1.11	-	-	-	-	1.24	1.1	-	-
4300005	C113	2	0.72	0.67	1.33	0.61	-	0.67	1.06	-
4300010	C114	2.53	1.81	1.80	1.81	1.13	1.80	2.18	2.24	2.34
4300015	C115	2.26	-	-	-	0.94	-	1.89	-	-
4311101	C116	2.26	1.43	-	0.74	2.33	0.75	1.51	2.26	0.75
4311102	C117	1.58	0.65	0.93	1.18	0.43	0.63	0.44	1.58	0.67
4300003	C121	1.14	1.02	0.91	0.56	1.03	0.70	0.80	1.23	-
4300012	C122	2.05	1.02	1.88	1.71	1.37	1.37	1.37	-	0.69
4300016	C123	-	0.83	0.83	-	1.66	0.83	1.66		
4320002	C124	1.95	0.65	0.65	-	-	-	0.63	-	-
4321101	C125	2.15	1.80	1.97	2.31	1.30	1.12	1.80	2.15	2.15
4321102	C126	2.19	1.28	1.30	1.30	1.52	1.30	0.88	1.87	0.73
4321103	C127	1.87	1.38	1.51	1.48	0.97	1.73	1.00	1.87	0.79

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4330001	C231	1.20	0.85	1.29	1.03	0.85	0.85	0.85	1.29	0.85
4331101	C232	2.01	1.89	1.74	1.48	1.07	1.20	1.48	2.01	1.34
4331102	C233	2.11	1.40	1.78	1.96	1.30	0.68	0.84	2.11	0.91
4331103	C234	1.40	0.93	0.93	1.12	0.71	1.12	0.66	1.30	1.22
4331104	C235	1.83	1.26	1.09	1.42	1.01	0.59	1.67	1.08	0.66
4331105	C236	1.22	0.97	0.85	1.10	0.74	0.81	1.08	-	1.46
4340003	C241	0.97	0.97	0.97	-	2.58	2.27	2.72	-	-
4341101	C242	1.77	1.15	1.29	1.27	0.61	1.29	1.37	1.54	1.01
4341102	C243	2.32	1.08	1.07	1.86	1.24	1.39	2.01	2.15	2.01
4341104	C244	2.35	1.91	1.90	2.76	1.09	0.92	1.16	2.48	2.35
4341105	C245	2.08	1.80	1.70	1.56	1.39	1.95	1.66	1.83	1.95
4341106	C246	2.50	2.34	2.17	1.85	1.34	1.50	1.83	2.50	1.16
4341107	C247	1.60	1.19	1.08	1.38	1.38	0.97	1.60	1.60	0.53
4300021	C351	1.50	1.03	0.97	0.63	0.63	1.26	1.37	-	-
4351102	C352	2.28	1.87	1.62	1.62	1.32	1.75	1.92	1.75	1.61
4351103	C353	1.76	1.30	1.76	1.61	1.63	1.57	1.44	1.94	1.79
4351104	C354	2.10	1.52	1.37	1.52	1.20	1.52	1.78	2.25	1.71
4351105	C355	2.81	2.07	1.88	2.26	0.95	1.25	2.81	-	2.81
4351106	C356	1.45	1.81	1.63	1.09	2.00	1.45	1.82	2.18	2.12
4351107	C357	2.85	1.90	1.33	1.52	1.71	1.33	2.85	1.90	2.09
4351108	C358	1.90	1.65	1.63	1.42	-	1.03	2.06	-	2.49
4361101	C361	2.33	1.65	1.46	1.22	1.04	1.65	2.16	1.82	2.16
4361102	C362	1.95	1.68	1.48	1.64	2.10	1.80	1.65	1.93	1.73
4361103	C363	2.72	0.91	2.14	1.67	1.85	1.90	1.88	2.05	1.87
4361104	C364	1.99	2.17	2.71	2.17	1.45	1.27	0.90	0.90	1.81
4361106	C365	2.74	1.81	1.81	1.81	1.60	1.81	2.51	2.74	2.70
Direct Attainment of POs/PSOs		1.96	1.38	1.42	1.50	1.30	1.31	1.51	1.85	1.53
Indirect Attainment of POs/PSOs		2.43	2.50	2.43	2.08	1.72	2.58	2.36	2.08	2.43
Final Attainment of POs/PSOs (80% Direct + 20% Indirect)		2.04	1.60	1.62	1.62	1.38	1.56	1.68	1.90	1.71

Table 7.1.6: POs and PSOs Attainment for the CAY 2025-26

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4300001	C111	1.7	0.7	0.55	-	-	-	0.54	-	-
4300002	C112	1.58	-	-	-	-	1.79	1.61	-	-
4300005	C113	2.36	0.83	0.79	1.57	0.72	-	0.79	1.26	

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
4300010	C114	2.65	1.89	1.89	1.89	1.18	1.89	2.28	2.35	2.84
4300015	C115	2.29	-	-	-	0.95	-	1.91	-	-
4311101	C116	2.15	1.34	-	0.72	2.15	0.72	1.43	2.15	0.72
4311102	C117	1.90	0.78	1.08	1.42	0.65	0.79	0.56	1.90	0.75
4300003	C121	0.95	0.86	0.76	0.48	0.87	0.61	0.67	0.95	-
4300012	C122	2.85	1.42	2.61	2.37	1.89	1.91	1.9	-	0.97
4300016	C123	-	0.95	0.95	-	1.89	0.95	1.89	-	-
4320002	C124	1.33	0.44	0.44	-	-	-	0.44	-	-
4321101	C125	2.44	2.07	2.26	2.64	1.51	1.32	2.07	2.64	1.56
4321102	C126	2.54	1.20	1.19	2.03	1.35	1.53	2.18	2.36	2.18
4321103	C127	1.76	1.28	1.41	1.38	0.92	1.64	0.94	1.30	1.53
4330001	C231	1.33	0.95	1.43	1.15	0.95	0.95	0.95	2.84	2.65
4331101	C232	2.12	2.00	1.82	1.55	1.11	1.26	1.57	2.12	1.42
4331102	C233	2.22	1.47	1.95	2.05	1.36	0.72	0.88	2.22	0.95
4331103	C234	1.81	1.21	1.21	1.45	0.89	1.45	0.84	1.69	1.57
4331104	C235	2.11	1.45	1.23	1.64	1.19	0.71	1.95	1.26	0.76
4331105	C236	1.62	1.38	1.28	1.54	1.02	1.06	1.45	-	1.92
4340003	C241	0.96	0.96	0.96	-	2.56	2.24	2.69	-	-
4341101	C242	2.14	1.42	1.56	1.57	0.67	1.56	1.72	1.80	1.30
4341102	C243	2.54	1.20	1.19	2.03	1.35	1.53	2.18	2.36	2.18
4341104	C244	2.36	1.89	1.89	2.82	1.16	0.94	1.18	2.77	2.36
4341105	C245	2.51	2.18	2.04	1.87	1.68	2.35	1.99	2.21	2.35
4341106	C246	2.70	2.52	2.35	1.98	1.45	1.62	1.98	2.70	1.25
4341107	C247	2.45	1.81	1.66	2.13	2.13	1.50	2.45	2.45	0.82
4300021	C351	2.16	1.63	1.44	0.96	0.89	1.85	1.97	1.56	1.54
4351102	C352	2.42	1.97	1.70	1.70	1.31	1.82	1.99	1.82	1.69
4351103	C353	1.97	1.42	2	1.78	1.72	1.83	1.61	2.18	1.97
4351104	C354	2.46	1.79	1.60	1.76	1.42	1.76	2.10	2.66	2.13
4351105	C355	2.84	2.08	1.89	2.27	0.94	1.26	2.84	-	2.84
4351106	C356	1.53	1.90	1.71	1.14	2.09	1.52	1.90	2.28	2.20
4351107	C357	2.85	1.90	1.33	1.51	1.71	1.33	2.85	1.90	2.09
4351108	C358	1.83	1.64	1.58	1.40	-	1.01	1.99	-	2.43
4361101	C361	2.56	1.86	1.56	1.35	1.18	1.88	2.38	2.04	2.39
4361102	C362	2.36	2.24	1.88	2.05	2.54	2.24	2.01	2.40	2.37
4361103	C363	2.93	0.98	2.27	1.75	1.95	1.92	1.96	2.14	1.95
4361104	C364	2.13	2.33	2.91	2.32	1.55	1.36	0.97	0.97	1.94
4361106	C365	2.94	1.97	1.97	1.97	1.72	1.97	2.70	2.94	2.98
Direct Attainment of POs/PSOs		2.16	1.52	1.57	1.71	1.40	1.46	1.70	2.07	1.83

COURSE CODE	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
Indirect Attainment of POs/PSOs		2.5	2.5	2.5	2.4	2	2.7	2.6	2.5	2.6
Final Attainment of POs/PSOs (80% Direct + 20% Indirect)		2.22	1.71	1.75	1.84	1.52	1.70	1.88	2.15	1.98

B. Gaps identified /shortfalls/improvement from continuous improvement perspective (05)

C. Plan of action to bridge the gap and its Implementation (10)

Table 7.1.7: POs and PSOs Attainment Levels and Actions for Improvement – CAYm2 (2023-24)

POs	Target Level	Attainment Level	Observations
PO1 Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.			
PO1	1.78	1.93	Target achieved.
Action 1: Target level increased to 1.87 for next AY. Action 2: Remedial classes were conducted to strengthen the foundational understanding of Engineering Mathematics, Science, and core engineering concepts among slow learners. Action 3: Micro-projects were assigned to enable students to apply analytical skills in Science and Mathematics for calculating and evaluating various design parameters.			
PO2 Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.			
PO2	1.26	1.44	Target achieved.
Action 1: Target level increased to 1.32 for next AY. Action 2: Students gained exposure to real-world engineering problems and their solutions through industrial visits and expert lectures. Action 3: Project competition events titled “New Palanpur for New India” were organized under the SSIP Cell to encourage and motivate students to develop and showcase their innovative project ideas. Action 4: Brainstorming sessions were conducted during projects identification process through Shodhyatra activities.			
PO3 Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.			
PO3	1.28	1.61	Target achieved.
Action 1: Target level increased to 1.34 for next AY. Action 2: Courses that foster the ability to design innovative solutions and implement new ideas addressing public health, safety, cultural, societal, and environmental considerations are incorporated and regularly updated, such as Embedded Systems and IoT. Action 3: Seminars, hands-on workshops, and Expert Lectures are conducted to address problem-solving approaches and practical solutions.			
PO4 Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.			
PO4	1.37	1.67	Target achieved.
Action 1: Target level increased to 1.44 for next AY. Action 2: In Electronics workshops, students were assigned to develop small modules such as power supplies, extension boards, measuring probes, RJ45 connectors, etc., to enhance their self-learning and troubleshooting skills. Action 3: Modern, advanced laboratory equipment is procured and maintained annually based on the requirements identified by subject teachers, and students are provided hands-on exposure to their applications by working directly with these tools in the laboratory. Action 4: Computer laboratories were developed to facilitate learning and demonstration of modern software tools such as SCILAB, Keil, Proteus, Xilinx, Multisim, Arduino IDE, KiCad, etc., enabling students to meet engineering application requirements in the emerging industrial era.			

POs	Target Level	Attainment Level	Observations
PO5 Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.			
PO5	1.15	1.44	Target achieved.
Action 1: Target level increased to 1.21 for next AY. Action 2: Students are encouraged to participate in activities such as tree plantation drives, Swachh Bharat Abhiyan, Thalassemia awareness camps, blood donation drives, National Service Scheme activities and International Yoga Day celebrations. Action 3: Students are guided to adhere to relevant standards and safety norms as technical constraints while developing applications and products for their projects, with a focus on addressing environmental concerns. Action 4: Students are encouraged to participate in co-curricular activities such as sports, Garba, drawing, essay competitions, and poster presentations to support holistic development.			
PO6 Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.			
PO6	1.17	1.53	Target achieved.
Action 1: Target level increased to 1.23 for next AY. Action 2: Students were encouraged to work collaboratively as team members and to take on leadership roles within their project teams. Action 3: Students were guided to identify real-life problems and formulate meaningful project statements based on practical needs. Action 4: Students were assigned unique projects under the Student Startup and Innovation Policy, which provides funding support for the development of their project models. Action 5: Expert sessions were organized to expose students to emerging technologies such as Networking, Embedded Systems, and IoT.			
PO7 Life-long learning Ability to analyze individual needs and engage in updating in the context of technological changes.			
PO7	1.34	1.62	Target achieved.
Action 1: Target level increased to 1.41 for next AY. Action 2: Career awareness programs and finishing schools were conducted to enhance industry readiness and foster lifelong learning skills among students. Action 3: Students were assigned presentation topics to develop and improve their communication and presentation skills. Action 4: Students were encouraged to explore innovative ideas and develop new applications that address societal needs.			
PSO1: Demonstrate proficiency in installation and problem solving of electronics and communication equipment.			
PSO1	1.63	1.83	Target achieved.
Action 1: Target level increased to 1.71 for next AY. Action 2: Industrial visits were organized to provide exposure to real-world processes involved in the installation, maintenance, testing, and troubleshooting of electronic products and systems. Action 3: Seminars and expert sessions in various domains of Electronics and Communication were conducted to enhance students' proficiency in installation, maintenance, testing, and troubleshooting of electronic systems. Action 4: Final-year students were assigned projects that involved end-to-end development—from ideation to implementation—emphasizing troubleshooting throughout the design and prototyping stages.			
PSO2: Proficiency in specialized software packages and coding useful for the analysis of electronics engineering systems and PCB design.			
PSO2	1.38	1.72	Target achieved.

POs	Target Level	Attainment Level	Observations
Action 1: Target level increased to 1.45 for next AY. Action 2: Conduct hands-on training sessions and laboratory exercises on specialized software tools such as SCILAB, Proteus, Multisim, Xilinx, and KiCad to enhance students' practical proficiency. Action 3: Motivate students to undertake industry-oriented projects and internships involving the use of professional software tools for electronics system design and analysis.			

Table 7.1.8: POs and PSOs Attainment Levels and Actions for Improvement – CAYm1 (2024-25)

POs	Target Level	Attainment Level	Observations
PO1 Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.			
PO1	1.87	2.04	Target achieved.
Action 1: Target level increased to 1.95 for next AY. Action 2: Remedial classes were conducted to strengthen the foundational understanding of Engineering Mathematics, Science, and core engineering concepts among slow learners. Action 3: Micro-projects were assigned to enable students to apply analytical skills in Science and Mathematics for calculating and evaluating various design parameters.			
PO2 Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.			
PO2	1.32	1.60	Target achieved.
Action 1: Target level increased to 1.38 for next AY. Action 2: Students gained exposure to real-world engineering problems and their solutions through industrial visits and expert lectures. Action 3: Project competition events titled “New Palanpur for New India” were organized under the SSIP Cell to encourage and motivate students to develop and showcase their innovative project ideas.			
PO3 Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.			
PO3	1.34	1.62	Target achieved.
Action 1: Target level increased to 1.40 for next AY. Action 2: Courses that foster the ability to design innovative solutions and implement new ideas addressing public health, safety, cultural, societal, and environmental considerations are incorporated and regularly updated, such as Embedded Systems and IoT. Action 3: Seminars, hands-on workshops, and Expert Lectures are conducted to address problem-solving approaches and practical solutions.			
PO4 Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.			
PO4	1.44	1.62	Target achieved.
Action 1: Target level increased to 1.50 for next AY. Action 2: In Electronics workshops, students were assigned to develop small modules such as power supplies, extension boards, measuring probes, RJ45 connectors, etc., to enhance their self-learning and troubleshooting skills. Action 3: During practical sessions of relevant subjects, students were encouraged to work on kits and equipment, observe outputs, and analyze results to draw meaningful conclusions. Action 4: Computer laboratories were developed to facilitate learning and demonstration of modern software tools such as SCILAB, Keil, Proteus, Xilinx, Multisim, Arduino IDE, KiCad, etc., enabling students to meet engineering application requirements in the emerging industrial era.			

POs	Target Level	Attainment Level	Observations
PO5 Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.			
PO5	1.21	1.38	Target achieved.
Action 1: Target level increased to 1.26 for next AY. Action 2: Students are encouraged to participate in activities such as tree plantation drives, Swachh Bharat Abhiyan, Thalassemia awareness camps, blood donation drives, National Service Scheme activities and International Yoga Day celebrations. Action 3: Students are guided to adhere to relevant standards and safety norms as technical constraints while developing applications and products for their projects, with a focus on addressing environmental concerns. Action 4: Students are encouraged to participate in co-curricular activities such as sports, Garba, drawing, essay competitions, and poster presentations to support holistic development.			
PO6 Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.			
PO6	1.23	1.56	Target achieved.
Action 1: Target level increased to 1.28 for next AY. Action 2: Students were encouraged to work collaboratively as team members and to take on leadership roles within their project teams. Action 3: Students were assigned unique projects under the Student Startup and Innovation Policy, which provides funding support for the development of their project models. Action 4: Expert sessions were organized to expose students to emerging technologies such as Networking, Embedded Systems, and IoT.			
PO7 Life-long learning Ability to analyze individual needs and engage in updating in the context of technological changes.			
PO7	1.41	1.68	Target achieved.
Action 1: Target level increased to 1.47 for next AY. Action 2: Career awareness programs and finishing schools were conducted to enhance industry readiness and foster lifelong learning skills among students. Action 3: Students were assigned presentation topics to develop and improve their communication and presentation skills. Action 4: Students were encouraged to explore innovative ideas and develop new applications that address societal needs.			
PSO1: Demonstrate proficiency in installation and problem solving of electronics and communication equipment.			
PSO1	1.71	1.90	Target achieved.
Action 1: Target level increased to 1.78 for next AY. Action 2: Industrial visits were organized to provide exposure to real-world processes involved in the installation, maintenance, testing, and troubleshooting of electronic products and systems. Action 3: Seminars and expert sessions in various domains of Electronics and Communication were conducted to enhance students' proficiency in installation, maintenance, testing, and troubleshooting of electronic systems. Action 4: Final-year students were assigned projects that involved end-to-end development—from ideation to implementation—emphasizing troubleshooting throughout the design and prototyping stages.			
PSO2: Proficiency in specialized software packages and coding useful for the analysis of electronics engineering systems and PCB design.			
PSO2	1.45	1.71	Target achieved.

POs	Target Level	Attainment Level	Observations
Action 1: Target level increased to 1.51 for next AY. Action 2: Conduct hands-on training sessions and laboratory exercises on specialized software tools such as SCILAB, Proteus, Multisim, Xilinx, and KiCad to enhance students' practical proficiency. Action 3: Motivate students to undertake industry-oriented projects and internships involving the use of professional software tools for electronics system design and analysis.			

Table 7.1.9: POs and PSOs Attainment Levels and Actions for Improvement – CAY (2025-26)

POs	Target Level	Attainment Level	Observations
PO1 Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.			
PO1	1.95	2.22	Target achieved.
Action 1: Remedial classes were conducted to strengthen the foundational understanding of Engineering Mathematics, Science, and core engineering concepts among slow learners. Action 2: Micro-projects were assigned to help students apply analytical skills in Science and Mathematics for the calculation and evaluation of various design parameters. Action 3: Doubt-solving sessions were organized, and relevant study materials were provided to support student learning.			
PO2 Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.			
PO2	1.38	1.71	Target achieved.
Action 1: Students were exposed to real-world engineering problems and their solutions through industrial visits and expert lectures. Action 2: Project competition events titled “New Palanpur for New India” were organized under the Student Startup and Innovation Policy Cell to encourage and motivate students to develop and showcase innovative project ideas.			
PO3 Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.			
PO3	1.40	1.75	Target achieved.
Action 1: Courses aimed at developing the ability to design innovative solutions and implement new ideas—addressing public health, safety, as well as cultural, societal, and environmental considerations—are incorporated and regularly updated, including subjects like Embedded Systems and IoT. Action 2: Seminars, hands-on workshops, and expert lectures are organized to enhance problem-solving skills and provide practical, solution-oriented learning experiences.			
PO4 Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.			
PO4	1.50	1.84	Target achieved.
Action 1: In Electronics workshops, students were assigned to design and develop small modules such as power supplies, extension boards, measuring probes, RJ45 connectors, etc., to strengthen their self-learning and troubleshooting abilities. Action 2: During practical sessions of relevant subjects, students were encouraged to work with kits and equipment, observe outputs, and analyze results to derive meaningful conclusions. Action 3: Computer laboratories were established to facilitate learning and demonstration of modern software tools such as Scilab, Keil, Proteus, Xilinx, Multisim, Arduino IDE, and KiCad, enabling students to meet modern engineering application requirements in the evolving industrial landscape.			
PO5 Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.			

POs	Target Level	Attainment Level	Observations
PO5	1.26	1.52	Target achieved.
Action 1: Students are encouraged to actively participate in activities such as tree plantation drives, Swachh Bharat Abhiyan, thalassemia awareness camps, blood donation drives, National Service Scheme activities, and International Yoga Day celebrations. Action 2: Students are guided to follow relevant standards and safety norms as technical constraints while developing applications and products, with due consideration to environmental sustainability. Action 3: Students are encouraged to participate in co-curricular activities such as sports, Garba, drawing, essay competitions, and poster presentations to promote holistic development.			
PO6 Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.			
PO6	1.28	1.70	Target achieved.
Action 1: Students were encouraged to collaborate effectively as team members and to assume leadership roles within their project teams. Action 2: Students were guided to identify real-world problems and develop meaningful project statements based on practical needs. Action 3: Students were assigned innovative projects under the Student Startup and Innovation Policy, which provides financial support for the development of project prototypes.			
PO7 Life-long learning Ability to analyze individual needs and engage in updating in the context of technological changes.			
PO7	1.47	1.88	Target achieved.
Action 1: Career awareness programs and finishing school sessions were conducted to enhance industry readiness and promote lifelong learning skills among students. Action 2: Students were assigned presentation topics to strengthen their communication and presentation abilities. Action 3: Students were encouraged to explore innovative ideas and develop applications that address societal needs.			
PSO1: Demonstrate proficiency in installation and problem solving of electronics and communication equipment.			
PSO1	1.78	2.15	Target achieved.
Action 1: Industrial visits were organized to expose students to real-world processes involved in the installation, maintenance, testing, and troubleshooting of electronic products and systems. Action 2: Seminars and expert sessions across various domains of Electronics and Communication were conducted to enhance students' proficiency in installation, maintenance, testing, and troubleshooting of electronic systems. Action 3: Final-year students were assigned projects involving end-to-end development—from ideation to implementation—with a strong emphasis on troubleshooting throughout the design and prototyping stages.			
PSO2: Proficiency in specialized software packages and coding useful for the analysis of electronics engineering systems and PCB design.			
PSO2	1.51	1.98	Target achieved.
Action 1: Hands-on training sessions and laboratory exercises were conducted on specialized software tools such as Scilab, Proteus, Multisim, Xilinx, and KiCad to enhance students' practical proficiency. Action 2: "Scratch Coding Competitions" were organized to foster and strengthen students' interest in coding. Action 3: Students were encouraged to undertake industry-oriented projects and internships involving the use of professional software tools for electronics system design and analysis.			

7.2 Improvement in Success Index of Students without the backlog (10)

*Last year graduate and m1 & m2 indicate minus one year and minus 2 years respectively

$SI = (\text{Number of students who have passed from the program in the stipulated period of course duration}) / (\text{Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry})$

Assessment shall be based on improvement trends in success indices. Marks are awarded accordingly.

Table 7.2.1: Success Index of Students Without the Backlog CAY (2025-26)

Item	Last Year Graduate, (LYG) 2022-2023	Last Year Graduate, (LYGm1) 2021-2022	Last Year Graduate, (LYGm2) 2020-2021
Total number of students (admitted through state level counseling+ admitted through Institute on level quota+ actually admitted through lateral entry)($N_1 + N_2 + N_3$)	12	20	06
Number of students who have passed without backlogs in the stipulated period(Y)	00	01	02
Success index(SI)=Y/X	0.00	0.05	0.33
Average SI	0.13	0.13	0.13
Success rate without backlogs in any year of study = $40 \times \text{Average SI}$			5.20

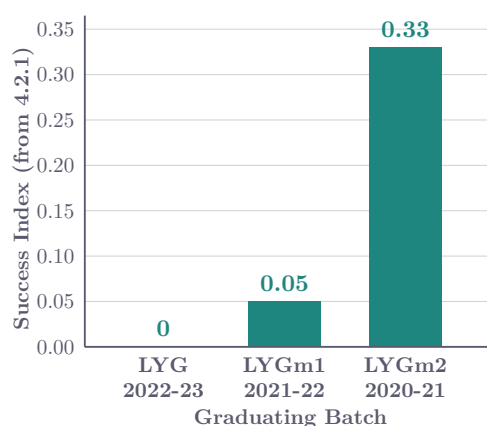


Figure 7.2.1: Success Index Comparison

Interpretation

An average success index of **0.13** (assessment points **5.20** of 40 on the Criterion 4.2.1 scale) indicates that a majority of students are not clearing the program without backlog, and that the trend requires corrective action:

Observations

- Department should focus on reducing backlog cases.
- Strong mentoring/remedial system should be incorporated.

Improvement Actions

- Remedial classes for Slow learners
- Subject-wise result analysis
- Continuous assessment and monitoring
- Mentoring and parent interaction
- Academic monitoring by HOD

7.3 Improvement in Placement and Higher Studies (10)

Assessment is based on improvement in:

- *Placement: number, quality placement, core industry, pay packages etc.*
- *Higher studies: admissions in premier institutions*

Table 7.3.1: Placement Index CAY (2025-26)

Item	Last Year Graduate, (LYG) (2024-25)	Last Year Graduate, minus-1 (LYGm1) (2023-2024)	Last Year Graduate, minus-2 (LYGm2) (2022-23)
Total No. of Final Year Students (N)	07	05	05
No. of students placed in companies or Government Sector(X)	01	02	00
No. of students admitted to higher studies (Y)	01	01	02
No. of students turned entrepreneur in the respective field of engineering/technology(Z)	00	00	00
Placement Index(P) : $(1.25X + Y + Z)/N$	0.32	0.70	0.40
Average placement= $(P1+P2 +P3)/3$	0.47	0.47	0.47
Assessment Points = 40 X Average placement=40*0.47		18.80	

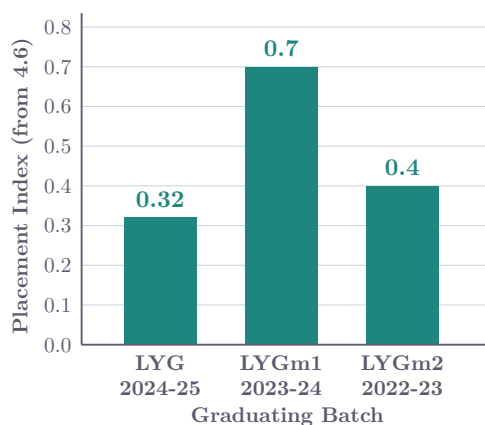


Figure 7.3.1: Placement Index Comparison

Interpretation

An average placement index of **0.47** (assessment points **18.80** of 40 on the Criterion 4.6 scale) indicates that the placement and higher-studies ecosystem is functional but uneven across years:

Observations

- Placement ecosystem is functional.
- Performance is reasonably good
- Consistency across years needs improvement

Improvement Actions

- Aptitude and soft-skill training
- Mock interviews and resume workshops
- Internship enhancement initiatives
- Alumni interaction
- Career guidance
- Industry collaboration and MoUs
- Encouraging for higher studies preparation - DDCET

7.4 Improvement in Academic Performance in Final Year (10)

Assessment is based on improvement in:

- Academic Performance in Final Year

Table 7.4.1: API CAY (2025-26)

Academic Performance	CAYm3 2022-23 LYG	CAYm4 2021-22 LYGm1	CAYm5 2020-21 LYGm2
Mean of CGPA or Mean Percentage of all successful students (X)	7.94	7.72	8.31
Total no. of successful students (Y)	3	3	2
Total no. of students appeared in the examination (Z)	7	5	5

Academic Performance	CAYm3 2022-23 LYG	CAYm4 2021-22 LYGm1	CAYm5 2020-21 LYGm2
API=X* (Y/Z)	3.40	4.63	3.32
Average API=(AP1 +AP2 + AP3)/3	3.78	3.78	3.78
Academic Performance Level =1.5 * Average API =1.5*3.78		5.68	

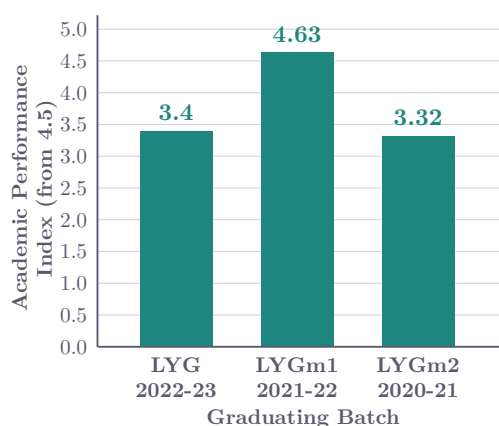


Figure 7.4.1: Academic Performance Index – API Comparison

Interpretation

An average Academic Performance Index of **3.78** (academic performance level **5.68** of 15 on the Criterion 4.5 scale) indicates a moderate level of final-year performance with a declining trend that requires monitoring:

Observations

- Moderate level of final-year academic performance.
- Effective teaching-learning practices.
- The API decreased from 4.63 (2021–22) to 3.40 (2022–23), suggesting the need for continuous monitoring and corrective actions.
- The performance in 2020–21 (3.32) and 2022–23 (3.40) remains relatively similar, indicating a stable but improvable trend.

Improvement Actions

- Strengthen Academic Monitoring
- Remedial and Bridge Courses/Induction Programs
- Effective Outcome-based teaching-learning process
- Mentoring and Counseling
- Additional Learning Resources
- Academic audits and monitoring by HOD

7.5 Internal Academic Audits to Review Complete Academics & to Implement Corrective Actions on Continuous Basis (10)

Academic Audit is essential to track progress of an institution towards its drive for achieving academic excellence. The audit not only reveals levels of proficiency of academic institution in terms of quality of teaching and administration but also reveals any deviation and course correction needs for bringing improvements i.e. improvements in teaching methodology and support infrastructure, capacity building of faculty members, department and institute. The Following auditing bodies are visiting and conducting audit regularly and giving their feedback:

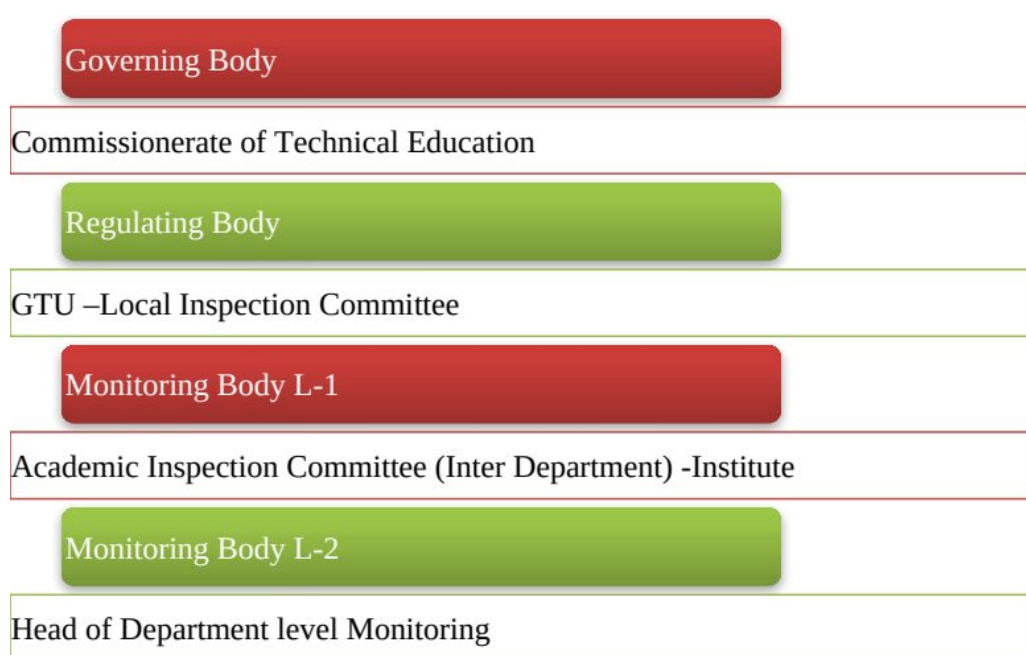


Figure 7.5.1: Four-Stage Academic Inspections

A. Audit Criteria

Academics at the department are audited at four levels, and each level audits against its own defined set of criteria:

- **Commissionerate of Technical Education (CTE)** — the guidelines suggested in the TEIM (TEchnical Institute Inspection Manual), under which CTE governs all activities of the institute.
- **Local Inspection Committee from GTU** — compliance of the institute to the norms of Gujarat Technological University, assessed by a team of highly experienced and qualified faculty members drawn from other institutes affiliated to GTU.
- **Academic Inspection Committee (Inter Department)** — compliance with the norms of CTE and GTU, verified internally by senior faculty members from other departments of the institute.
- **Head of Department level Monitoring** — conduct of daily academic activities as per the time table; the completeness and currency of the course file, the equipment utilization

report and the equipment history cards; and the quality of live academic sessions, observed and recorded in an Academic Monitoring Log Book.

The Head of Department level criteria are the most detailed of the four and are applied as an explicit checklist: the fifteen documents that constitute a complete course file are listed under C below, and every course file is verified against that list.

B. Frequency

Internal academic audits were carried out in every year of the assessment period. The frequency at each of the four levels is as follows:

- **Head of Department level Monitoring** — continuous, during every semester.
- **Commissionerate of Technical Education (CTE)** — periodic, and additionally unannounced: time to time, CTE also sends inspection committee to audit the academics without any prior intimation. CTE further monitors all day-to-day academic activities through CCTV on a continuous basis.
- **Local Inspection Committee from GTU** — the team visits on a predefined date.
- **Academic Inspection Committee (Inter Department)** — time to time, as convened by the institute.

Table 7.5.1 records the inspections conducted in each year of the assessment period, with their dates.

Table 7.5.1: Inspections Summary

Items	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
Internal Academic Audits	YES Academic inspection carried out: Commissionerate of Technical Education level Inspection (Yet to be done) University level academic inspection (Date: 10/04/2026) Inter department academic inspection (Yet to be done) Head of Department level Monitoring (During Semester)	YES Academic inspection carried out: Commissionerate of Technical Education level Inspection (Date: 16/03/2026) University level academic inspection (Not Scheduled by University) Inter department academic inspection (Date: 03/05/2025) Head of Department level Monitoring (During Semester)	YES Academic inspection carried out: Commissionerate of Technical Education level Inspection (Date: 21/03/2025) University level academic inspection (Date: 14/06/2023) Inter department academic inspection (Date: 04/05/2024) Head of Department level Monitoring (During Semester)	YES Academic inspection carried out: Commissionerate of Technical Education level Inspection (Date: 18/04/2023) University level academic inspection (Date: 10/06/2022) Inter department academic inspection (Date: 29/09/2023) Head of Department level Monitoring (During Semester)

C. Methodology

The method followed at each of the four levels, and the report each produces, are set out below. The corrective action arising from each is recorded under E.

Commissionerate of Technical Education (CTE)

1. CTE governs all activities of the institute under the guideline suggested in TEIM (Technical Institute Inspection Manual)
2. CTE monitors all day-to-day academic activities through CCTV.
3. CTE issues notice and asks for written explanation if any misconduct is found.
4. Time to time, CTE also sends inspection committee to audit the academics without any prior intimation.

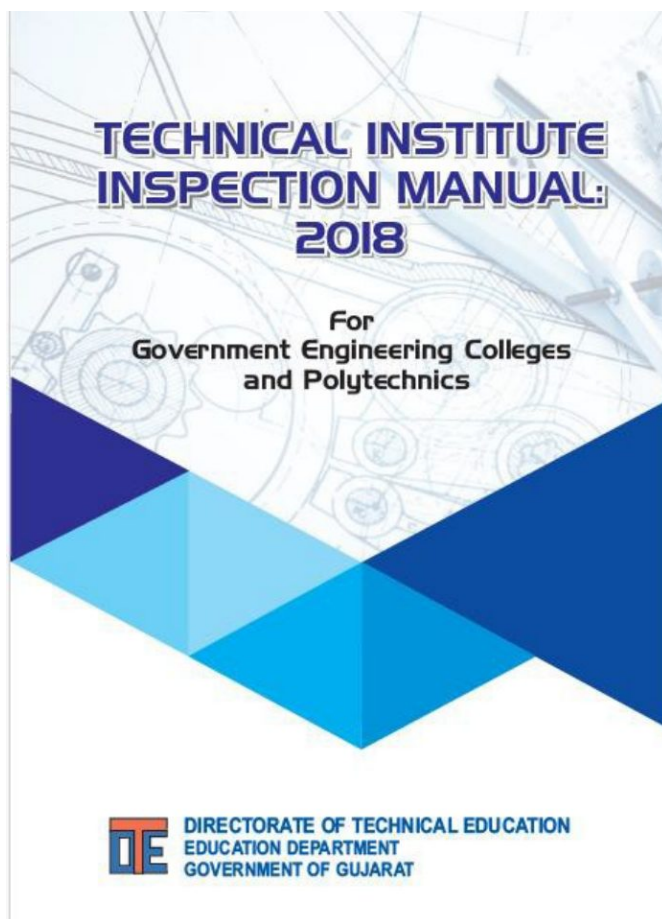


Figure 7.5.2: Front Page of TEIM

EC- dept.

16/3/26

Government Polytechnic, Palanpur

Academic Year Under Assessment 2024-25 Inspection Year 2025-26

Dashboard / Comments

Department Comment (Characters Limit upto 255)

☒ HOD ☐ Internal Expert ☐ DTE Expert

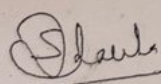
HOD Comments

HOD Comment

0 / 255

ADD

Sr. No	Comment	Comment From	Comment By
1	All faculties have carried out academic sessions satisfactory in both terms. Good Extra-curricular and Cocurricular activities carried out. Results found satisfactory except Semester-3. 1-day workshop on HAM Radio and Drone Tech carried out is fruitful.	SUNILKUMAR JETHALAL CHAUHAN	HOD
2	Agreed with HOD Comments for efforts made by department for overall improvement of students and department (Odd Semester). Agreed with HOD Comments for the contribution made by faculty members for overall developments of the department (Even Semester).	Shri I D Chaudhary Shri V A Chauhan	Internal Expert
3	Teaching learning activities are performed; alternate arrangement of academic workload has been carried out. Course files are prepared as per OBE. Students result need to be improved. Adequate infrastructure, ICT classroom, and computing facilities.	Dr. H D Mehta Dr P A Barot Prof S D Joshi Shri B N Patel	DTE Expert


 HOD (EC)
 GP, Palanpur
 16/3/26

 (Dr. H. D. Mehta)

 (Dr. P. A. Barot)

 (Prof. S. D. Joshi)

 (Shri B. N. Patel)
 16/3/26

Figure 7.5.3: CTE Inspection Report from Cogent Portal

TECHNICAL INSTITUTE INSPECTION MANUAL : 2018

Chapter: 3 DEPARTMENTAL ACADEMIC PERFORMANCE

Individual department plays an important role in overall academic performance of the institute; hence it is essential to standardize the best practices across the departments.

Format for Departmental Academic Performance Evaluation

[To be filled by Each Department]

Name of Institute : Government Polytechnic, Palanpur

Department : Electronics and Communication Engineering

Academic term : From 27/06/2024 to 25/10/2024 (Semester-3 & 5)
From 22/07/2024 to 07/12/2024 (Semester-1)

Details for major performance indicators of the Department

Sr. No	Parameter	Details
1	Approved Intake	60(ICT)
2	Student to Faculty Ratio	20.1
3	Supporting Staff Details	1 lab assistant
4	Student Attendance	100%
5	Laboratory & Equipments	Available
6	Result Analysis / Academic Performance	5 th Sem – 50% 3 rd Sem – 16.67 % 1 st Sem – 30.77%
7	Student feedback system	Yes (Feedback taken)
8	Placement	- No of companies visiting campus for placement- Webilok - No of student placed by campus placement- 2 - Higher studies - 1 - Total % Placement (including all)-100%
8	Project and Consultancy	• Nil
9	Faculty Student Research Contributions	Mr. L. K. Patel completed his Ph. D. in July 2024
10	Awards / Achievement by students and faculties	Nil
11	Training / Workshops / Conference organised	NIL
12	Industry institute linkage	Yes

1

Figure 7.5.4: Departmental Academic Performance TEIM Page-1

TECHNICAL INSTITUTE INSPECTION MANUAL : 2018

	• Industry advisory board of department	YES
	• Student Chapters of professional organisation	ISTE
	• Expert talks	Expert talk on by experts from industries and academic institutes 1. AI-ML: A NEW ERA OF FUTURE 2. INTERNET OF THINGS 3. CAREER GUIDANCE FOR ECENGINEERS
	• Visits	1. BAJARANG PAPER PRODUCTS, PALANPUR 2. RAILWAY STATION, PALANPUR 3. BANAS DAIRY 4. COMMUNITY RADIO STATION, PALANPUR
	• Industry projects	NIL
	• Faculty on boards of industry/institutes or professional organisations	NIL
13	Innovative Practices	NIL

Comments by Head of Department:

- All Faculties have carried out Academic sessions at their best, and found Satisfactory.
- Good extra-curricular Activities carried out.
- Result found Satisfactory except Sem-3.

[Signature]
Head of Department

Comments by Inspection Panel Members

- Agreed with HOD comments and for efforts made by department for overall improvement of students and departments.
-

[Signature] Member1 *[Signature]* Member2 Chairperson

2

Figure 7.5.5: Departmental Academic Performance TEIM Page-2

TECHNICAL INSTITUTE INSPECTION MANUAL: 2018

Chapter: 2 FACULTY ACADEMIC PERFORMANCE

Faculty members play key role in overall academic performance of the institute; hence it is essential to assess contribution of each faculty in the overall academic performance of the institute. The Information in the format given below may be used to collect information for faculty academic performance evaluation process, which will be verified by head of department and reviewed by inspection panel members.

Format for Faculty Academic Performance Evaluation

[To be filled by all faculty members individually]

Name of Institute : Government Polytechnic, Palanpur
Department : Electronics and communication
Name of the staff : S J Chauhan
Designation : HOD (EC)
Academic term : From 27/06/2024 to 25/10/2024 (Semester-3 & 5)
 From 22/07/2024 to 07/12/2024 (Semester-1)

Academic work details

Subject with Code in Hrs/week	Teaching workload in Hrs/week		Teaching workload actually		Teaching workload engaged in Hrs/term		Total % of Teaching contact hours in which all student absent	% Course Covered	Remarks if any
	Th	Pract/ Tut	Th	Pract/ Tut	Th	Pract/ Tut			
Communication Engg. (1333201)	3	4	46	72	40	66	8 %	95	
Principle of Electronic Communication (4331104)	3	2	40	32	32	32	5%	95	

1. Engagement of faculty during the term (No of days)

Total No of teaching days available in the term: 107 days
 Attendance in the institute: 84.5 days (78.97%)
 On duty: 10 days
 Total Leave (other than CL/RH): 00 days

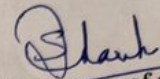
2. Faculty output details

1

Figure 7.5.6: Faculty Academic Performance TEIM Page-1

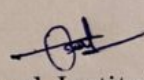
Self Observations by faculty:

1. Updated Prepared power point presentation for all the topics of these 2 subjects in EC and ICT branches for class room teaching.
2. Satisfied with project work allotted and executed by students.
3. Carried out duties of head of department of EC, ICT branch.
4. Carried out all duties allotted by principal, DTE and GTU.


Signature of the teaching staff

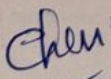
Comments by Head of Department:

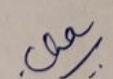
1. He is sincere about his teaching work
2. He is dedicated & effective leadership in both administrative & academic work.


Head, Institute

Comments by Inspection Panel Members

1. Agreed with principal's comments.
2. .


Member


Member

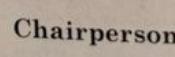

Chairperson

Figure 7.5.7: Faculty Academic Performance TEIM Page-2

Local Inspection Committee from GTU

1. Gujarat Technological University also practices a regular monitoring system.

2. GTU forms a team comprising highly experienced and qualified faculty members from different institutes affiliated to GTU.
3. The team visits on predefined date to audit the compliance of the institute to the norms of GTU.
4. The team prepares a deficiency report and submits to the institute through GTU for further improvement.

Gujarat Technological University
Ahmedabad, Gujarat
Academic Inspection Report - 2026-27

Institute Code: 626
Committee Registration Date : 01/04/2026
Committee Visit Date : 10/04/2026

Institute Name :- **GOVERNMENT POLYTECHNIC, PALANPUR**

→ **PURPOSE OF THE AIC/LIC :**

(Committee has to write the conditions looking to the deficiencies found during the inspection and also orally inform the college Authorities /Principal, the following different conditions which the college has to comply as earliest i.e. to appoint a full time qualified permanent Regular Principal/Director.(if deficiency of Principal/Director found.)

The purpose of the Local Inspection Committee (LIC) is to assess the institute for grant/continuation of affiliation by evaluating its compliance with prescribed norms and standards.

→ **[A]. OBSERVATIONS OF THE COMMITTEE :**

(Committee has to write the conditions looking to the deficiencies found during the inspection and also orally inform the college Authorities /Principal, the following different conditions which the college has to comply as earliest i.e. to appoint a full time qualified permanent Regular Principal/Director.(if deficiency of Principal/Director found.)

The institute possesses adequate and well-maintained infrastructure, including classrooms, laboratories, library, and other academic facilities, which are found satisfactory as per norms.

The institute does not have any overall deficiency as per AICTE 2026-27 Report.

Institute is running with incharge principal.

3-departments are running with incharge HOD.

Approval status: Recommended

→ **[B]. COMMITTEE SUGESSTION (INFRASTRUCTURE) :**

Figure 7.5.8: GTU Local Inspection Committee Report_1

COMMITTEE MEMBER

No.	Type	Name	Inst_name	Mobile No	Sign
1	Convener	SUNIL K PARIYANI	GOVERNMENT POLYTECHNIC, PALANPUR	9033025564	
2	Member - 1	N G PARMAR	K. C. TECHNICAL INSTITUTE	9426333054	

Name - Signature & Seal of the Principal / Director :

Principal / Director Name : S. D. Dabhi Sign :

Principal
Govt. Polytechnic,
Palanpur.

Convener Sign : Date : 10/04/2026

Director / Principal Sign : Date : 10/04/2026

Principal
Govt. Polytechnic,
Palanpur.

Figure 7.5.9: GTU Local Inspection Committee Report_2

UNDERTAKING BY INSPECTION COMMITTEE MEMBER

We **SUNIL K PARIYANI**(Convener) and **N G PARMAR**, hereby certify that during the inspection of **GOVERNMENT POLYTECHNIC, PALANPUR** ON **10/04/2026**.

A) We have personally interacted with the teaching faculty and verified with details filled in the prescribed format.
 B) We have not accepted any hospitality from the above institution during the inspection.
 C) We are aware that we will be held accountable in case the above verification is challenged or found false.

No.	Type	Name	Sign
1	Convener	SUNIL K PARIYANI	 Date: 10/04/2026
2	Member - 1	N G PARMAR	 Date: 10/04/2026

Figure 7.5.10: GTU Local Inspection Committee Report_3

Academic Inspection Committee (Inter Department) -Institute

1. To comply with the norms of CTE and GTU, institute also has an Academic Inspection Committee comprises of senior faculty members from different departments.
2. Time to time, the committee observes the academic activities of all departments and brings any lapses to the notice of Principal for further action.

	Government Polytechnic, Palanpur સરકારી પોલીટેકનીક, પાલનપુર	
માલન ગેટ રોડ, પાલનપુર-૩૮૫૦૦૧	Outside Malan Gate, Palanpur-385001	
Phone : (02742) 245219 / 262115	E-mail : gp-palanpur-dte@gujarat.gov.in	
Website: www.gppp.cteguj.in		
ક્રમાંક: સપોષ/પકમ/૨૦૨૩/૬૦૪		તા. ૧૫/૦૭/૨૦૨૩

કચેરી માટે:

અંગેની સંસ્થા ખાતે સિવિલ, મિકેનિકલ અને ઈલેક્ટ્રીકલ વિભાગને NBA Extension ની પૂર્વ તૈયારીનાં ભાગ રૂપે દરેક Criterion નું ઇન્સ્પેક્શન તેમજ સંસ્થા ખાતે પૂર્ણ થયેલ એકેડેમિક વર્કનું ઇન્ટર ડીપાર્ટમેન્ટ ઇન્સ્પેક્શન માટે નીચે મુજબનાં અધિકારીઓનો આદેશ કરવામાં આવે છે. જેઓએ આ અંગેની કાર્યવાહી કરી તેનો રીપોર્ટ તા. ૧૫/૦૮/૨૦૨૩ મુખી નીચે સહી કરનારને સબમીટ કરવાનો રહેશે.

૧	મિકેનિકલ વિભાગ	૧. શ્રી એન. એન. રાજગોપ, ઇન્ચાર્જ ખાતાનાં વડા સિવિલ ૨. શ્રીમતી એમ. કે. પેઠડીયા, વ્યાખ્યાતા ઇ.સી.	✓ ૧૫/૭/૨૩
૨	સિવિલ વિભાગ	૧. શ્રી એ. ડી. શાહ, ખાતાનાં વડા ઈલેક્ટ્રીકલ ૨. શ્રી એ. એમ. કુરેશી, વ્યાખ્યાતા ઈલેક્ટ્રીકલ	
૩	ઈલેક્ટ્રીકલ વિભાગ	૧. શ્રી ડી. ડી. જગજીવન, ઇન્ચાર્જ ખાતાનાં વડા મિકેનિકલ ૨. શ્રી એન. વી. ઓજા, વ્યાખ્યાતા મિકેનિકલ	
૪	ઈ.સી.આઈ.સી.ટી. વિભાગ	૧. શ્રી એમ. એફ. ટાંક, ઇન્ચાર્જ ખાતાનાં વડા જનરલ ૨. શ્રીમતી કે. એ. પટેલ, વ્યાખ્યાતા આઈ.સી.	
૫	જનરલ વિભાગ	૧. શ્રી એસ. એ. ચૌધારી, ખાતાનાં વડા ઇ.સી. ૨. શ્રી આઈ. ડી. ચૌધરી, વ્યાખ્યાતા ઈલેક્ટ્રીકલ	
૬	એપ્વાર્ડ્સ મિકેનિકલ વિભાગ	૧. શ્રીમતી એમ. એમ. શાહ, ઇન્ચાર્જ ખાતાનાં વડા આઈ.સી. ૨. શ્રી આર. જી. પટેલ, ઇન્ચાર્જ ખાતાનાં વડા એપ્વાર્ડ્સ મિકેનિકલ	
૭	Criteria-B	૧. શ્રી એમ. એ. વડવાણિયા, વ્યાખ્યાતા આઈ.સી. ૨. શ્રીમતી એ. ડી. મોદી, વ્યાખ્યાતા સ્લાયડશોરસ	
૮	Criteria-G	૧. કુ. પી. જી. ચૌધારી, વ્યાખ્યાતા મિકેનિકલ ૨. શ્રી ડી. એન. શેઠ, વ્યાખ્યાતા સિવિલ	

સરકારી પોલીટેકનીક,
પાલનપુર. (પક. ક.)

નકલ રવાના:

૧. ટીપરોલન તમામ અધિકારીઓ તરફ જાણ તથા જરૂરી કાર્યવાહી સારું (ખાતાનાં વડા મારફત)
૨. મહેકમ શાખા તરફ ફાઈલ સારું

Figure 7.5.11: Inter Department Inspection Order

M F Tank
K A Patel
Date: 29-09-2023

To,
The Principal,
Government Polytechnic, Palanpur

Subject: Academic Inspection Report (Year: 2022) of **EC Department**

Reference: Office Order સપોપા/૫૬૫/૨૦૨૩/૯૦૪ Dated: 15/07/2023

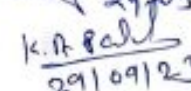
Respected Sir,

With reference to above mentioned office order, we have inspected **EC Department** in terms of records for the **academic year-2022-Odd and Even Terms**. Our comments are as follows:

- Academic records such as student muster, result analysis, student feedback, lesson plan, class notes, answer books, assignments are properly prepared and maintained.

Thanks...

Yours faithfully,

1. M F Tank 
2. K A Patel 

29/09/2023
29/09/23

Figure 7.5.12: Inter Department Inspection Report

Head of Department level Monitoring

1. The Head of Department regularly inspects daily academic activities as per the time table.
2. The Head of Department regularly checks the academic documents like course file, equipment utilization report, equipment history cards etc.
3. The Head of the Department maintains an Academic Monitoring Log Book, wherein live academic sessions are observed.
4. Write off/New Purchases: This team looks into the matters concerning the Requirement of new equipment, ICT tools, Hardware and Software required additional infrastructural facilities.

5. Course file consist of following documents which are updated time to time wherever applicable.

- 1.1. Faculty Timetable
- 1.2. University syllabus
- 1.3. Teaching Scheme
- 1.4. Course Outcome
- 1.5. Reference Books
- 1.6. Lesson/Lab Plan
- 1.7. Student Attendance sheets
- 1.8. Assignments
- 1.9. Tutorials
- 1.10. CO-PO-PSO Mapping for Program Articulation Matrix
- 1.11. PA / Midsem Exam question papers
- 1.12. PA Marksheets (CO wise)
- 1.13. Course Exit Survey
- 1.14. Lecture Notes
- 1.15. Lab Manual with Rubrics

Electronics and Communication /ICT Engineering Department
GP Palanpur

Date: 26/12/2023

LOG Book - Academic Monitoring (Visit of Live Academic Session)

Term Date : 26/12/2023		C10/08/2023 to 30/12/2023	
Semester/Div : 3 rd		Name of Present Faculty: Mr. R.C. Parmar	
Lab/ Lecturer Timing : Lab 12:00 PM to 4:00 PM		Classroom/Laboratory Room No : Lab-B-206	

1 General Observation

1.1 Lecturer/ Laboratory		Routine Lecture/Lab/Proxy lecture-Lab /Extra Lecturer-lab	
1.2 Give detail if Proxy arrangement		-	
1.3 % Presence of student in a class	Present 08	Absent 02	Total 10 80%
1.4 Punctuality of teacher to attend student		Good	
1.5 Coverall cleanliness of this Room		Good	

2 Teaching Learning Process

2.1 Chapter No./Experiment Number	24
2.2 Topic Name/ Name of experiment	To perform AC Power Control using diode triac
2.3 Is it found as per lesson planning ?	Yes/No
2.4 Strategy of teaching (For Lecture)	Chalk : Board/White Board/ Multimedia
2.5 Languages used by teacher	Eng - English
2.6 Content delivery to student	Good/very Good/ Excellent
2.7 Interaction with student	Good
2.8 Name of Books used by teacher	Lab manual

3 HOD's Remarks if any

3.1 Instructions given to student	• Understand practical wiring of this experiment
3.2 Instructions given to faculty	• You hv used 'electronic Fan speed controller as a application of this project . very good .

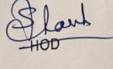
 Student
  Faculty
  HOD

Figure 7.5.13: Head of Department Level Monitoring (Log Book)

D. Effectiveness

The effectiveness of the audit system shows in three ways: the cycle has run without interruption, it has produced documented corrections rather than observations alone, and it is the instrument the department itself names when acting on the weaknesses identified elsewhere in this criterion.

Continuity of the audit cycle

Internal academic audits are recorded as conducted in each of the four years covered by Table 7.5.1, from 2022–23 to 2025–26. Head of Department level monitoring is recorded as taking place during the semester in each of the four years, and at least one external or inter-departmental inspection was held in every one of them. For the current year, 2025–26, the University level academic inspection was held on 10/04/2026; the CTE level and inter-departmental inspections for that year are yet to be conducted at the time of this report.

Corrections produced by the audits

The audits translate into recorded corrective action. Following Head of Department level monitoring, course files were updated on a regular basis; constructive feedback was provided by the Head of Department to faculty members to enhance the effectiveness of content delivery, on the basis of Academic Monitoring Log Book observations; continuous assessment was conducted for laboratory sessions; topics beyond curriculum were identified and delivered; and expert lectures and industrial visits were conducted. Against the deficiency report of the GTU Local Inspection Committee, the institute has taken corrective measures as required by that report. Where serious misconduct was found at the CTE or inter-departmental level, written explanations were obtained from the faculty members concerned. These actions are set out in full under E.

Use of the audit system in the department's improvement cycle

The audit system is not a standalone compliance exercise; it is the mechanism through which the improvement actions recorded elsewhere in this criterion are monitored to closure. Academic monitoring by the Head of Department is listed among the improvement actions for the success index in sub-criterion 7.2, and academic audits and monitoring by the Head of Department among those for final year academic performance in sub-criterion 7.4. In both cases the department, having identified where it intends to improve further — clearing backlog cases to raise the success index, and sustaining monitoring of the Academic Performance Index — names this audit system as the instrument through which that improvement is driven and verified. The audits thereby close the loop opened by the PO and PSO gap analysis in sub-criterion 7.1: gaps are identified, a plan of action is recorded, and its implementation is verified at the next audit.

E. Action Plan

Corrective action attached to each audit

- **Commissionerate of Technical Education (CTE)** — *Action Taken:* In case of serious misconduct, the faculty members were asked to submit written explanation.
- **Local Inspection Committee from GTU** — *Action taken:* Institute has taken corrective measures as per the deficiency report.
- **Academic Inspection Committee (Inter Department)** — *Action taken:* In case of serious misconduct, the faculty members were asked to submit written explanation.

Head of Department level Monitoring — Action taken

1. Course files were updated on regular basis.
2. Based on Academic Monitoring Log Book observations, constructive feedback is provided by Head of Department to faculty members to enhance the effectiveness of content delivery.
3. Continuous assessment was conducted for laboratory sessions.
4. Topics beyond curriculum were identified and delivered in best possible way.
5. Expert lecture and industrial visits were conducted.

Standing improvement cycle

Beyond the action attached to any individual audit, the department operates a standing cycle in which each year's target moves with performance. As recorded in sub-criterion 7.1, the attainment target is revised by $\pm 3\%$ of the previous year's target — increased if the target is achieved and decreased if it is not — so that each audit cycle is assessed against a target that reflects the previous cycle's result. The gaps identified against each PO and PSO, and the plan of action to bridge them and its implementation, are recorded under sub-points B and C of that sub-criterion.

Planned actions carried forward

The improvement actions arising from the present assessment period, whose implementation the audit system monitors, are recorded under their respective sub-criteria:

- **Success index** (sub-criterion 7.2) — remedial classes for slow learners; subject-wise result analysis; continuous assessment and monitoring; mentoring and parent interaction; and academic monitoring by the Head of Department.
- **Placement and higher studies** (sub-criterion 7.3) — aptitude and soft-skill training; mock interviews and resume workshops; internship enhancement initiatives; alumni interaction; career guidance; industry collaboration and MoUs; and encouraging higher studies preparation through DDCET.
- **Final year academic performance** (sub-criterion 7.4) — strengthened academic monitoring; remedial and bridge courses and induction programs; effective outcome-based teaching-learning process; mentoring and counseling; additional learning resources; and academic audits and monitoring by the Head of Department.

7.6 New Facility created in the program (10)

Assessment is based on improvement in:

Table 7.6.1: New Facility Created Summary

Items	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
New facility created	YES	YES	YES	YES

Table 7.6.2: Purchase Details Summary

YEAR	TOTAL PURCHASE AMOUNT		PURCHASE ITEM COUNT		Furniture
	Equipment	IT items	Equipment	IT items	
2022-23	420432	00	47	00	11722
2023-24	126938	00	14	00	00
2024-25	74440	677842	3	11	44783
2025-26	8990	00	1	00	00
TOTAL	630800	677842	65	11	56505

Table 7.6.3: Purchase Details 2022-23

Sr. No.	Register	Rg. Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
1	Expandable	13	63	GEMC-511687745186103	Metrix plus Hand Held 10000 KHz Digital Multimeter (Metrix plus)Model Metrix+171TRMS+	06-10-2022	18683	5	18683
2	Expandable	13	64	GEMC-511687701684512	Metravi Manual Digital LCD Display LCR Meter, Warranty 1 year (Metravi)Model METRAVI-451	06-10-2022	4416	1	4484.99
3	Expandable	13	65	GEMC-511687724579264	SCHERING BRIDGE (LINKER)Model SCHERING BRIDGE	07-01-2023	9890	1	9990
4	Expandable	13	66	GEMC-511687794982138	ITI SMPS Trainer (LINKER)Model ITI SMPS Trainer	07-01-2023	11870	1	11990
5	Expandable	14	67	GEMC-511687718480531	Strain Gauge Trainer kit (BTC Instruments)Model REX-652	07-01-2023	12477	1	12540
6	Expandable	14	68	GEMC-511687788409647	DIGITAL TO ANALOG TRAINER KIT (BTC Instruments)Model DTOA	07-01-2023	3546	1	3600
7	Expandable	14	69	GEMC-511687703126381	PSK Modulation And Demodulation Trainer Kit (BTC Instruments)Model PSK Modulation And Demodulation Trainer Kit	20-01-2023	6965	1	7000
8	Expandable	14	70	GEMC-511687762161725	VARIAC/ DIMMERSTATE/ AUTO TRANSFORMER Single Phase, 2Amp (LABSURGE)Model PH 258/1	17-01-2023	5200	1	5200
9	Expandable	15	71	GEMC-511687758178501	Frequency Modulation & Demodulation TRAINER (BTC Instruments)Model Frequency Modulation & Demodulation TRAINER	17-01-2023	6965	1	7000
10	Expandable	15	72	GEMC-511687701214990	LCR Resonance Circuit with Built in Sine Wave Oscillator (BTC Instruments)Model LCR Resonance Circuit with Built in Sine Wave Osci	07-01-2023	7683	1	7800
11	Expandable	15	73	GEMC-511687767236975	Thermocouple Charterstics Apparatus (BTC Instruments) Model Thermocouple Charterstics Apparatus	17-01-2023	7462	1	7500
12	Expandable	15	74	GEMC-511687734702929	FSK Modulation Demodulation Trainer Kit (BTC Instruments) Model BTC- FSK	20-01-2023	7462	1	7500

Sr. No.	Register	Rg. Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
13	Expandable	16	75	GEMC-511687764423059	AM-FM Radio Trainer Kit (BTC Instruments) Model AM-FM Radio Trainer Kit	17-01-2023	7960	1	8000
14	Expandable	16	76	GEMC-511687785615046	4-Bit Counters (Synchronous Asynchronous) (BTC Instruments) Model 4-Bit Counters (Syn-Asynchronous)	17-01-2023	5472	1	5500
15	Expandable	16	77	GEMC-511687709631263	Maximum Power Transfer Theorem (BTC Instruments) Model Maximum Power Transfer Theorem	17-01-2023	3781	1	3800
16	Expandable	16	78	GEMC-511687704999223	OHMS LAW APPARATUS With Power Supply (BTC Instruments)Model GTC-027	17-01-2023	1791	1	1800
17	Expandable	17	79	GEMC-511687769798184	Pulse Width Modulation Kit (BTC Instruments)Model Pulse Width Modulation Kit	17-01-2023	7462	1	7500
18	Expandable	17	80	GEMC-511687736533145	PAM-PPM-PWM TRAINER trainer kit (BTC Instruments)Model PAM-PPM-PWM TRAINER trainer kit	17-01-2023	13432	1	13500
19	Expandable	17	81	GEMC-511687784546022	COLPITTS OSCILLATOR TRAINER (BTC Instruments)Model BTC - COLLPIT OSCILLATOR	17-01-2023	2985	1	3000
20	Expandable	17	82	GEMC-511687738110995	Discrete Component Trainer (BTC Instruments) Model Discrete Component Trainer Kit	17-01-2023	8955	1	9000
21	Expandable	18	83	GEMC-511687718215498	DSB/SSB AM Receiver Kit (LINKER)Model DSB/SSB AM Receiver Kit	17-01-2023	18705	1	18900
22	Expandable	18	84	GEMC-511687700193534	Delta Modulation And Demodulation Trainer Kit (LINKER)Model Delta Modulation And Demodulation Trainer Kit	17-01-2023	10825	1	10990
23	Expandable	18	85	GEMC-511687721350332	Crystal Oscillator (BTC Instruments)Model Crystal Oscillator	17-01-2023	3447	1	3500
24	Expandable	18	86	GEMC-511687798174000	AMPLITUDE SHIFT KEYING MODULATION AND DEMODULATION TRAINER (BTC Instruments)Model AMPLITUDE SHIFT KEYING MODULATION AND DEMODULATION	17-01-2023	5970	1	6000
25	Expandable	19	87	GEMC-51168777573807	ANALOG TO DIGITAL TRAINER (BTC Instruments)Model BTC09	07-01-2023	3546	1	3600

Sr. No.	Register	Rg. Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
26	Expandable	19	88	GEMC-511687703860557	Bread Board with Power Supplies TRAINER (BTC Instruments)Model BTC-BREAD BOARD TRAINER	17-01-2023	3940	1	4000
27	Expandable	19	89	GEMC-511687790732628	555 Timer Trainer Kit (BTC Instruments)Model 555 Timer Trainer Kit	17-01-2023	5472	1	5500
28	Expandable	19	90	GEMC-511687745528097	Frequency Division Multiplexing & Demultiplexing TRAINER KIT (LINKER)Model Frequency Division Multiplexing & Demultiplexing T	17-01-2023	11810	1	11990
29	Expandable	20	91	GEMC-511687757224366	Biasing Techniques of Transistor(BJT) (BTC Instruments)Model BTC789	17-01-2023	5771	1	5800
30	Expandable	20	92	GEMC-511687721951312	UPS TRAINER (BTC Instruments)Model BTCUPS TRAINER	17-01-2023	16915	1	17000
31	Expandable	20	93	GEMC-511687771659081	FET Characteristics Apparatus (BTC Instruments)Model REX-535D	10-01-2023	4058	1	4099
32	Expandable	20	94	GEMC-511687757551010	OPERATIONAL AMPLIFIER TRAINER WITH 1 DIGITAL METER (BTC Instruments)Model OPAMP TRAINER KIT	17-01-2023	3940	1	4000
33	Expandable	21	95	GEMC-511687716316202	H' Parameter of PNP Transistor in Common Emitter Mode (BTC Instruments)Model H' Parameter of PNP Transistor in Common Emitter M	18-01-2023	4776	1	4800
34	Expandable	21	96	GEMC-511687751792519	VOLTAGE DOUBLER AND TRIPPLER CIRCUIT (BTC Instruments)Model BTC09	17-01-2023	5565	1	5650
35	Expandable	21	97	GEMC-511687789825392	SCR, Diac & Triac Characteristics Trainer (BTC Instruments)Model SCR, Diac & Triac Characteristics Trainer	17-01-2023	12312	1	12500
36	Expandable	21	98	GEMC-511687791146601	RTD TEMPERATURE TRANSDUCER TRAINER (BTC Instruments)Model RTD TEMPERATURE TRANSDUCER TRAINER	17-01-2023	9357	1	9500
37	Expandable	22	99	GEMC-511687763697444	Pulse Code Modulation And Demodulation Trainer Kit (BTC Instruments)Model Pulse Code Modulation And Demodulation Trainer Kit	17-01-2023	10835	1	11000
38	Expandable	22	100	GEMC-511687779200273	Unbranded 20 megaHertz 2 channels Analog Oscilloscope (NA)Model Unitec-OD20	07-01-2023	19998	1	19998

Sr. No.	Register	Rg. Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
39	Expandable	22	101	GEMC-511687741762420	HARTLEY OSCILLATOR KIT (BTC Instruments)Model BTC-908	17-01-2023	2985	1	3000
40	Expandable	22	102	GEMC-511687727095212	RC PHASE SHIFT OSCILLATOR (BTC Instruments)Model BTC- RC PHASE SHIFT	17-01-2023	2985	1	3000
41	Expandable	23	103	GEMC-511687747281772	Wein Bridge Oscillator (BTC Instruments)Model Wein Bridge Oscillator	17-01-2023	2587	1	2600
42	Expandable	23	104	GEMC-511687750692974	PUSH PULL AMPLIFIER KIT (BTC Instruments)Model BTC- PPL	07-01-2023	2985	1	3000
43	Expandable	23	105	GEMC-511687757163770	TIME DIVISON MULTIPLEXING AND DEMULTIPLEXING KIT (LINKER)Model TIME DIVISON MULTIPLEXING AND DEMULTIPLEXING KIT	20-01-2023	12795	1	12990
44	Expandable	23	106	GEMC-511687765263840	KVL & KCL TRAINER KIT (BTC Instruments)Model SP-KVL	17-01-2023	3781	1	3800
45	Expandable	24	107	GEMC-511687716964975	ROBU. IN - Uno R3 Board without Cable compatible with Arduino (14140) (Robu.in)Model ROBU.IN - Uno R3 Board without Cable compatible with Arduino (14140)	03-03-2023	3945	5	3945
46	Expandable	24	108	GEMC-511687739675914	GWINSTEK 10 mHz to 25 MHz Frequency 2 channel function generator (GWINSTEK)Model GWINSTEK AFG-2225	28-02-2023	31970	1	31970
47	Expandable	24	109	GEMC-511687727874530	HTC Analog and Analog and Digital (Mixed Signal) 100 megaHertz NA Digital Storage Oscilloscope (HTC)Model HTC 100 MHz Digital Oscilloscope	20-03-2023	44700	2	44700
TOTAL							420432	56	

Table 7.6.4: Purchase Details 2023-24

Sr No	Register	Rg.Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
1	Expandable	24	110	GEMC-511687717049199	ASTALAB EQUIPMENT'S 1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model Series current feedback in transistor amplifier AP	01-09-2023	5742	1	5800
2	Expandable	25	111	GEMC-511687712919456	ASTALAB EQUIPMENT'S 1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model Power amplifier trainer	01-09-2023	6633	1	6700
3	Expandable	25	112	GEMC-511687755658427	ASTALAB EQUIPMENT'S 1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model Opto-coupler (MCT-2E) trainer kit	01-09-2023	5742	1	5800
4	Expandable	25	113	GEMC-511687723023039	ASTALAB EQUIPMENT'S 1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model DECADE COUNTER TRAINER	02-09-2023	5544	1	5600
5	Expandable	25	114	GEMC-51168778851536	ASTALAB EQUIPMENT'S 1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model Recirpcity/Super Postion/Thevnin	27-09-2023	11300	1	11300
6	Expandable	26	115	GEMC-511687749591854	ASTALAB EQUIPMENT'S 1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model Maxwell's bridge trainer kit	01-09-2023	10741	1	10850
7	Expandable	26	116	GEMC-511687764565814	ASTALAB EQUIPMENT'S 1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model DIGITAL IC TESTER	01-09-2023	10780	1	11000
8	Expandable	26	117	GEMC-511687794428477	UNI-T 4.5 digit Backlit LCD Hand Held True Rms Clamp Meter (UNI-T)Model UT211B	02-09-2023	17820	3	18000
9	Expandable	26	118	GEMC-511687751160025	ASTALAB EQUIPMENT'S 1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model Universal Chopper trainer	11-10-2023	17640	1	18000

Sr No	Register	Rg. Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
10	Expandable	27	119	GEMC-511687755707891	ASTALAB EQUIPMENT'S 1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model IGBT Characteristic trainer	11-10-2023	9800	1	10000
11	Expandable	27	120	GEMC-511687795448484	ASTALAB EQUIPMENT'S 1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model DIGITAL MOSFET characteristics trainer kit	11-10-2023	4179	1	4200
12	Expandable	27	121	GEMC-511687761016473	ASTALAB EQUIPMENT'S 1 Hz to 100 KHz in 6 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model Norton's theorem trainer	26-10-2023	5174	1	5200
13	Expandable	27	122	GEMC-511687702876555	ASTALAB EQUIPMENT'S 1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S)Model Two stage "RC" coupled amplifier using Transistor	01-09-2023	5148	1	5200
14	Expandable	28	123	GEMC-511687776635913	1 Hz to 1 MHz in 7 steps Digital Trainer Kit (ASTALAB EQUIPMENT'S) Model Wheatstone Bridge	27-09-2023	10695	1	11500
TOTAL							126938	16	

Table 7.6.5: Purchase Details 2024-25

Sr No	Register	Rg. Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
1	Expandable	32	139	GEMC-511687744418451	Ivesty Ring Topology For Networking Trainer Kit Networking Trainer Educational Kit (Ivesty) Model Mobile Phone Trainer	06-09-2024	24990	1	24990
2	Expandable	32	140	GEMC-511687719258644	KITEK-KITEK TECHNOLOGIES PRIVATE LIMITED NA FPGA Development and Evaluation Board Model VLS-01 (VLSI Trainer with XILINX FPGA Spartan 6)	14-10-2024	24774	1	24899

Sr No	Register	Rg.Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
3	Expandable	32	141	GEMC-511687756696973	KITEK-KITEK TECHNOLOGIES PRIVATE LIMITED NA FPGA Development and Evaluation Board,Model E87-04 (ATMEGA32 AVR Embedded Trainer Kit)	14-10-2024	24676	1	24800
TOTAL							74440	3	

Table 7.6.6: Purchase Details 2025-26

Sr No	Register	Rg.Page No	Rg. Sr. No	Contract Number	Item name	Order Date	CRAC Amount	Qnt	Order amount
1	Expandable	33	142	GEMC-511687778080969	T-SERIES Bluetooth Speaker with Total Power Rating 100-125 (T-SERIES)	08-09-2025	8990	1	8990
TOTAL							8990	1	

Table 7.6.7: Facility for Infrastructure and Technical Support

Sr. No.	Facility Name	Details	Reason(s) for creating facility	Area in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	LAN facility with sufficient Speed	200 MBPS	Internet connectivity enables students and staff members to access digital learning materials and various free online educational resources. It also facilitates data entry, communication, and the smooth execution of college and university-related online activities and processes.	Digital learning, E-resources, Research	PO1, PO4, PO6, PO7, PSO2
2	Multimedia Classroom/ Laboratory	Overhead Projector in Classroom: B011 Laboratory: B008, B009	To enable clear visualization of complex concepts, thereby supporting effective practical demonstrations and technical presentations.	Curricular, Co-Curricular and Extra-Curricular domains	PO1, PO3, PO6, PSO1, PSO2
3	Department Library	Room No: B-107 with Approx. 102 Books	Encourage resource-sharing among students and Learning	Curricular domain	PO1, PO7, PSO1
4	Industry Supported Lab	In Collaboration with BeeRobokids innovations Pvt. Ltd.	An industry-supported laboratory titled “Advanced Controller and Processor Laboratory” has been established in collaboration with BeeRobokids Innovations Pvt. Ltd. to provide students with hands-on learning opportunities and exposure to advanced projects based on processors and controllers.	Curricular and Co-Curricular domains	PO1, PO2, PO3, PO4, PO6, PSO1, PSO2

Criterion 8

Student Support Systems (50)

Total Marks: 50

Table 8.0.1: Sub-Criteria and Marks Distribution – Criterion 8: Student Support Systems (Total 50 Marks)

No.	Sub-Criterion	Marks
8.1	Mentoring system to help at individual level	10
A	Details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system	10
8.2	Feedback analysis and reward /corrective measures taken, if any	10
A	Methodology being followed for feedback collection, analysis and its effectiveness	5
B	Record of corrective measures taken	5
8.3	Feedback on facilities	5
A	Student feedback on facilities, analysis and corrective action taken	5
8.4	Career Guidance, Training, Placement	20
A	Availability	5
B	Management	10
C	Effectiveness	5
8.5	Entrepreneurship Cell / Technology Business Incubator / Skill Development Centre	5
A	Availability	1
B	Management	2
C	Effectiveness	2
Total Marks – Criterion 8		50

8.1 Mentoring system to help at individual level (10)

A. Details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system (10)

Government Polytechnic, Palanpur has established an effective student mentoring system aimed at developing technically competent diploma engineers. Faculty members provide structured, stage-wise mentoring throughout the students' academic journey, offering guidance and support in various aspects of their growth.

Key Strengths of the Mentoring System

- **Career Guidance:** Students often struggle with choosing between higher studies, immediate employment, or entrepreneurship. Structured mentoring helps them make informed decisions aligned with their strengths and industry needs.
- **Academic Support:** Faculty mentors can identify learning gaps early, recommend remedial measures, and track progress, which directly improves performance.
- **Personal Counseling:** By offering empathetic support, mentors help students manage stress, confidence issues, or personal challenges—critical for overall well-being.
- **Parent-Teacher Meetings (PTM):** Involving parents ensures transparency and builds a support network beyond the classroom.
- **Holistic Development:** Encouraging participation in co-curricular and extracurricular activities nurtures leadership, teamwork, and communication skills alongside technical competence.

This comprehensive mentoring approach ensures students receive continuous personal, academic, and professional guidance throughout their diploma program.

Types of mentoring system:

Table 8.1.1: Types of mentoring system

Descriptions of mentoring system:		
Sr. No.	Type of mentoring system	Functions
1	Orientation/Induction program for first year students	• Familiarize new admitted students/parents with various sections, facilities, department of the institute, institute website, section heads, head of the department (HoD), faculty members and make them aware with the procedure of each section. • Acquaint students with Gujarat Technological University (GTU) teaching scheme, syllabus, Examination scheme, GTU website, and GTU norms. • Make them familiar with the other Students and Institute, a specific 2 weeks Induction Programme is arranged for first year students, which includes basic lectures on Mathematics, English and General activities like sports, puzzles games, tree Plantation, visit etc.

Descriptions of mentoring system:		
Sr. No.	Type of mentoring system	Functions
2	Academic guidance	• Share information of academic calendar, academic schedules, study material, and e-learning resources. • Identify students with less attendance and they are counselled by the mentor/HODs to improve their attendance. • In some case parents are informed by telephonically for their ward attendance. • For academically slow learners, subject teacher provides additional reading materials, model question papers, assignment etc. in order to pace them with other students.
3	Laboratory specific	• Students are motivated to complete their practical work and submission within time. • Students are advised to utilize the lab to carryout mini project work.
4	Professional guidance/ Career advancement	• Students are encouraged to participate in competitive activities, expert lectures, seminars, online platform courses and industrial visit for up scaling their knowledge and skill. • Guidance is given to the students for higher studies.
5	Overall growth / development	Students are encouraged to organize and participate in co-curricular/extracurricular activities under guidance of faculty members, which help them to develop leadership qualities, decision making abilities, team spirit for overall growth.



GOVERNMENT POLYTECHNIC
PALANPUR (B.K.) 395004
ESTD.: 1984
॥ सा विद्या या विमुक्तये ॥

Government Polytechnic, Palanpur
EC Engineering department
Program:

Student Mentoring Details



[A] PERSONAL INFORMATION

- Name: <u>Dave Falguni</u> - Father's Name: <u>Jitendra Kumar</u> - Enrollment No: <u>236260311002</u>	- Gender: <u>M/F</u> - Category: <u>OPEN/OBC/SC/ST</u> - Birth Date: <u>13/08/2008</u>
- Mobile: 1) <u>9458873508</u> [Own] 2) <u>7739024048</u> [Father] 3) <u>—</u> [Mother]	Email ID: <u>davefalguni4t@gmail.com</u>
Postal Address: <u>AT-DO-DESA</u> <u>Chandrolak society-2,</u> <u>Ta-DESA, Dist-Ganapokantha-385535</u>	10th Percentage: <u>64.66%</u> - ACPDC Merit Rank: <u>18569</u>
Occupation (Father): <u>Business</u>	Occupation (Mother): <u>—</u>
Institute Hostel Accommodation: <u>Yes / No</u> If YES then Block/Room No: <u>—</u> If NO then provide details of Accommodation: <u>—</u>	

[B] ACADEMICS

	SEM-1	SEM-2	SEM-3	SEM-4	SEM-5	SEM-6
SPI	7.09	7.32	4.70	8.45	8.61	
CPI	7.09	7.20	6.38	6.93	7.75	
BACKLOG	—	—	PEC	—	—	
	—	—	Prog. C	—	—	
	—	—	—	—	—	
Parent's Signature	<u>Dave J.C.</u>	<u>Dave J.C.</u>	<u>21/9/2024</u>	<u>20/03/25</u>	<u>Dave J.C.</u>	
Parent's Meet date	21/10/2023	20/4/2024	21/9/2024	20/3/2025	20/9/2025	

Figure 8.1.1: Student Mentoring Details Record Page-1 – Personal Information and Semester-Wise Academics

[C] MENTORING										Sign of student	
SEM	DATE	Exam Performance	Class/Lab Attendance	Subject Learning Difficulties	Learning Material Issue (Book, E-help, Assignment)	Communication Problem	Co-curricular Activity	Exam UFM	Misbehavior in Campus		Personal (Stress / Depression / Health / Financial / Friendship / Peer Pressure / Competition / Social – emotional, Home Sickness, etc.)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)
SEM-1	21/10/2023	point 2,3,4,5,9 discussed - PA-2 result discussion, and follow up									[Signature]
	4/11/2023	Exam Performance, Exam UFM, Personally counselling, Appreciation → PA-2 result discussion → Attendance review → GCU item result - Discussion									
SEM-2	20/04/2024	- submission follow up → GCU exam guidelines → learning material provided									[Signature]
	20/05/2024	→ PA-2 result discussion → Attendance review → points 3 & 9 discussion - submission follow up - GCU Exam guidance - learning material provided									
SEM-3	21/9/2024	GCU Sem-3 result discussion. - attendance review - PA-2 result of Sem-4 discussion									[Signature]
	19/10/2024	GCU Exam guidance → submission follow up → learning material provided									
SEM-4	29/3/2025	GCU Sem-4 result discussion → PA-2 result discussion → Attendance review → learning material provided → submission follow up									[Signature]
	21/04/2025	GCU Exam guidance → submission follow up → learning material provided									
SEM-5	20/9/2025	GCU Sem-4 result discussion → PA-2 result discussion → Attendance review → learning material provided → submission follow up									[Signature]
	10/10/2025	GCU Exam guidance									
SEM-6											

Sr. No.	Mentor Details		Student's Sign
	Name	Sign	
1	S. P. Jushiam	[Signature]	[Signature]
2			
3			

Figure 8.1.2: Student Mentoring Details Record Page-2 – Semester-Wise Mentoring Log and Mentor Sign-Off

Efficacy of our mentoring system:

The efficacy of the mentoring system is evidenced by **Student Progression and Career Outcomes:**

Higher Studies as a Preferred Pathway

A significant proportion of students aspire to pursue higher education, with many successfully securing admissions in Bachelor of Engineering (BE) and Bachelor of Technology (B.Tech.) programs. This reflects their strong academic foundation and the institution's emphasis on preparing students for advanced learning opportunities.

Successful Placements and Societal Contribution

Numerous students are selected through campus placement drives and are now contributing meaningfully to society as professional engineers. Their roles span diverse industries, where they apply technical knowledge, problem-solving skills, and innovation to address real-world challenges. This not only enhances their personal growth but also strengthens the institution's reputation for producing competent graduates.

Support for Slow Learners

Special mentoring initiatives have been implemented to support slow learners. Through personalized guidance, remedial sessions, and continuous monitoring, these students have shown remarkable improvement in academic performance. Their progress demonstrates the effectiveness of mentoring programs and the institution's commitment to inclusive education.

8.2 Feedback analysis and reward /corrective measures taken, if any (10)

A. Methodology being followed for feedback collection, analysis and its effectiveness (05)

The institute has established a well-structured and transparent feedback collection system to capture students' views on teaching-learning processes.

Direct feedback

- A clearly defined feedback process is in place at the institutional level.
- All students are actively encouraged to provide honest and constructive feedback.
- Student feedback is collected once every semester through Google forms/ hard copy at the department level.
- The standard student feedback format provided by AICTE is given below.

STUDENT FEEDBACK FORMAT GIVEN BY AICTE

- To be filled by institute

Table 8.2.1: AICTE student feedback format – course and faculty particulars

Academic Year:		Name of Faculty:	
Course(Subject):		Semester:	
		Date of feedback:	

- For getting filled in through student

Table 8.2.2: AICTE student feedback format – classroom teaching evaluation parameters

Sr. No.	Description	Very Poor (1)	Poor (2)	Good (3)	Very Good (4)	Excellent (5)
1	Has the teacher covered entire syllabus as per prescribed university/board?					
2	Has the teacher covered topic beyond syllabus?					
3	Effectiveness of teacher in terms of:					
	(a) Technical content/course content					
	(b) Communication skills					
	(c) Use of teaching aids					
4	Pace on which contents were covered					
5	Motivation and inspiration for students to learn					
6	Support for development of students' skill					
	(i) Practical demonstration					
	(ii) Hands on training					
7	Clarity of expectation of students					
8	Feedback provided on students' progress					
9	Willingness to offer help and advice to students					
Total						

If you want to give additional feedback, to improve quality of classroom teaching as per NBA:

[Annexure 8.2.1 Format of student feedback form]

Government Polytechnic, Palanpur

FEEDBACK FORM FOR CONCERNED FACULTY, FILLED BY STUDENTS (EC Department)

Students' Name (Optional): Sumit R. Parmchal

Name of Faculty: <u>L.R. Patel</u>	Academic Year/Term: <u>Summer 2022</u>
Semester: <u>5th sem</u>	Course(Subject): <u>O.C</u>
Date of feedback: <u>16/6/2022</u>	Term Date: <u>31/3 to 14/6</u>

Sr. No	Description	Very Poor (1)	Poor (2)	Good (3)	Very Good (4)	Excellent (5)
1	Has the teacher covered entire syllabus as per prescribed GTU? (શિક્ષક જીટીયુ નાં અભ્યાસક્રમને સંપૂર્ણપણે આવરી લે છે ?)					✓
2	Has the teacher covered latest Development/ topic beyond syllabus? (શું શિક્ષક અભ્યાસક્રમની બહારના નવા સંશોધનો / મુદ્દા આવરી લે છે ?)					✓
3	Effectiveness of teacher in terms of (શિક્ષકની વર્ગખંડમાં ભણાવવાની ક્ષમતા / કળા/ અસરકારકતા) :					
3.1	(a) Ability to teach technical course content (વિષયને યોગ્ય રીતે ભણાવવાની ક્ષમતા / ટેકનિકલ કેવી છે ?)					✓
3.2	(b) Communication skills (વાતચીત કરવાની કળા કેવી છે ?)					✓
3.3	(c) Use of teaching aids (Black board / Projector/ Smart board) (શિક્ષણ માટે સહાયક, વિવિધ સાધનોનો ઉપયોગ કેવો કરે છે ?)					✓
4	Pace on which contents/ topic/ syllabus were covered (મુદ્દા/અભ્યાસક્રમ ભણાવવાની/પૂરે કરવાની સ્પીડ/ઝડપ કેવી છે ?)				✓	
5	Motivation and inspiration for students to learn (વિદ્યાર્થીઓને શીખવા માટે પ્રોત્સાહન અને પ્રેરણા આપે છે ?)				✓	
6	Ability to clear doubts of students' mind (વિદ્યાર્થીઓએ પુછેલા પ્રશ્નોનાં જવાબ આપવાની ક્ષમતા/કળા કેવી છે ?)					✓
7	Guidance on students' academic progress in classroom (વિદ્યાર્થીઓની શૈક્ષણિક પ્રગતિ માટે વર્ગમાં માર્ગદર્શન આપે છે ?)					✓
8	Willingness to offer additional academic help and career counseling (વિદ્યાર્થીઓને વધારાની શૈક્ષણિક મદદ અને કારકિર્દી માટેનું માર્ગદર્શન આપે છે ?)				✓	
9	Support for development of students' practical skill (વિદ્યાર્થીઓના પ્રેક્ટિકલ કૌશલ્યના વિકાસ માટે સપોર્ટ)					
9.1	(a) Practical demonstration (પ્રેક્ટિકલ કરાવવાની ક્ષમતા કેવી છે ?)					✓
9.2	(b) Hands on practical to student (વિદ્યાર્થીઓને જાતે પ્રેક્ટિકલ કરવા દેવાની છુટ આપે છે ?)					✓
Total						

કલાસરૂમ ટીચિંગ સુધારવા માટે આપનો વધારાનો પ્રતિભાવ(જો હોય તો) (additional feedback)

Shanku
HOD (EC)



Figure 8.2.1: Filled Student Feedback Form on Concerned Faculty – EC Department

- Feedback received from students is systematically analyzed using predefined evaluation criteria.
- Each criterion is scored on a 4-point scale based on categorical responses:

- Excellent $\rightarrow$ 5
 - Very Good $\rightarrow$ 4
 - Good $\rightarrow$ 3
 - Poor $\rightarrow$ 2
 - Very Poor $\rightarrow$ 1
- The following key parameters are evaluated with the above numerical mapping:
 - Interaction with students in the classroom
 - Coverage and quality of Course Content
 - Use of practical examples and ability to explain concepts effectively
 - Regularity and punctuality in conducting classes
 - Overall effectiveness of teaching

Indirect feedback

- The HoD maintains record about live feedback taken during the semester. The sample format is shown below.
- The Principal, Heads of Departments (HoDs), and members of the Discipline Committee regularly visit the campus and interact directly with students to understand academic-related concerns.
- During official inspections, officers appointed by the Commissionerate of Technical Education (CTE) and Gujarat Technological University (GTU) collect independent feedback from both students and faculty members.
- Continuous monitoring of academic activities is carried out by the CTE office through regular CCTV surveillance.

Electronics and Communication /ICT Engineering Department
GP Palanpur

Date: 19/12/24 12:15 P

LOG Book - Academic Monitoring (Visit of Live Academic Session)

Term Date :	01/02/2024 to 25/05/2024			
Semester/ Div :	4th, EC	Name of Present Faculty : Mr. R C Parmar		
Lab/ Lecturer Timing :	11:30 AM to 12:30 PM	Classroom /Laboratory Room No : B-108		

1 General Observation

1.1	Lecturer/ Laboratory	Routine Lecture-Lab / Proxy lecture-Lab / Extra-Lecturer-lab		
1.2	Give detail if Proxy arrangement	NA		
1.3	% Presence of student in a class	Present	Absent	Total %
		06	03	09 66 %
1.4	Punctuality of teacher to attend student	Excellent		
1.5	Coverall cleanliness of this Room	Good		

2 Teaching Learning Process

2.1	Chapter No./Experiment Number	ch-03 - (LIC)		
2.2	Topic Name/ Name of experiment	class AB Power Amplifier		
2.3	Is it found as per lesson planning ?	Yes/No		
2.4	Strategy of teaching (For Lecture)	Chalk : Board/White Board/ Multimedia		
2.5	Languages used by teacher	English, Gujarati		
2.6	Content delivery to student	Good / very Good/ Excellent		
2.7	Interaction with student	Yes, interacting with students		
2.8	Name of Books used by teacher	Basic electronics & linear circuit by N.V. Bhargava		

3 HOD 's Remarks if any

3.1	Instructions given to student	Develop habit- to get Extra Knowledge by searching topic in U-tube and watch video Awar		
3.2	Instructions given to faculty	→ Involvement of student in develop skill of topic seen Very good		

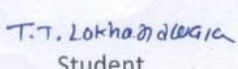
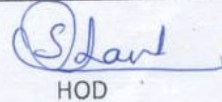
 Student
  Faculty
 
  HOD

Figure 8.2.2: Academic Monitoring Log Book – HoD Visit to a Live Academic Session

B. Record of corrective measures taken (05)

Table 8.2.3: Process of evaluation and corrective measures

System of Reward Process	Corrective Measures
1. Student feedback (Format enclosed as above) 2. Faculty self-appraisal report 3. HOD's evaluation 4. Marks awarded by the Faculty Appraisal Committee, headed by the Principal Reward: Higher marks are reflected in the Performance Appraisal Reports of individual faculty members.	- In case of poor feedback for a faculty member, he/she is called before the HOD and advised to improve performance in the next semester.
Indices Used and Summary	Feedback form designed by AICTE is taken as reference and the following indices are incorporated in the feedback form: • Interaction with students in the classroom • Practical examples / ability • Course content • Regularity and punctuality • Overall performance
Number of Corrective Measures	Faculty Performance Review and Development Initiatives • Structured Review Mechanism Faculty members who receive average feedback from students are invited by the Head of Department (HOD) for a formal review discussion. This structured interaction ensures transparency, where faculty are informed about the nature of the feedback and guided on specific areas requiring improvement. The process fosters accountability while maintaining a supportive environment. • Guidance and Mentoring During these discussions, faculty are advised on strategies to enhance classroom delivery, student engagement, and subject expertise. Constructive suggestions are provided to help them improve their performance in subsequent semesters. The emphasis is on continuous improvement rather than criticism, ensuring faculty feel motivated to upgrade their teaching practices. • Faculty Development Programs (FDPs) To strengthen teaching effectiveness, faculty members with average feedback are deputed to Faculty Development Programs (FDPs) in relevant subject areas. These FDPs expose them to modern pedagogical techniques, emerging technologies, and updated curriculum requirements. Participation in such programs helps faculty upgrade knowledge, refine teaching methodologies, and align with industry expectations.

Feedback Analysis Report	
Academic Year 2023-24, Term - Odd, GTU Exam - Winter 2023	
Dept of ECE, GP Palanpur	
Contents	
1 Overview	2
1.1 Report Overview & Term Details	2
1.2 Assessment Parameters & Rating Scale	2
1.2.1 Assessment Parameters	2
1.2.2 Rating Scale	2
2 Feedback Analysis (Overall)	2
2.1 Branch Analysis	3
2.2 Semester Analysis	3
2.3 Subject Analysis	3
2.4 Faculty Analysis	5
3 Parameter-wise Feedback Analysis	5
3.1 Branch Analysis (Parameter-wise)	6
3.2 Semester Analysis (Parameter-wise)	6
3.3 Subject Analysis (Parameter-wise)	7
3.4 Faculty Analysis (Parameter-wise)	8
4 Misc Feedback Analysis	8
4.1 Faculty-Subject Correlation Matrix	8
5 Faculty Strength & Weakness Analysis	9
5.1 Mr. S P Joshiara (SPJ)	10
5.1.1 Subjects Taught	10
5.1.2 Strengths (Top 3 Parameters)	10
5.1.3 Areas for Improvement (Lowest 3 Parameters)	10
5.1.4 HOD Comments	10
5.2 Ms. M K Pedhadiya (MKP)	11
5.2.1 Subjects Taught	11
5.2.2 Strengths (Top 3 Parameters)	11
5.2.3 Areas for Improvement (Lowest 3 Parameters)	11
5.2.4 HOD Comments	11
5.3 Mr. R C Parmar (RCP)	12
5.3.1 Subjects Taught	12
5.3.2 Strengths (Top 3 Parameters)	12
5.3.3 Areas for Improvement (Lowest 3 Parameters)	12
5.3.4 HOD Comments	12
5.4 Mr. L K Patel (LKP)	13
5.4.1 Subjects Taught	13
5.4.2 Strengths (Top 3 Parameters)	13
5.4.3 Areas for Improvement (Lowest 3 Parameters)	13
5.4.4 HOD Comments	13
5.5 Mr. R N Patel (RNP)	14
5.5.1 Subjects Taught	14
5.5.2 Strengths (Top 3 Parameters)	14
5.5.3 Areas for Improvement (Lowest 3 Parameters)	14
5.5.4 HOD Comments	14
5.6 Mr. M J Dabgar (MJD)	15
5.6.1 Subjects Taught	15

Figure 8.2.3: Feedback Analysis Report 2023-24 (Odd Term) Page-1 – Cover and Contents

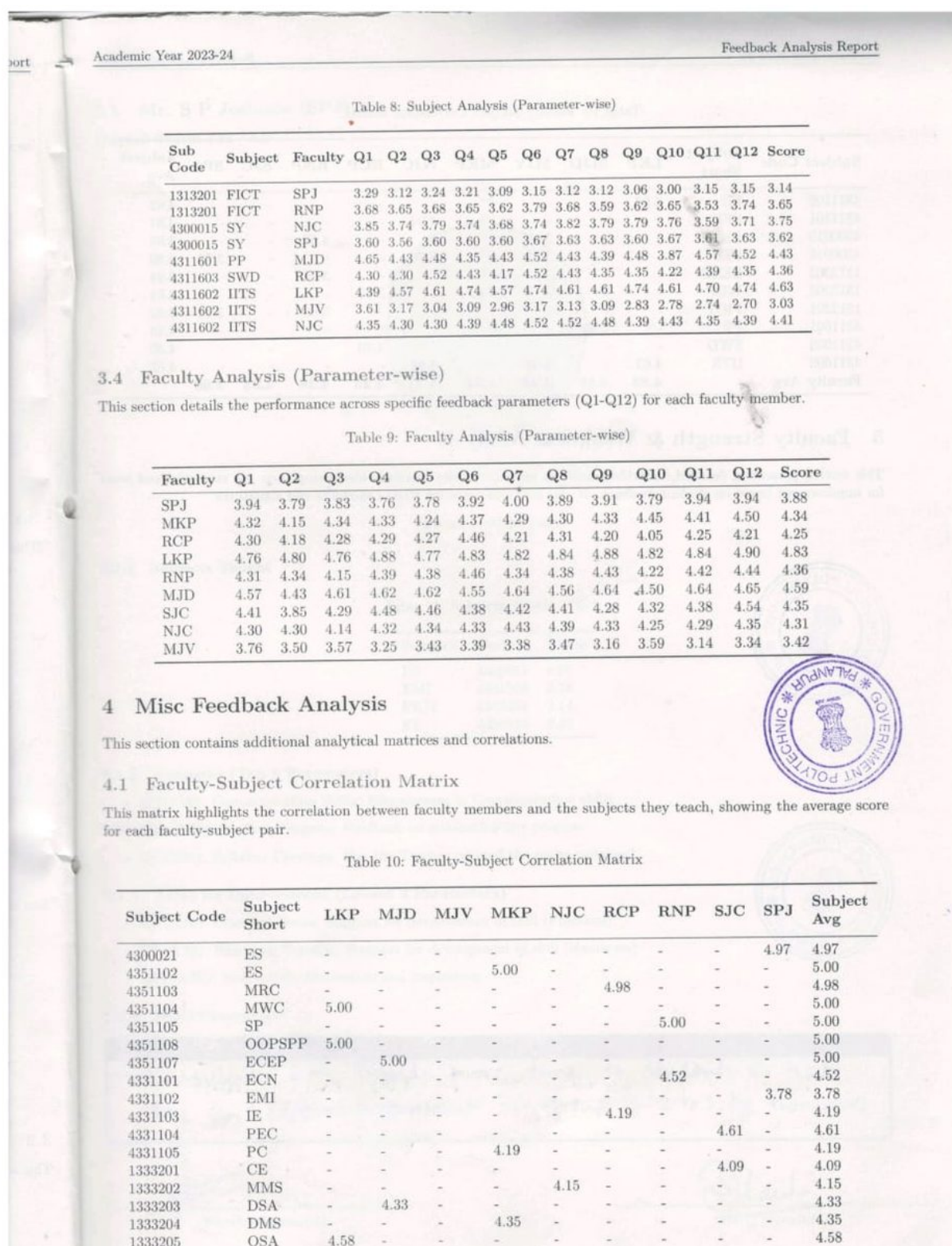


Figure 8.2.4: Feedback Analysis Report 2023-24 Page-2 – Parameter-Wise Subject, Faculty and Correlation Analysis

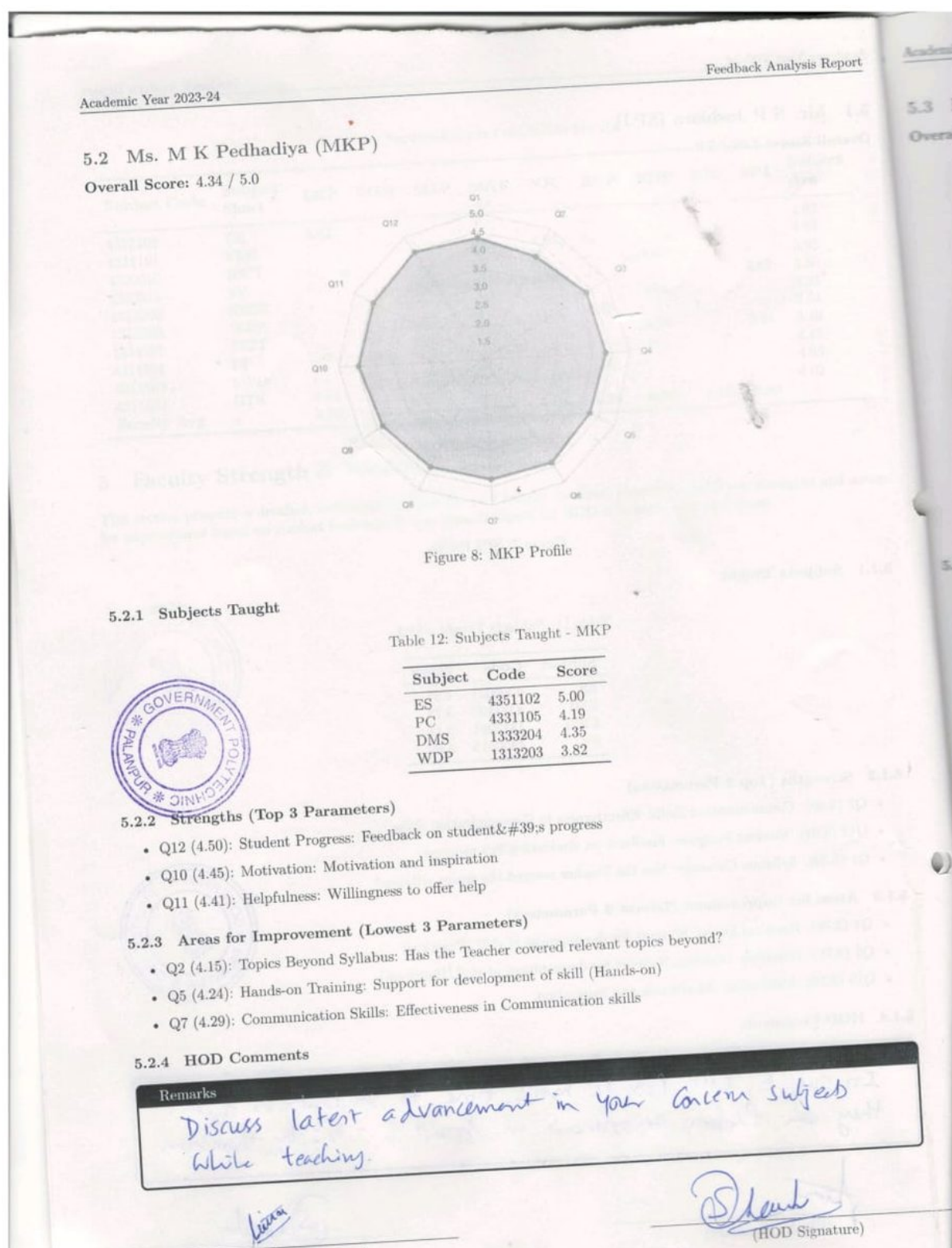


Figure 8.2.5: Feedback Analysis Report 2023-24 Page-3 – Faculty Strength/Weakness Profile with HoD Remarks

8.3 Feedback on facilities (05)

A. Student feedback on facilities, analysis and corrective action taken (05)

- Feedback on various institutional facilities is collected online from pass out students of institute.
- Based on the feedback received, the competent authority takes appropriate corrective actions to address and resolve issues related to the respective facilities.
- The prescribed format for student feedback on facilities is provided in Annexure 8.3.1.

STUDENT FEEDBACK OF INSTITUTE

Please rate the following points

Table 8.3.1: Student feedback on institute facilities – rating form (Annexure 8.3.1)

Sr. No.	Feedback Points	Poor	Good	Very Good	Excellent
1.	Overall Class Room facility (Board/bench/fan/cleanliness)	☐	☐	☐	☐
2.	Overall Laboratory facility (Equipment/ ease of doing experiment)	☐	☐	☐	☐
3.	Seminar Room / Auditorium (Overall)	☐	☐	☐	☐
4.	Wi-Fi (Internet) Facility in Campus (NAMO Wi-fi)	☐	☐	☐	☐
5.	Library (Availability of books / Reading space/ Library staff cooperation)	☐	☐	☐	☐
6.	Canteen (Availability of breakfast/Tea/coffee)	☐	☐	☐	☐
7.	Co Curricular Activity (Industrial visit/ Seminar) (Overall in 3 years)	☐	☐	☐	☐
8.	Sports/Cultural activity (Play Ground)	☐	☐	☐	☐
9.	Drinking Water (Availability)	☐	☐	☐	☐
10.	Toilet Block (Cleanliness)	☐	☐	☐	☐
11.	Communication to students-Overall (Website/ Notice board/ Social Media)	☐	☐	☐	☐
12.	Fee (College + GTU) Collection Process	☐	☐	☐	☐
13.	Boys/Girl's Common Room (Availability/Usage)	☐	☐	☐	☐
14.	Students counseling (Mentoring)	☐	☐	☐	☐
15.	Transportation from College (To & Fro)	☐	☐	☐	☐
16.	Security arrangement in campus	☐	☐	☐	☐
17.	Co operation/ Support system from Student Section staff	☐	☐	☐	☐
18.	Hostel facility (Overall) To be filled up, Only if you have stayed at institute hostel)	☐	☐	☐	☐

Sr. No.	Feedback Points	Poor	Good	Very Good	Excellent
19.	Suggestions for improvement (If Any)	☐	☐	☐	☐

I am studying in following Department: _____ Semester _____

Name of Student (optional) _____ Enrollment Number (optional) _____

Your e-mail address for future communication. _____ Your year of Admission. _____

Suggestions for Improvement (if any):

[Annexure 8.3.1 Format of student feedback on facilities form]

4) Wi-Fi (Internet)

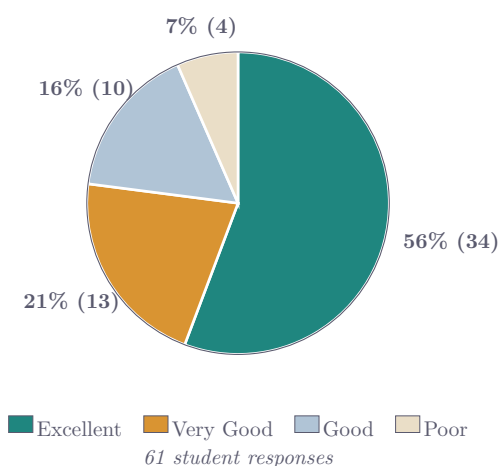


Figure 8.3.1: Student feedback on Wi-Fi (Internet) facility

6) Canteen

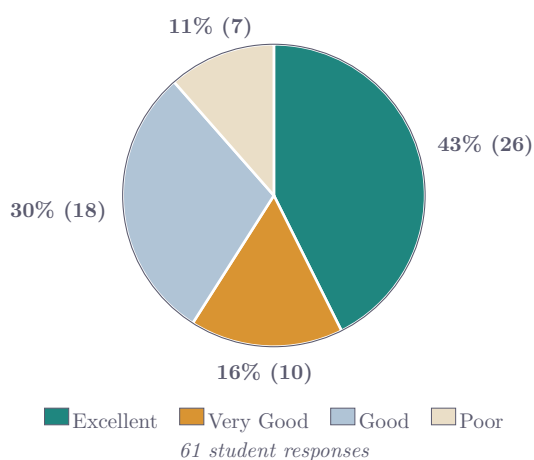


Figure 8.3.2: Student feedback on canteen facility

9) Drinking Water (Availability)

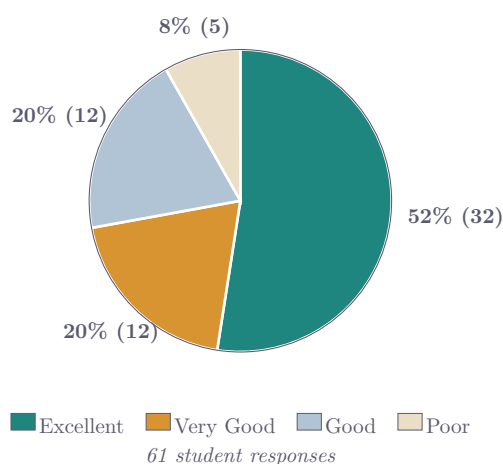


Figure 8.3.3: Student feedback on drinking water availability

Feedback Year 2025

Table 8.3.2: Corrective action taken based on feedback on facilities

Feedback		Corrective Action
1	Wi-Fi (Internet) Facility in Campus (NAMO Wi-fi)	- There are two internet facility in the campus. - Namo Wi-Fi Facility has been provided by government through KCG and maintenance is done by BSNL as per government directions. - Institute have other internet facility CWAN which is maintain by institute. It wired connection has speed of 200 mbps and Wi-Fi speed of 30 to 40 mbps.
2	Canteen	- Agency is appointed for canteen by tender procedure as per Govt. norms.
3.	Drinking Water	- Water cooler & air conditioner maintenance correspondence is done. - RO Drinking Water Facility has been provided.
4	Cleanliness	- Annual cleanliness contract is given through GEM Portal. - Department wise cleanliness observed on regular basis.
5.	Request for hostel facilities	- Hostel block-A is declared “Not to be used” by R&B Department. - Students are guided for alternate facility in nearby area. - The estimates for new hostel building is submitted to DTE Gandhinagar.
6	Infrastructure Upgradation	- Proposal for upgradation of existing auditorium interior is submitted to R&B. - After sanctioning Proposal, upgradation work related to sitting and accoustic walls with modern PA system is ongoing

8.4 Career Guidance, Training, Placement (20)

Placement activities are executed in two modes. One is through campus Interview at institute and second is mega drive for placement at District level well organised by KCG (Knowledge

consortium of Gujarat) under direct guidance of Education department.

The institute has three available cells, who are contributing in enhancement of the effectiveness of training and placement:

- Training and Placement Cell
- Finishing School
- Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

A. Availability (05)

1. Training and Placement Cell

The Training and Placement Cell (TPC) at Government Polytechnic, Palanpur is clearly positioned as a cornerstone for student career readiness. Its dual focus—counseling for career development and arranging campus placements—creates a strong bridge between academic learning and industry expectations. Let's break down its contributions:

Key Functions of the Training & Placement Cell

- **Campus Recruitment Drives:** Prestigious industries are invited to recruit diploma engineers directly from campus.
- **Industrial Training & Internships:** Students gain hands-on exposure to workplace practices, machinery, and professional culture.
- **Skill-Building Activities:** Mock interviews, aptitude tests, and personality development programs prepare students for real recruitment scenarios.
- **Industry Interaction:** Regular sessions with industry professionals help students understand current market trends and skill demands.
- **Continuous Career Guidance:** Mentors and placement officers counsel students on career pathways, higher studies, and employability skills.

Infrastructure of TPO Cell:

The TPO cell has one TPO office in LRUC building and for conducting personal interviews, one seminar room in Mechanical Building & an auditorium Hall to address large amount of students.

2. Finishing school (Soft skill component)

The Finishing School Program at Government Polytechnic, Palanpur is a remarkable initiative that complements the Training & Placement Cell by focusing on employability enhancement and life skills development. Here's a structured overview of its significance:

Objectives of the Finishing School Program

- **Skill Development Beyond Academics:** Training in communication, soft skills, aptitude, technical competencies, teamwork, and professional ethics.
- **Functional English Training:** Special emphasis on improving English language proficiency for students who are academically strong but struggle with communication.

- Industry Readiness: Enhances confidence, workplace behaviour, and problem-solving abilities to meet employer expectations.
- Bridging the Skill Gap: Addresses the mismatch between classroom learning and industry requirements, thereby improving placement opportunities.

Implementation & Reach

- Launched on 16th March 2017 by the Education Department, Government of Gujarat through the Knowledge Consortium of Gujarat (KCG).
- Initially piloted in ~40 colleges with 35 trainers; now expanded to 250+ colleges with 125 trainers.
- Government investment of approx. ₹15 crore has trained over 20,000 students, significantly improving employability ratios across the state.
- KCG assigned the agencies through GeM vide letter No.
 - KCG, Gujarat Letter No. KCG/Finishing School/2022-23/2202 Dt. 10/11/2022
 - KCG, Gujarat Letter No. KCG/Finishing School/2022-23/2179 Dt. 03/11/2022
 - KCG, Gujarat Letter No. KCG/Finishing School/2022-23/2307 Dt. 02/12/2022

In that connection, H Kumar's Education Institute, Ahmedabad is the assigned agency to Government Polytechnic, Palanpur

3. Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

The Rashtriya Uchchatar Shiksha Abhiyan (RUSA) project is a powerful driver of institutional strengthening, and Government Polytechnic, Palanpur's participation under Component 9 (Equity Initiative) is especially significant. Here's a structured overview:

Objectives of RUSA

- Access, Equity, and Quality: Ensures planned development of higher education at the state level.
- Infrastructure Strengthening: Modernization of laboratories, classrooms, and learning facilities.
- Faculty Development: Training programs to enhance teaching quality and pedagogical innovation.
- Curriculum Enrichment: Adoption of updated syllabi and innovative teaching-learning practices.
- Digital & Inclusive Education: Promotes e-learning, research, and equitable opportunities for all students.

B. Management (10)

1. Training and Placement Cell

Placement team

The College is having Training and Placement Cell. Prof. N.V.Oza (Lecturer of Mechanical Engineering.) is Convener of the cell. Mr. I D Chaudhary and Mr. J B Patel functions as Co-Convener of TPO. TPO cell is assisted by departmental TPO members.

- Faculty Coordinators and Students from each department are also involved actively in the placement cell activities like arranging pre-placement orientation sessions, placement activity, database management, etc.
- Placement cell is very keen to increase placements every year and expand industry contacts. Efforts for the same are made by placement cell as well as at faculty level.
- Placement cell initiates placements by inviting recruiters through invitation email or letter to companies or by communicating over telephone.
- Faculties from departments also contribute via referring companies/person in their contacts. Placement coordinators do visit company in person and discuss as well as invite companies to hire students from the institute.
- Department placement coordinators along with respective HOD also make efforts to liaison with industries at their level in addition to the placement cell activities.
- The students are exposed to the process of placement by making aware them about mock interviews, group discussion, aptitude tests etc.

Placement team

Table 8.4.1: Training and Placement Cell team

Sr. No.	Name	Designation	Department	Email Id
1	Shri N.V.Oza	Convener	Mechanical	gpptpo@gmail.com
2	Shri I.D.Chaudhary	Co-convener	Electrical	gpptpo@gmail.com
3	Shri J B Patel	Co-convener	Mechanical	gpptpo@gmail.com
4	Mr. M.J.Dabagar	Member	EC	gpptpo@gmail.com
5	Shri A N Patel	Member	Civil	gpptpo@gmail.com
6	Shri D P Judal	Member	Mechanical	gpptpo@gmail.com
7	Shri Ankit Gajjar	Member	Electrical	gpptpo@gmail.com

2. Finishing school (Soft skill component)

KCG Finishing School Team for Management

Table 8.4.2: KCG Finishing School team for management

NAME	DEPARTMENT	DESIGNATION
Dr C S Pandya	GENERAL	Coordinator
Shri Y T RANA	CIVIL	Member
Shri T D Modi	MECHANICAL	Member

NAME	DEPARTMENT	DESIGNATION
Shri R M Prajapati	ELECTRICAL	Member
Shri M J Dabgar	EC	Member
Shri V A Chauhan	IC	Member
Shri Nirav Chauhan Sr Clerk	ACCOUNT	Member

3. Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

Table 8.4.3: Rashtriya Uchchatar Shiksha Abhiyan (RUSA) team

NAME	DEPARTMENT	DESIGNATION
C S Gelot	GENERAL	Coordinator
Shri S.N.Chauhan	MECHANICAL	Member
Shri A.R.PATEL	CIVIL	Member
Shri B.M.Patel	ELECTRICAL	Member
Shri R.C.parmar	EC	Member
Shri N.A.Modi	MECHANICA	Member

C. Effectiveness (05)

1. Training and Placement Cell

Campus Interview or Placement Procedure:

1. Preparation of Industry list

1. Approaching Industry as per prepared list by email and telephone.
2. Getting job specific selection criteria from HR department of different companies.
3. After receiving the mail about requirements from the Industry, It is to be share to all the departmental TPO Coordinators.
4. Departmental TPO Coordinators will share the same information among the concern students.
5. As per specified selection criteria, departmental TPO Coordinators will prepare the list of eligible students.
6. If Off campus is there, the list of concern students will be provided to the concern industry by email.
7. The details of Off campus placement will be shared to the concern students to be appear for the interview.
8. In case of placement at our place, discussion with industry personnel about their arrival to conduct the interview process.
9. After finalization of interview date, The information will be shared to concern departmental TPO Coordinators to be aware of their role and responsibility during the whole on campus selection process.
10. The result will be display on TPO Notice board as well as through WhatsApp group.
11. Collection of Offer letter/salary slip or I-card of Students who join the concern Industry.

2. Recruiter's feedback about the process and students

Collective data of Campus Interview held at Institute and at Placement fair.

Table 8.4.4: Department-wise placement, higher studies and entrepreneurship data

Placement Data						
Department	Passing Year	No. of Student Pass-out	Current Status			
			No. of Student doing Job/placed	No. of Student pursue higher studies	No. of Student Entrepreneur	% Placement
Civil	2024-25	17	0	15	–	88%
	2023-24	16	0	16	–	100%
	2022-23	16	0	16	–	100%
	2021-22	29	1	26	–	93%
	2020-21	34	0	32	–	94%
Mechanical	2024-25	10	7	3	–	100%
	2023-24	9	4	5	–	100%
	2022-23	16	3	12	–	94%
	2021-22	40	3	22	–	63%
	2020-21	57	2	35	–	65%
Electrical	2024-25	23	8	14	–	96%
	2023-24	16	6	6	–	75%
	2022-23	13	3	3	–	46%
	2021-22	24	8	3	–	46%
	2020-21	47	13	10	–	49%
Electronics & Communication	2024-25	3	1	1	–	67%
	2023-24	3	2	1	–	100%
	2022-23	2	0	2	-	100%
	2021-22	4	1	2	–	75%
	2020-21	5	1	2	–	60%
ICT	2024-25	4	0	3	–	75%

Procedure for Placement Fair (District level) :

(A)Pre-Placement:

1. The education department of Gujarat state decides the Month, Date and venue of the different placement fair to be held across the state.
2. The education department activates the web portal for planning and real time monitoring.
3. The education department frame the guidelines and communicate its to the participating Institutes.
4. Formation of Placement fair team by Institute head and distribution of Office order.
5. The TPO make the team of 1, 2 or 3 staff members for different route to be visited.
6. The team members make the list of Industry to be visited in Banaskatha as well as nearby district.
7. Registration of final year students on web portal to participate in Placement fair.
8. Visit to the different industries and vacancy data collection by the team members.
9. Emailing the above data to the central portal team.
10. Verification of above student and Industries data uploaded by the central portal team.
11. Correcting the data if any discrepancy found by communicating to the Nodal officer of Central portal team.
12. Documentation of all the related information.
13. Formation of different team by nodal officer and distribution of office order for placement fair execution at host institute.⁵⁴
14. Reporting and working at host institute as per direction of Nodal officer.

(B)During the Placement:

1. Reporting at the host institute on specified dates.
2. Working at host institute for smooth execution of Placement fair.

(C)Post-Placement:

1. Review of Student placement.
2. Record keeping of placement data.
3. Uploading of offer letter on portal.
4. Final account settlement.
5. Surrender of grant of remaining amount.
6. Feedback from industry

Table 8.4.5: District-level placement fair – year-wise participation and selection

Year	Date	Venue	No. of Industry present	No. of student registered	No. of student present	No. of student appeared	No. of student Selected
2021	18-03-2021	GEC Palanpur	09	240	117	303	45
2022	23-03-2022	G P Palanpur	08	119	116	226	82
2023	10-03-2023	G P Palanpur	02	110 (3)	54	109	22
2024	11-03-2024	DNP Arts College, Deesa	02	80 (0)	38	18	6
2025	25-02-2025	G P Palanpur	04	81	81	192	106

Table 8.4.6: Industries participating in placement drives – name and location

Sr. No	Name of Industry	Location
1	Academy For Skill Development, (For ArcelorMittal)	Hazira
2	L& T Construction,	Surat
3	SUSPA Pneumatics India Private Limited,	Ahmedabad
4	Suzuki Motor Gujarat Pvt Ltd	Hansalpur, Becharaji, Gujarat
5	Torrent Power,	Ahmedabad
6	Asahi Glass India Ltd,	Chanasma
7	TATA Passenger Vehicle	Sanand
8	Tanu Motors ,	Palanpur
9	L&T- Energy Carbonlite Solutions	Surat
10	TORRENT RENEWABLE	Surat
11	M/s Micron	Sanand
12	CMR Green Technologies Limited	Vadodara

Impact on Students

- **Employability Enhancement:** Students graduate with not just technical knowledge but also communication, confidence, and adaptability.
- **Professional Competence:** Exposure to industry practices ensures students are aligned with real-world requirements.
- **Career Readiness:** Structured guidance helps students transition smoothly from academics to employment or higher studies.

Why Palanpur Polytechnic Stands Out

- The institution has become a preferred destination for industries seeking talented diploma engineers.
- Its proactive placement cell ensures students receive best opportunities through collaborations with reputed companies.
- The dual approach—counselling + placement drives—creates a holistic support system for career development.

2. Finishing school (Soft skill component)

Procedure to execute training Programme

1. A meeting twice in a year with members from each department is conducted for planning and fixing the duration of training.
2. List of interested students are registered and on the basis of total number of registered students batches are decided/divided as per KCG guidelines..
3. After getting approval of Principal, availability of empanelled trainers is asked to the assigned agency by KCG, Gujarat i.e. H Kumar's Education Institute, Ahmedabad and in adherence with the guidelines given by KCG, Gujarat, the training(s) is/are scheduled to benefit the maximum students.
4. For smooth conduction and monitoring, work distribution orders are generated.
5. Attendance record on daily basis and photographs of the training are kept and sent to the KCG by the assigned trainers as per existing guidelines.
6. At the end of training feedback in oral and written form are taken from the students as per existing guidelines.
7. Procedure of payment of honorarium to the the assigned agency by KCG, Gujarat i.e. H Kumar's Education Institute, Ahmedabad as per KCG guidelines.
8. Final compiled report is submitted by the assigned agency by KCG, Gujarat i.e. H Kumar's Education Institute, Ahmedabad to the KCG as well as to the Institute on the Web Portal <https://hk.kcgfinishingschool.com/>
9. Certificates are being printed and sent by the agency as per guidelines and distributed to the students.
10. Review meeting after each completed trainings is conducted at institute level..

Table 8.4.7: Finishing School soft-skill training batches – branch-wise students and trainers

Batch No.	Training Date		Component Number	Training Hours	No. of Students trained per batch	BRANCHWISE Total Students		Name of Trainer	REMARK
	From	To				Branch	No. of Students		
1/2022-2023	06-FEB-2023	03-MAR-2023	ALL SETs	80	48	CIVIL	41	Mr ANAND VYAS & Ms URJA JOSHI	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
						EC	06	Mr ANAND VYAS & Ms URJA JOSHI	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
						ELECTRICAL	01	Mr ANAND VYAS & Ms URJA JOSHI	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
2/2022-2023	06-FEB-2023	03-MAR-2023	ALL SETs	80	47	CIVIL	01	Mr ANAND VYAS & Ms URJA JOSHI	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
						ELECTRICAL	14	Mr ANAND VYAS & Ms URJA JOSHI	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
						MECHANICAL	32	Mr ANAND VYAS & Ms URJA JOSHI	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
3/2023-2024	19-FEB-2024	16-MAR-2024	ALL SETs	80	34	CIVIL	29	Mr Divyang Gor & Ms Kuntal Gor	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
						EC	05	Mr Divyang Gor & Ms Kuntal Gor	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
4/2023-2024	19-FEB-2024	16-MAR-2024	ALL SETs	80	43	MECHANICAL	23	Mr Divyang Gor & Ms Kuntal Gor	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
						ELECTRICAL	20	Mr Divyang Gor & Ms Kuntal Gor	SET-A, B, C, D (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
5/2025-2026	15-SEPT-2025	26-SEPT-2025	ALL SETs	40	47	MECHANICAL	30	Mr Prakash Detroja	SET-A, B, C, D (Life Skills) (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)

Batch No.	Training Date		Component Number	Training Hours	No. of Students trained per batch	BRANCHWISE Total Students		Name of Trainer	REMARK
	From	To				Branch	No. of Students		
						IT	17	Mr Prakash Detroja	SET-A, B, C, D (Life Skills) (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
6/2025-2026	15-SEPT-2025	26-SEPT-2025	ALL SETs	40	48	CIVIL	41	Mr Divyang Gor	SET-A, B, C, D (Spoken English) (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
						EC	7	Mr Divyang Gor	SET-A, B, C, D (Spoken English) (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
7/2025-2026	15-SEPT-2025	26-SEPT-2025	ALL SETs	40	49	ELECTRICAL	29	Mr Nikhil Oza	SET-A, B, C, D (Life Skills) (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)
						ICT	20	Mr Nikhil Oza	SET-A, B, C, D (Life Skills) (H KUMARS EDUCATION INSTITUTE, AHMEDABAD)

Finishing School (Technical)

At state level there was a training to faculty of Civil, Mechanical, Electrical and IC branch which was imparted by field experts covering latest trends in industry of 2 to 5 days. The trained faculty then had delivered training to final year students as per following data.

Table 8.4.8: Finishing School (Technical) training – department-wise area, duration and participants

Sr. No.	Department	Duration	Area of Training	No. of Participant Students
1	Electrical	06 Days	Control Panel Wiring	14
2	Mechanical	10 Days	3D Solid Modelling & 3D Printing (Fs Mech-1)	10
	Mechanical	06 Days	CNC Programming & Machining (Fs Mech-3)	19
3	Civil	11 Days	Total Station	19
4	IC	05 Days	Maintenance, Calibration And Testing Of Industrial Instruments (Pressure And Flow)	03

Summary of grant utilization KCG

Table 8.4.9: Year-wise KCG Finishing School grant received and utilized

SR NO	FINANCAIL YEAR	GRANT RECEIVED	TOTAL (LAST FY CLOSING + GRANT RECEIVED IN CURRENT FY)	USED GRANT	CLOSING BALANCE
1	2022-23	255500	666920	511000	155920
2	2023-24	511000	666920	511000	155920
3	2024-25	511000	666920	0	666920
4	2025-26	0	666920	383250	283670

Role of Government Polytechnic, Palanpur

- Recognized as a Finishing School Centre, which is a privilege and a mark of trust in the institute's quality.
- The institute contributes by imparting training that enhances employability skills and life skills, preparing students for success not only in jobs but in all walks of life.
- This aligns perfectly with the institute's mentoring and placement ecosystem, creating a holistic student development model.

Impact on Students

- Confidence Boost: Students become more articulate and self-assured.
- Professional Competence: Training in ethics, teamwork, and workplace behavior makes them industry-ready.
- Career Success: Improved employability skills directly translate into better placement opportunities.

3. Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

Major initiatives of RUSA

1. Equity opportunity cell

We established Equity Opportunity Cell (EOC) for the development of SC, ST and OBC students including gender equality.

2. Remedial classes

Workshops are organized to train students thoroughly for taking English Proficiency exams under SCOPE.

3. Gender sensitization campaign

Under Gender Sensitization Campaign, the college organized “Women Empowerment Week” for the awareness, safety, encouragement and empowerment of women.

4. Innovative scheme (mentoring of girl child)

Psychometric Test for girls was conducted by a famous city based Psychiatrist who is well known for his research publications.

5. Gender counseling

Workshop on Business Related Communication Skills was conducted for SC/ST and OBC girls.

Table 8.4.10: Events conducted under RUSA

Sr. No	EventDate	Topic	ExpertName
1	05-03-2022	LAW RELATED TO WOMEN SAFETY	MS.YASHSHVI MEHTA PANDYA
2	05-03-2022	DISADVANTAGES OF MOBILE AND INTERNET	MS.GEETA ACHARYA
3	05-03-2022	SELF EMPLOYMENT ENHANCEMENT	TITHI VAKIL
4	23-11-2022 TO 29-11-2022	REMEDIAL CLASS	C.P.GELOT C.S.PANDYA B.B.MOR M.F.TANK R.P.CHAVDA R.H.CHAVDA V.M.PRAJAPATI N.J.CHAUHAN N.M.PATEL
5	23-11-2022	COMPETATIVE EXAM CLASS	PATEL NARESHKUMAR KARSANBHAI
6	24-11-2022	GROUP COUSELING	DR.NILAM PATEL
7	24-11-2022	EXPERT LECTURE ON BRUN HATYA	DR.NILAM PATEL
8	13-03-2023	SELF EMPLOYMENT AND ENHANCEMENT FOR GIRLS STUDENTS	MS.JALPABEN R VAIDYA
9	13-03-2023	MOTIVATIONAL TALK FOR GIRLS STUDENTS	MR.DARSHAN SOLANKI
10	15-03-2023	WOMEN EMPOWERMENT	MS.M.K.PEDHADIYA
11	17-03-2023	ICE BREAKING ACTIVITY FOR GIRLS STUDENTS	MS.MANISHABEN JOSHI

Sr. No	EventDate	Topic	ExpertName
12	17-03-2023	TO ENHANCE CREATIVITY SKILLS FOR GIRLSSTUDENTS	MS.RUKSHANABEN PARMAR
13	20-03-2023 TO 21-03-2023	SPOKEN ENGLISH	DR.C.S.PANDYA
14	07-08-2023 TO 09-08-2023	ENTREPRENEURSHIP DEVELOPMENT	MR.VIRENDRASINH CHAVDA
15	09-08-2023 TO 11-8-2023	INNOVATION CREATIVITY	HITTEN PATEL
16	17-8-2023 TO 19-8-2023	SELF EMPLOYMENT AND ENHANCEMENT	MR GAURAV PATEL
17	21-08-2023 TO 25-08-2023	KARATE WORKSHOP	Mr.NARSHBHAI PRAJAPATI
18	11-09-2024 TO 14-09-2024	YOGA WORKSHOP	MR.AASHISH B MODI
19	14-10-2024	EXPERT LECTURE ON COMPITATIVE EXAMINATION	DRASHTI S GAMI
20	10-10-2024	REMEDIAL CLASS FOR MATHEMATICS	DRASHTI S GAMI
21	11-10-2024	EXPERT LECTURE ON WOMEN EMPOWERMENT	DRASHTI S GAMI
22	11-10-2024	GROUP COUSELLING FOR GIRLS STUDENTS	DRASHTI S GAMI
23	11-10-2024	CARRIER GUIDANCE FOR STUDENTS	DRASHTI S GAMI

RUSA Grant Utilization

Table 8.4.11: Year-wise RUSA grant balance and grant received

SR NO	FINANCIAL YEAR	GRANT BALANCE	GRANT RECEIVED
1	2022-23	50616.79	22930.00
2	2023-24	27686.79	26500.00
3	2024-25	1186.79	1186.00

Impact on Government Polytechnic, Palanpur

- Receives RUSA grants under Component 9 (Equity Initiative), which focuses on inclusivity and bridging gaps for disadvantaged groups.
- Enables modernized labs and resources, improving hands-on learning for diploma engineering students.
- Supports faculty development workshops, ensuring teachers stay aligned with industry and academic advancements.
- Encourages innovative teaching methods like blended learning, project-based education, and digital tools.
- Enhances student performance and institutional effectiveness through systematic reforms and financial support.

Benefits for Students

- **Holistic Development:** Beyond technical skills, students gain exposure to research, digital learning, and inclusive practices.
- **Improved Employability:** Better labs, updated curriculum, and skilled faculty directly enhance career readiness.
- **Equity & Inclusion:** Focus on disadvantaged students ensures equal access to quality education.

8.5 Entrepreneurship Cell / Technology Business Incubator / Skill Development Centre (05)

A. Availability (01)

The Student Startup and Innovation Policy (SSIP) of the Government of Gujarat encourages innovation, entrepreneurship, and startup culture among students. Under this policy, students receive financial assistance, mentoring, incubation support, and exposure to entrepreneurial ecosystems. SSIP motivates students to convert innovative ideas into viable products and startups. It promotes problem-solving skills, creativity, and self-employment, thereby reducing dependency on traditional job opportunities and fostering an innovation-driven mindset among diploma engineering students.

Government of Gujarat has developed a policy for providing assistance to Startups/ Innovation. Under this scheme, any individual/ group of individuals having innovative idea/ Concept will be eligible and/ or Universities/ education institutions, Incubation Centre/ PSUs/ R&D Institutions/ Private and other establishments will be eligible as an institution to support and mentor to innovators as approved by Committee. Startups in an ecosystem and technology sectors is an important indicator of technological performance for several reasons.

The Student Startup& Innovation Policy of Government of Gujarat aims to create an integrated, state-wide, university-based innovation ecosystem to support innovations and ideas of young students and provide a conducive environment for optimum harnessing of their creative pursuit.

Government Polytechnic Palanpur has started its SSIP cell in 2017. This centre is providing incubation facility for the students as it's equipped with basic modern instruments and computers with internet connectivity.

Importance of SSIP for Diploma Engineering Colleges

- **Encourages Innovation:** Provides a structured platform for students to convert classroom knowledge into practical solutions.
- **Funding Support:** Students can receive grants (up to ₹2.5 lakh per project) for prototype development, reducing financial barriers.
- **Skill Development:** Promotes design thinking, problem-solving, and entrepreneurship skills beyond the syllabus.
- **Industry Linkages:** Builds bridges between academia, industry, and government, improving employability and startup culture.
- **Recognition:** Successful projects gain visibility at state and national levels, motivating students and institutions.

Scope of SSIP in Diploma Colleges

- **Prototype Development:** Students can apply for grants to build working models of innovative ideas.
- **Incubation Ecosystem:** Colleges are encouraged to set up SSIP cells/incubation centres to mentor and guide students.
- **Interdisciplinary Projects:** Open to all branches of engineering and polytechnic programs, encouraging collaboration.
- **IPR Support:** Assistance for patent filing and intellectual property protection.
- **Events & Hackathons:** Colleges can organize innovation challenges, bootcamps, and workshops under SSIP.
- **Scaling Ideas:** Promising student projects can be scaled into startups with further support from state innovation hubs.

B. Management (02)

Following is a team working hard to make SSIP activities to its effective utilization.

Table 8.5.1: SSIP Cell team members and designations

Sr No	Faculty	Deptt.	Designation in SSIP Cell
1	Mr L K Patel	EC	SSIP Coordinator
2	Mr B M Patel	EE	Member
3	Mr M J Dabgar	EC	Member
4	Mr F M Mukhi	Civil	Member
5	Mr V H Suthar	Mech	Member
6	Mr V A Chauhan	IC	Member

C. Effectiveness (02)

The different activities organised by SSIP cell at GP, Palanpur are as under.

Overall Activities at a glance:

Summary of SSIP Grant Sanctioned, Received, Utilized

Table 8.5.2: Year-wise SSIP grant sanctioned, received and utilized

Financial Year	Sanction(Rs.)	Received(Rs.)	Utilized(Rs.)
2022-23	900000	450000	137303.5
2023-24	1080000	540000	287013
2024 -25	1160000	0	49005
2025 – 26	1360000	0	333664.5
Total		990000	806986

POC Utilized

Table 8.5.3: Year-wise Proof of Concept projects approved and funds utilized

Year	No. Approved POC	Fund Utilized
2022-23	15	79793
2023-24	1	124889
2024 -25	12	32295
2025 – till date	4	243160
Total	32	480137

IPR Utilization

Table 8.5.4: Year-wise IPR applications approved and funds utilized

Year	No. Approved IPR	Fund Utilized
2022-23	1	12000
2023-24	0	0
2024 -25	0	0
2025 – till date	1	45000
Total	2	57000

Event Utilization

Table 8.5.5: Year-wise SSIP events organized and funds utilized

Year	No. Event organized	Fund Utilized
2022-23	18	37412
2023-24	09	13064
2024 -25	10	15710
2025 – till date	04	44416
Total	41	110602

Patent filed by students under SSIP

Table 8.5.6: Patents filed by students under SSIP

Sr No	Title	IPR No	Leader Name	Financial Year	Date of filing	Granted
1	Switchboard	202021026651	Mr. Hiten Patel	2020-21	24/06/2020	22/12/2023
2	Smart Rotary Switchboard	202021044176	Mr. Hiten Patel	2020-21	10/10/2020	10/05/2022
3	Water TAP Alarm	202121004092	Nai Dhaval	2020-21	29-01-2021	25-10-2021
4	Cup and Glass Cleaning Device	202121049081	Nai Dhaval	2021-22	27/10/2021	20/02/2024

Sr No	Title	IPR No	Leader Name	Financial Year	Date of filing	Granted
5	Multimodular Digital Stethoscope with Integrated Diagnostics and AI Assistance	202521118577	Dr Vipul Tank	2025-26	28-11-2025	Under Examination
6	Modular Stethoscope with Interchangeable Chest Piece	202521131153	Dr Vipul Tank	2025-26	24-12-2025	Under Examination

Start-up Support

Table 8.5.7: Student start-ups supported under SSIP

Sr No	Startup	Full name	Contact number	Email address	Domain	Startup Description (MCats)
1	Prahaantam Pvt. Ltd	Mr Dhaval Nai	9638898921	naidhaval724@gmail.com	Manufacturing	Prahaantam Pvt. Ltd. is an Ahmedabad-based manufacturer of automated tea cup washing machines, designed to improve hygiene and efficiency for tea vendors and hospitality businesses.
2	Zephyr Digisteth	Dr. Vipul Tank	8154976472	vipulktank@gmail.com	Healthcare & Nutrition	They are developing a compact, all-in-one medical device that assists both doctors and patients. It integrates auscultation, ECG, temperature, and blood sugar monitoring, with modular attachments like an otoscope, ophthalmoscope, and BP monitor. Designed for clinics and homes, it supports daily checkups, tele-consultations, and remote care. With AI-powered analysis, data storage, and live streaming, it enables faster, more accurate diagnoses and ensures no subtle signs are overlooked.
3	Beerobokids Innovations Pvt Ltd	Rishabh kunjeshbhai prajapati	9687136019	prajapatirshb@gmail.com	STEM Education	BeeRobokids Innovations Pvt Ltd is a startup dedicated to empowering kids and young innovators through hands-on learning in Robotics, IoT, and emerging technologies. The platform nurtures creativity, critical thinking, and problem-solving skills, inspiring the next generation of inventors and tech leaders. By blending education with innovation, BeeRobokids aims to make future technologies accessible and engaging for young minds, fostering curiosity and lifelong learning.
4	Innovate 3D	Deepak Chaudhary	9638718578	dip9627@gmail.com	Tech	Innovate 3D is a startup dedicated to advancing 3D design, printing, and rapid prototyping. It develops cost-effective 3D printers, STEM education kits, and offers prototyping support for startups and industries. By combining innovation, research, and practical learning, Innovate 3D makes advanced manufacturing accessible to students, creators, and businesses. Its mission is to bridge imagination and reality—empowering people to turn ideas into tangible creations and shape future possibilities.

Sr No	Startup	Full name	Contact number	Email address	Domain	Startup Description (MCats)
5	Sky Print Startup	Rajput yuvraj	8160664564	rajputyuvraj224@gmail.com	Tech	Sky Print is a startup focused on creating customized drone solutions for diverse industries and applications. The company designs high-performance FPV, surveillance, and custom-built drones, along with special models like flower-dropping drones for events. It also offers drone services, training, and ready-to-fly models. With a mission to redefine aerial technology, Sky Print aims to deliver innovative, reliable, and purpose-driven drones for commercial, creative, and industrial use.
6	Sky craft	Bharat Mali	7862996203	malibharatkumar9070@gmail.com	STEM Education	Develop low-cost robotics and IoT kits that make future technologies accessible. Create activity-based learning modules that inspire curiosity and encourage experiential learning. Support teachers and schools in rural areas with training programs and ready-to-use learning resources. Foster a culture of innovation, teamwork, and entrepreneurship among young learners.

Events organized: Year 2022-2023

Table 8.5.8: SSIP events organized – Year 2022-23

Sr. No	Date	Event Name	Event Type	No. Participation	Venue
1	20/09/2022	Group Discussion event for first and final year students	Group Discussion	100	seminar hall Government polytechnic palanpur
2	21/09/2022	Group Discussion for STD 1 to 8	Group Discussion	675	Branch school palanpur
3	23/09/2022	Group Discussion for STD9 to 10	Group Discussion	600	Shri Vividhlaxmi VidhyamandirPalanpur
4	24/09/2022	Group Discussion for STD 9 to 11	Group Discussion	275	Shri M M Mehta english medium school Palanpur
5	26/09/2022	Group Discussion for STD 6 to 8	Group Discussion	550	Shri I J Mehta Vidhyamandir school Palanpur
6	27/09/2022	Group Discussion for STD 6 to 11	Group Discussion	320	Vimla Vidhyalay Gadh
7	30/09/2022	Group Discussion for STD 3 to 5	Group Discussion	575	Shri Rajlaxmi Primary School Palanpur
8	1/10/2022	Group Discussion for STD 5 to 8	Group Discussion	150	Ganeshpura Primary School Palanpur
9	4/10/2022	Group Discussion	Group Discussion	100	Iqra english medium

Sr. No	Date	Event Name	Event Type	No. Participation	Venue
10	6/10/2022	Group Discussion for STD 6 to 8	Group Discussion	407	Shri M M Mehta english medium school Palanpur
11	10/10/2022	New Palanpur for New India	Appreciation Program	150	seminar hall Government polytechnic palanpur
12	10/1/2023	Sensetization programme	Sensetization programme	483	Iqra english medium
13	10/01/2023 to 11/01/2023	boot camp	work shop	35	Iqra english medium
14	17/01/2023	Sensetization programme	Sensetization programme	200	Chaniyanaprimeri school
15	17/01/2023 to 18/01/2023	boot camp	work shop	32	Chaniyanaprimeri school
16	10/02/2023	motivational speech for Entrepreneurship	seminar	90	seminar hall Government polytechnic palanpur
17	11/03/2023	Sensetization programme	Sensetization programme	681	Adarsh School palanpur
18	11/03/2023 to 12/03/2023	boot camp	work shop	70	Adarsh School palanpur

Year 2023-24

Table 8.5.9: SSIP events organized – Year 2023-24

Sr no	Date	Event Name	Event Type	No. Participation	Venue
1	19/07/2023	Sensitization program	Sensitization program	210	Seminar Hall
2	10/08/2023	Students innovation fest 2023	Expert Talk	190	Seminar Hall
3	07-08-09/08/2023	EXPERT LECTURE ON ENTERPRENEURSHIP DEVELOPMENT	Expert lecture series by RUSHA and SSIP Cell	30	Seminar Hall

Sr no	Date	Event Name	Event Type	No. Participation	Venue
4	09-10-11/08/2023	EXPERT LECTURE ON INNOVATION & CREATIVITY	Expert lecture series by RUSHA and SSIP Cell	30	Seminar Hall
5	17-18-19/08/2023	EXPERT LECTURE ON SELF EMPLOYMENT & ENHANCEMENT	Expert lecture series by RUSHA and SSIP Cell	30	Seminar Hall
6	21-08-2023	Word entrepreneur Day(Entrepreneurship as a Career)	seminar	180	Seminar Hall
7	14-09-2023	Innovation and Startup Sensitization work shop	Seminar	250	Seminar Hall
8	05-12-2023 to 10-12-23	Startup Conclave -2023,Gandhinagar STALL	Event	3	Gandhinagar
9	8/12/2023	Startup Conclave -2023,Gandhinagar institute students visit	Event	52	Gandhinagar

Year 2024-25

Table 8.5.10: SSIP events organized – Year 2024-25

Sr no	Date	Event Name	Event Type	No. Participation	Venue
1	16/04/2024	New Palanpur for New India	Event	140	G P Palanpur
2	29/11/2024	Sensitization program	Seminar	1398	Swastik Primary school palanpur
3	29/11/2024	Sensitization program	Seminar	1000	Adarsh Primary school palanpur
4	29/11/2024	Sensitization program	Seminar	500	Adarsh school palanpur (9 to12 std)
5	29/11/2024	Sensitization program	Seminar	700	silverbell school palanpur
6	29/11/2024	Sensitization program	Seminar	862	Hetiba primary school palanpur
7	29/11/2024	Sensitization program	Seminar	320	Aekta Primaryschoolpalanpur
8	30/11/2024	Sensitization program	Seminar	1500	Swastik school palanpur (9 to 12)
9	21/01/2025	One day workshop	One day workshop	20	G P palanpur
10	25/03/2025	Opening ceremony of Innovative Idea & One day seminar	One day seminar	120	G P palanpur

Year 2025- till date

Table 8.5.11: SSIP events organized – Year 2025 to date

Sr no	Date	Event Name	Event Type	No. Participation	Venue
1	09/04/2025	New Palanpur for New India 3.0	Real-life problems tackled with tech-powered solutions.	250	G P Palanpur
2	06/09/2025	Sensitization program	Sensitization program	145	Shri Ram VidhyalayPalanpur
3	10/09/2025	AI tools workshop	One day workshop	72	G P Palanpur
4	18/09/2025	Sensitization program	Sensitization program	62	Gela Primary School

Outcomes of SSIP Activities**Financial Impact of SSIP Implementation (2022–2026)**

- A total of **₹9.90 lakh** SSIP grant was sanctioned, out of which **₹8.07 lakh** has been effectively utilized for innovation, POC development, IPR filing, and events.
- **32 Proof of Concept (POC)** projects were approved with **₹4.80 lakh** utilized, promoting hands-on innovation and product development.
- **6 IPR applications** were supported, strengthening the culture of patent awareness.
- **41 innovation and entrepreneurship events** were organized with **₹1.10 lakh** utilization, enhancing student exposure and participation.

Overall Outcome Summary

The SSIP initiative has created a strong innovation ecosystem by supporting student projects, promoting entrepreneurship, strengthening IPR awareness, and organizing impactful events. The structured utilization of funds has ensured sustainable skill development, practical exposure, and real-world problem-solving abilities among students.

Criterion 9

Governance, Institutional Support and Financial Resources (75)

Total Marks: 75

Table 9.0.1: Sub-Criteria and Marks Distribution – Criterion 9: Governance, Institutional Support and Financial Resources (Total 75 Marks)

No.	Sub-Criterion	Marks
9.1	Organization, Governance and Transparency	25
9.1.1	State the Vision and Mission of the Institute	5
A	Availability of the Vision & Mission statements of the Institute	2
B	Appropriateness/Relevance of the Statements	3
9.1.2	Governing body, administrative setup, functions of various bodies, define rules procedures, recruitment and promotional policies	5
A	List the Governing Body Composition; their memberships, functions, and responsibilities	2
B	Minutes of the meetings and action-taken reports	1
C	The published service rules, policies and procedures with year of publication	1
D	Extent of awareness among the employees/students	1
9.1.3	Decentralization in working and grievance redressal mechanism	5
A	List the names of the faculty members who have been delegated powers for taking administrative decisions	2
B	Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee	3
9.1.4	Delegation of financial powers	5
A	Demonstrate the utilization of financial powers for each of the assessment years	5
9.1.5	Transparency and availability of correct/unambiguous information in public domain	5
A	Information on the policies, rules, processes is to be made available on web site	2
B	Dissemination of the information about student, faculty and staff	3
9.2	Budget Allocation, Utilization, and Public Accounting at Institute level	10
9.2.1	Adequacy of budget allocation	4
·	Process and Adequacy	–
9.2.2	Utilization of allocated funds	4
·	Budget utilization for three years	–
9.2.3	Availability of the audited statements on the institute's website	2
·	Availability of Audited statements on website	–
9.3	Department Specific Budget Allocation, Utilization	5
·	To be evaluated in consultation with the Program Experts	–
9.3.1	Adequacy of budget allocation	2
·	Process and Adequacy	–
9.3.2	Utilization of allocated funds	3
·	Budget utilization for three years	–
9.4	Library and Internet	20
9.4.1	Quality of learning resources (hard/soft)	10
A	Availability of relevant learning resources including e-resources and Digital Library	7

No.	Sub-Criterion	Marks
B	Accessibility to students	3
9.4.2	Internet	10
A	Available bandwidth	4
B	Wi-Fi availability	2
C	Internet access in labs, classrooms, library and offices of all Departments	2
D	Security Arrangements	2
9.5	Institutional Contribution to the Community Development/ Go-green	5
9.6	Alumni Performance and Connect	10
Total Marks – Criterion 9		75

9.1 Organization, Governance and Transparency (25)

9.1.1 State the Vision and Mission of the Institute (05)

A. Availability of the Vision & Mission statements of the Institute (02)

Vision: To produce competent diploma engineers as per need of industries and entrepreneurs with ethical values.

Mission: Government Polytechnic, Palanpur strives to impart,

- Industry oriented technical education.
- Excellent teaching and learning environment.
- Promote entrepreneurship activities.
- Continual growth in every sphere of life by developing core human values.

Availability

- Principal office
- Office of Head of the Departments
- Main Building
- BADP Building
- Mechanical Building
- Canteen
- Institute website

B. Appropriateness/Relevance of the Statements (03)

Appropriateness/Relevance of vision statement

Table 9.1.1: Relevance of the Institute Vision to AICTE, DTE, PM and GTU Objectives

	AICTE objective	DTE	PM vision	GTU objectives
Institute Vision	Institute strives to provide quality education	Institute strives to provide technical education so as to inculcate competency in Diploma engineers to serve industries and become an entrepreneur	Competent engineers with ethical values will surely be employable and will generate employment for others too.	Competency will provide meaningful careers to the diploma engineers.

Appropriateness/Relevance of mission statements

Table 9.1.2: Relevance of the Institute Mission Statements to AICTE, DTE, PM and GTU Objectives

	AICTE objective	DTE	PM vision	GTU objectives
M1.	Improvement in education with industrial support	Providing education in line with industry needs will add competency in the Diploma holders	Education targeted to industries will enhance employment	Quality education with respect to industry needs opens future employment paths
M2.	Regular updation in the laboratories providing excellent teaching environment	For the growth of students' base is formed by teaching and learning environment	Clean and green environment will enhance learning	Follow effective education delivery mechanism providing excellent learning environment
M3.	Boost entrepreneurial activities to enhance learning	Promoting entrepreneurial activities to create a pool of technical professionals	Technical education promoting entrepreneurship will provide equal opportunity for all to grow and will create employment for others too	Promote entrepreneurship activities by conduction of seminars, workshops and many more
M4.	Activities for all round development	Lifelong learners with ethical values will always head the society	Education with human values will eradicate corruptions and enhance prosperity in nation	All round development of students to attract great career scopes

9.1.2 Governing body, administrative setup, functions of various bodies, define rules procedures, recruitment and promotional policies (05)**A. List the Governing Body Composition; their memberships, functions, and responsibilities (02)*****Governing Body and Administrative Setup***

The governance mechanism in government systems is designed to be fair, transparent and effective. Government Polytechnic, Palanpur is administered by the Commissionerate of Technical Education which reports to the Education department, Government of Gujarat. The organizational set up of the authorities of the whole Education Department is appended herewith at Figure 9.1.1.

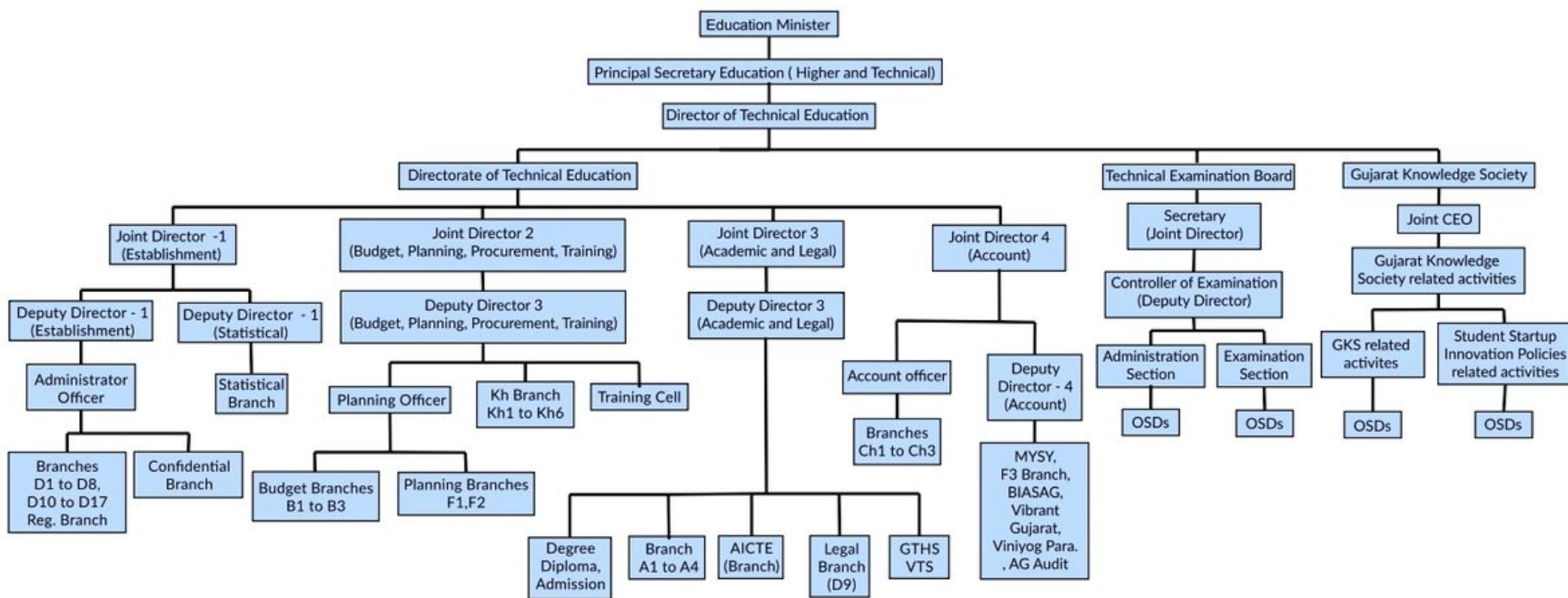


Figure 9.1.1: Governing Body - Organizational Chart - Education Department

Furthermore, Government Polytechnic, Palanpur follows the standard practices defined in TEIM (Technical Education Institute Manual), which is available on Commissionerate of Technical Education, Gujarat website on the following link: <https://dte.gujarat.gov.in/technical-education-institution-manual-teim-govt-polytechnics>

Functions and responsibilities of Various Bodies

- The administration of the overall Education Department, Gujarat state is decentralized.
- The key officers of the education department are Principal Secretary (Higher and Technical Education), Director-Technical Education, Joint Directors and Principals of the various Government Polytechnics.
- Principal Secretary is the highest authority for overall higher and technical education system in the state.
- Under Principal Secretary, Directorate of Technical education works to leverage various governance supports to technical institutions.
- At Directorate office, Joint Directors are appointed for responsibilities of Establishment, Budget-Planning-Procurement, Academic, Legal and Admission related matters.
- At Institute level, Principal is the highest authority for various academic and administrative matters and reports to Director of Technical Education.
- Government Polytechnic, Palanpur is affiliated with Gujarat Technological University, Ahmedabad.
- For the curriculum and evaluation methodology, institute has adopted the rules and regulations laid down by the University.
- Being important stakeholder of the University system, many faculties of the Institute contributes on various boards such as Academic Council, Board of Studies, Academic Inspection etc.

Service rules, procedures, recruitment and promotional policies

Service rules and procedures:

- The Service rules are well defined and amended time to time by the General Administration Department (GAD), Government of Gujarat.
- Service rules including pay, pension and leaves are published in Gujarat Civil Services Rules (GCSR).
- For the pay, Government follows AICTE guidelines.
- The rules are uploaded on Finance Department website on following link : GCSR Rules: <https://financedepartment.gujarat.gov.in/rules.html>

Recruitment and Promotion policies:

- The Recruitment Rules (RR) and promotion policy concerned with academic faculties and supporting staff are framed by the Government from time to time.

- Gujarat Gaun Seva Pasandgi Mandal (*GSSSB*) is statutory body to carry out the direct recruitment for the various non-teaching positions.
- The Gujarat Public Service Commission (GPSC) is statutory body to carry out the direct recruitment for the various academic faculty positions (Principal, Head of the Department, Lecturer) in case of direct recruitment.
- All promotions are carried out as per rules through Departmental Promotion Committee (DPC) with final approval from GPSC.
- The overall mode of recruitment and promotion is as below:
 - 100% of the sanctioned positions at the level of Lecturer carried out through direct recruitment by the GPSC based upon proposal received from education department, Gujarat state, as per AICTE norms.
 - For remaining cadre (Principal, Head of the Department) 50% of vacant positions are filled through direct recruitment by GPSC, while remaining 50% positions are filled through promotion by education department through departmental promotion committees.
 - The detailed information is available at: <https://dte.gujarat.gov.in/recruitment-rules>

B. Minutes of the meetings and action-taken reports (01)

Institute has policy to arrange meetings of head of the different committees and their members for smooth functioning of the institute. Decisions taken in the meetings are recorded in Minutes of Meetings (MoM).

C. The published service rules, policies and procedures with year of publication (01)

As a government institution, we are following Government of Gujarat Policies:

- Service Rules: Government Civil Services Rules (GCSR-2002)
<https://financedepartment.gujarat.gov.in/rules.html>
- Purchase Policy: Gujarat State Purchase Policy-2016
http://www.imd-gujarat.gov.in/Document/2016-6-7_379.pdf
- Admission Policy: Gujarat Act - 2, 2008, Dated: 07/03/2008 and 28/05/2008
<http://acpdc.co.in/advertisement/act.html>
- Academic Policy: As per Gujarat Technological University (GTU), Ahmedabad
<http://www.gtu.ac.in>
- Student's Startup and Innovation Policy: SSIP Policy published by Government of Gujarat as on 11/01/2017
<http://www.startupgujarat.in/writereaddata/Images/pdf/Student-innov-Policy-HT-Edu.pdf>

D. Extent of awareness among the employees/students (01)

Awareness of Service Rules, Policies and Procedures among the employees/students created through training and awareness program as shown in following details:

Employees

- Teaching faculty training: Induction training, subjective training, interdisciplinary training, etc. are arranged by CTE training cell through FSD portal.
- Non-teaching faculty training: Administrative trainings are arranged by SPIPA.
- Institute circular and notification.
- Websites:
 - Government Polytechnic Palanpur (<https://gppalanpur.ac.in>)
 - Commissionerate of Technical Education (<https://dte.gujarat.gov.in>)
 - Gujarat Technological University (<https://www.gtu.ac.in>)
 - General Administration Department (<https://gad.gujarat.gov.in>)
 - Finance Department (<https://financedepartment.gujarat.gov.in>)

Students

- Through Induction and Awareness programs arranged at Institute.
- Institute circular and notice board.
- Websites:
 - Government Polytechnic Palanpur (<https://gppalanpur.ac.in>)
 - Gujarat Technological University (<https://www.gtu.ac.in>)

9.1.3 Decentralization in working and grievance redressal mechanism (05)

A. List the names of the faculty members who have been delegated powers for taking administrative decisions (02)

Decentralization in working

The administration of the Institute is decentralized as shown in Figure 9.1.2.

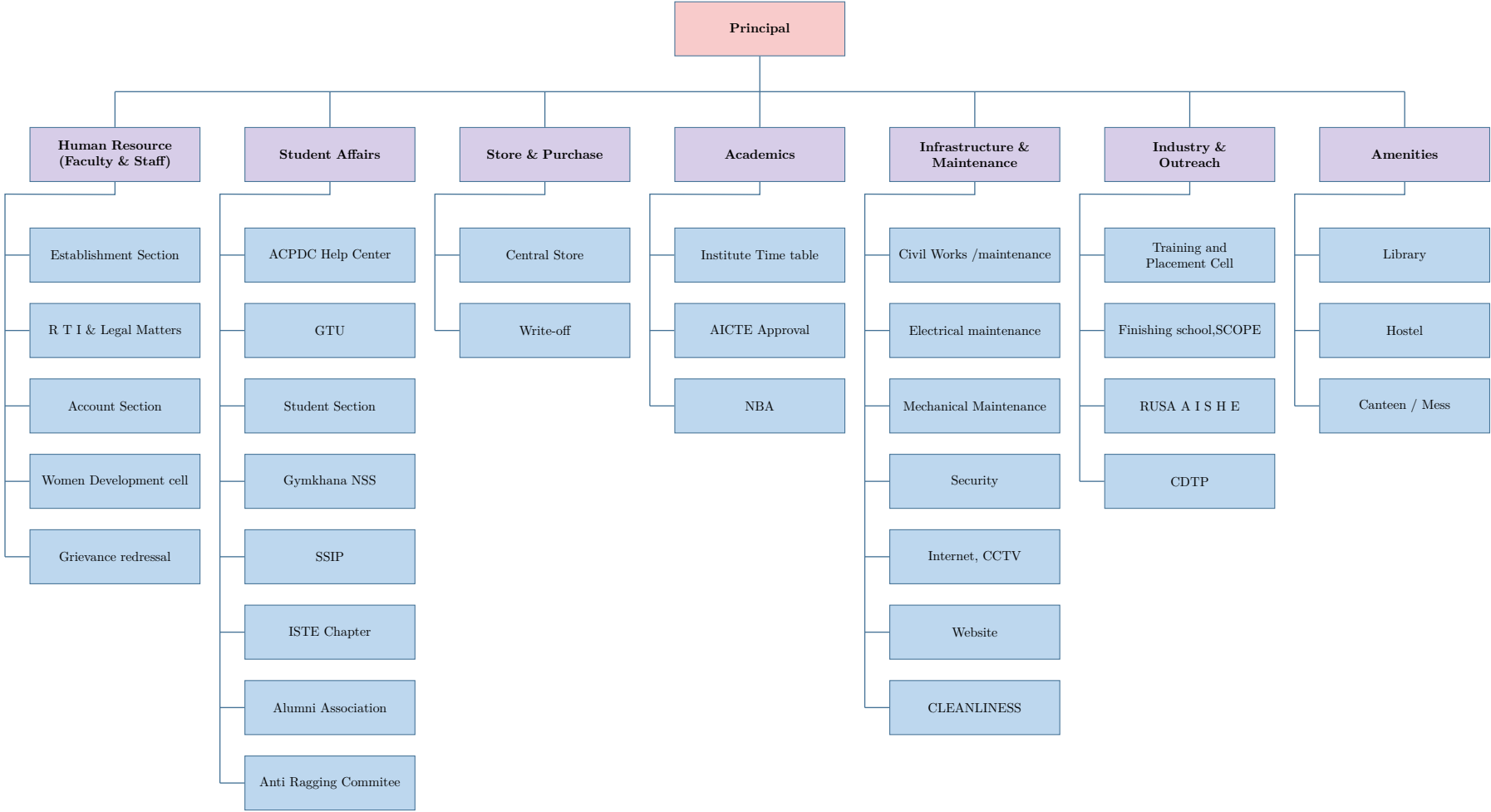


Figure 9.1.2: Organizational Chart – Institution Level

Decentralization of work

- Principal of the Institute is responsible for the overall academic and administrative aspects of the Institute.
- Institute also has cells for managing various institute level development activities like Establishment (for faculty and staff service matters), Students matters, Academics, Store and Purchase, Infrastructure & Maintenance, Industry and outreach and central amenities.
- To look after the various academic activities of each programme, Institute has nominated heads of the departments (HODs).
- All faculty and staff members of the concerned programme report to the respective Head of department for their academic activities, academic calendar and managing department level administrative portfolios, grievances etc.
- All HODs report to the head of the Institute.
- To provide detailed guidelines for various activities of a teacher, a Technical Education Institute Manual (TIEM) has been prepared by Commissionerate of Technical Education, Government of Gujarat.
- As per the guidelines of the TEIM, various committees have been formed for the smooth working of the institutional matters as shown in the Figure 9.1.3 given below vide Office Order No.: GPP/EST/Work distribution/2024/662 Dated: 04/07/2024.

	Government Polytechnic, Palanpur सरकारी पोलिटेक्नीक, पालनपुर			
માલણ દરવાજા બહાર, પાલનપુર-૩૮૫૦૦૧	Outside Malan Gate, Palanpur-385001			
Phone : (02742) 245219 / 262115	E-mail : gp-palanpur-dte@gujarat.gov.in			
No. GPP/EST/Work Distribution/662		Date : 04/07/2024		
<u>Office Order (Work Distribution)</u>				
Following administrative/managerial duties are assigned to corresponding officers/faculties in addition to their regular job specific responsibilities for smooth functioning and overall development of the institute till further order. All are inform to maintain records with proofs and present as and when required.				
No	Activity	Convener	Co-Convener	Members
1	Head, Human Resource (Faculty & Staff) :			
1	Establishment Section	R N Patel-EC	V H Suthar-Mech	C P Gelot-General ✓ B M Patel-Elect R L Chaudhary-Mech A R Patel – Civil
2	E-Mail Handling e-Sarkar	S P Joshiyara-EC	V M Prajapati-Mech	
3	SATHI Karmyogi Portal	R N Patel-EC	V M Prajapati-Mech	C P Gelot-General ✓ V H Suthar-Mech B M Patel-Elect A N Patel-Civil R C Parmar-EC J V Kureshi-IC
4	CAS	✓ B B Mor-General	A R Patel-Elect R N Patel-EC	K A Patel-IC J B Patel-Mech V P Patel-Civil
5	IQAC	Principal	S J Chauhan-EC	All HoDs A D Shah-Elect D D Prajapati-Mech R J Patel-Applied M F Tank-General ✓ D N Sheth-Civil
6	TNA / FDP Portal / Foreign NOC	A M Qureshi -Elect	N N Chaudhary -Mech	

Figure 9.1.3: Institute-Level Committees and Work Distribution Order (Page 1 of 6)

7	RTI & Legal Matters	✓ C S Pandya-Gen	Y D Chaudhary-Mech	
8	Audit Para	R J Patel-Applied	A R Patel-Elect	Coordinators of Esta, Account & Store
9	Account Section	✓ B B Mor-Gen	T D Modi-Mech Y D Chaudhary-Mech	J V Kureshi-IC A N Patel-Civil R P Chavda- Elect S P Mahant-Mech
10	Women Development cell	M M Shah-IC	V G Patel-Mech	M K Pedhadia-EC P D Sheth-Civil S N Chauhan-Mech F M Patel - Civil
11	Internal Complaint Committee	P G Chauhan-Mech	P D Sheth-Civil	M K Pedhadia-EC
12	Grievance redressal	A D Shah - Elect	P G Chauhan-Mech	M M Shah-IC M F Tank-General ✓
13	CCC Fee Reversal	✓ M F Tank-Gen	R M Prajapati-Elect	N H Oza-Mech
14	SC-ST Cell	P G Chauhan-Mech	C M Amin-Mech	Y T Rana - Civil
15	Physical Disable Cell	N A Modi-Mech	I P Kharodiya (S.K.)	
16	RTO learning License	B N Prajapati-Mech	S P Mahant-Mech	Rotational order
2 Head, Student Affairs :				
1	ACPDC Help Center Awareness program	✓ M F Tank-Gen	F A Mukhi-Civil V A Chauhan-IC	Detail Order
2	GTU	B N Prajapati-Mech	V P Patel-Civil P K Bhavsar -Elect	S P Joshiyara-EC V B Chaudhary-Mech
3	Student Section	M M Shah-IC	M K Pedhadia-EC R C Parmar-EC S N Chauhan-Mech	F M Patel-Civil M R Zala-Mech N H Oza-Mech R M Prajapati-Elect P D Sheth-Civil
4	Gymkhana NSS Ek Bharat Shrestha Bharat (EBSB)	✓ J D Modi-General	M K Prajapati-Mech J N Chaudhary-App.	F M Patel-Civil D P Judal-Mech J V Kureshi -IC R M Prajapati-Elect V B Chaudhary-Mech P K Bhavsar -Elect (NSS) N J Chauhan-EC
5	ISTE Chapter	D N Sheth-Civil	H P Patel-Civil	V M Prajapati-Mech N J Chauhan-EC A V Gajjar-Elect

Figure 9.1.4: Institute-Level Committees and Work Distribution Order (Page 2 of 6)

6	Alumni Association	A R Patel-Elect	F A Mukhi-Civil	N A Modi -Mech R N Patel-EC V A Chauhan-IC P K Bhavsar-Elect
7	VISHWA-KARMA YOJNA	D N Sheth-Civil	A N Patel-Civil	P K Bhavsar-Elect
8	MYSY	S D Dabhi-Principal (SSO)	D P Judal-Mech N N Chaudhary-Mech (Scrutiny)	V M Prajapati-Mech R L Chaudhary-Mech
9	Anti Ragging Committee Anti Ragging Squade	D D Prajapati-Mech	R P Chavda-Elect	F A Mukhi-Civil C P Gehlot - General ✓
10	Psychology Cell	A R Patel-Elect	J V Kureshi-IC	Y D Chaudhary-Mech
11	Education Loan	J B Patel-Mech	N H Oza-Mech	R P Chavda-Elect
3 Head, Store & Purchase:				
1	Central Store Purchase on GeM New items / Vikaslaxi / CSS Tendering Outsourcing etc. Physical Verification	A D Shah-Elect	T P Purohit-Elect Y D Chaudhary-Mech	N V Prajapati -Civil J N Chaudhary-Applied R L Chaudhari-Mech C S Pandya-Gen ✓ L K Patel-EC
2	Local Purchase Committee	Principal	Store Officer As Member Secretary	All HoD As A Member ✓
3	Write-off	A D Shah-Elect	N N Chaudhary-Mech N V Prajapati-Civil	A.M Qureshi-Elect L K Patel-EC C S Pandya-Gen ✓ J N Chaudhary-Applied V G Patel-Girl's hostel D H Desai-Boys' hostel B N Raval-Library
4 Head, Academics:				
1	Institute Time table Institute Overload Academic Calendar	I D Chaudhary-Elect	T D Modi-Mech	Y T Rana-Civil N H Oza - Mech A M Qureshi-Elect R C Parmar-EC M F Tank-Gen ✓ J N Chaudhary-Applied
2	AICTE Approval GTU Affiliation	S J Chauhan-EC	C M Amin-Mech N J Chauhan-EC	A R Patel-Civil D H Desai-Mech R P Chavda-Elect V A Chauhan-IC J D Modi-Gen ✓ R J Patel-Applied

Figure 9.1.5: Institute-Level Committees and Work Distribution Order (Page 3 of 6)

3	AICTE PARAKH	S J Chauhan-EC	I D Chaudhary-Elect	N V Oza-Mech R J Patel-Applied A R Patel-Civil M K Prajapati-Mech
4	NBA	N V Oza-Mech	A M Qureshi-Elect M K Pedhadiya – EC A R Patel-Civil	M K Prajapati -Mech J D Modi – Gen ✓
5	SSIP CIC3 IPR Hackathone	L K Patel-EC	B M Patel-Elect	Y T Rana-Civil V H Suthar-Mech M J Dabgar-EC V A Chauhan-IC
6	MERITE	B M Patel-Elect	B B Mor – Gen ✓	
7	CLEANLINESS	M M Shah-IC	J D Modi-General ✓ R L Chaudhary-Mech	P D Sheth-Civil V G Patel-Mech A V Gajjar-Elect P.G.Chauhan(W/S) D H Desai-Mech V A Chauhan-IC L K Patel-EC B N Raval (LRUC)
8	NEP GSIRF	M J Vadhavaniya-IC	F M Patel-Civil	C M Amin-Mech S N Chauhan-Mech H P Patel-Civil T P Purohit-Elect
9	Academic Coordinator (NEP)	M J Vadhavaniya-IC	H P Patel-Civil	M R Zala-Mech T D Modi-Mech N J Chauhan-EC
10	ABC ID	L K Patel-EC	M J Vadhavaniya-IC	B N Prajapati-Mech S P Mahant-Mech H P Patel-Civil T P Purohit-Elect
5	Head, Infrastructure & Maintenance:			
1	Civil Works /maintenance R&B (Civil) Liason For College campus Hostel campus Staff Quarters, *Fire N.O.C	D N Sheth-Civil	F A Mukhi-Civil	A N Patel-Civil (Quarters)
2	Electrical maintenance , (College + Hostels + Street) Billing R&B (Elect) liason, Solar Panel etc., Fire N.O.C	A R Patel - Elect	T P Purohit – Elect	

Figure 9.1.6: Institute-Level Committees and Work Distribution Order (Page 4 of 6)

3	Mechanical Maintenance RO & Water Cooler, AC Maintenance, Fire Extinguisher	V H Suthar - Mech	J B Patel -Mech	N N Chaudhary-Mech
4	Quarter Allotment	D N Sheth-Civil	R J Patel-Applied	V P Patel-Civil
5	Security (Monitoring of Institutional Discipline)	✓ B B Mor-Gen	V B Chaudhary-Mech	N V Prajapati-Civil T P Purohit -Elect N J Chauhan-EC T D Modi-Mech
6	CWAN, Lease Line / Internet, CCTV, NAMO WIFI, Video Conferencing	M J Dabgar -EC	J V Kureshi -IC	S P Joshiara-EC D H Desai- Mech A M Qureshi-Elect
7	Cogent, Website, KYC	S P Joshiara-EC	R N Patel-EC M R Zala-Mech	N V Prajapati - Civil C M Amin - Mech R M Prajapati -Elect J D Modi-General ✓ M B Valagot-Office B N Raval-Lib
		P K Bhavsar-Elect	Coordinator of AKKAM/ Electoral Literacy/ PANCHPRAKALP/ Voter Awareness/ Yoga Day	
		C S Pandya- General	Coordinator of SCOPE ✓	
		A M Kureshi-Elect	Coordinator of Training	
		B M Patel-Elect	Coordinator of SSIP / Startup / Innovation	
		I D Chaudhary- Elect	Nodal Officer of EDC	
		J V Kureshi-IC	Coordinator of Climate Change	
		J N Chaudhary- Applied	Coordinator of Cyber Club	
		M J Vadhavaniya- IC	Coordinator of NEP2020 Conference (SOU)	
		M J Dabgar-EC R M Prajapati- Elect V A Chauhan-IC Y T Rana-Civil	Coordinator of SSIP	
		S P Joshiara-EC	Coordinator of ETRP (COGENT)	
		V B Chaudhary- Mech	G20 NODAL OFFICER	
		K A Patel-IC	ENVIRONMENTAL NODAL OFFICER	
		M M Shah-IC	CLEANLINESS NODAL OFFICER Swachhta Hi Seva Coordinator	
6	Head, Industry & Outreach:			
1	Training and Placement Cell, Placement Fair Industry Linkages MOU etc.	N V Oza-Mech	I D Chaudhary-Elect J B Patel-Mech	Y T Rana-Civil D P Judal-Mech M J Dabgar-EC A V Gajjar-Elect

Figure 9.1.7: Institute-Level Committees and Work Distribution Order (Page 5 of 6)

2	MAY , PMKVY; DSC, D. Voc (AICTE) BISAG	S J Chauhan-EC	A V Gajjar-Elect	M J Vadhvaniya-IC D P Judal-Mech H P Patel-Civil
3	Finishing school GKS SCOPE Language Lab etc.	✓ C S Pandya – General	Y T Rana-Civil	V A Chauhan-IC M K Prajapati-Mech R M Prajapati-Elect M J Dabgar-EC N A Modi-Mech
4	RUSA A I S H E	✓ C P Gelot-Gen	S N Chauhan-Mech	A R Patel - Civil B M Patel – Elect R C Parmar-EC N A Modi-Mech
5	CDTP	P G Chauhan- Mech	P D Sheth-Civil K A Patel-IC	
6	MEDIA CELL VC DATA Inspection data (Academic)	N A Modi-Mech	V B Chaudhary-Mech	B N Prajapati-Mech S P Mahant-Mech N V Prajapati-Civil A V Gajjar-Elect N J Chauhan-EC
7	Head, Amenities			
1	Library	K A Patel-IC	S N Chauhan-Mech	
2	Hostel Rector	A D Shah-Elect	D H Desai-Boys Hostel V G Patel-Girls Hostel	K B Desai-Office Lobby Coordinator detail order
3	Canteen / Mess	D D Prajapati- Mech	I D Chaudhary-Elect	V P Patel - Civil M R Zala - Mech K A Patel - IC

Note: For Portfolio specific goals and responsibilities and related information refer TEIM for GPs.

Responsibilities of concerned conveners /members:

1. Prepare an annual action plan with clear objectives by following standard methodology considering NBA requirements as benchmark for overall development /smooth functioning of the institute.
2. Do allotment of work among members related to said portfolio.
3. Collection of previous data/documents/proofs from Ex. Convener/ In-charge if required and processed further to achieve the target as planned in action plan..
4. Motivate the team to accomplish the plan work as per annual action plan.
5. Coordinate with committee/members/representatives at regular interval to identify progress/ lagging/follow ups.Submit progress report to principal.
6. Submit confidential report of members related to efficacy of members in fulfilling goals of particular portfolio to Principal to be reflected in PAR and also helping for 360 feedback of individual faculty .
7. In absence of convenor , co convenor has to function as convener. If faculty name is in convenor or co convenor then that faculty must carried out duty as department member also.

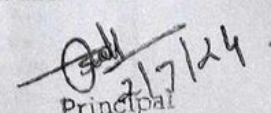

 Principal
 Govt. Polytechnic
 Palanpur

Figure 9.1.8: Institute-Level Committees and Work Distribution Order (Page 6 of 6)

Brief scope of works*Human Resource (For faculty & staff):*

- Institute level overall human resource planning / administration including faculty / staff service level matters.
- Institute legal matters, RTI, educational quality assurance, Training need analysis, Annual performance Redressal.

Student matters:

- Student section related activities/ services, scholarship matters.
- For smooth conduction of the examination and liaisons with university.
- Co-and-Extracurricular activities and responsible for various student amenities.
- Strong bonding with Alumni association.
- To promote NSS / NCC activities in the Institute.
- Various issues including Admission, Ragging, and student counselling.

Academics:

- To ensure the quality of the academics at the Institute level.
- Coordination among various departments to ensure optimum utilization of the Institute level resources.
- First year academic and examination planning.
- To provide academic related data as per the needs of CTE and University.
- Taking care of the AICTE compliance, University affiliation, NBA requirements.
- To promote the innovation among the students.

Store and Purchase:

- Prepare and propose new item requirements based on the Department demands and submit to Directorate of Technical Education office.
- To purchase and planning from non-government funds.
- To take care of write-off procedure, maintenance and calibration of various equipment based on the department request.
- To audit, ensure and keep record of utilization of the equipment.

Infrastructure and Maintenance:

- Institute civil works and liaison with R and B civil/electrical related matters.
- Taking care of overall cleanliness and security of the Institute.
- To look into drinking water facility as well overall Institute ambience.

Industry and Outreach:

- To increase institute-Industry linkage.
- Media and newsletter coordination.
- To ensure the implementation of various GOI/GOG schemes effectively in Institute.
- Explore internship and training opportunities for the students.
- Skill development / Finishing school of the students

Institute Amenities:

- To ensure optimal usage of Institute amenities, like hostel, canteen, centralized computing, library, language lab etc.

B. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee (03)*Grievance Redressal Cell:**Grievance Redressal system in Institute:*

- Various cells are operative at Institute level for addressing the various grievances.
- Grievance Redress Mechanism has been institutionalized through portal.
- The administration mechanism for accountable, responsive and user-friendly approach has been established along with an efficient and effective grievance redress.

Responsibilities of the Grievance Cell

- Addressing the grievance of the students and staff.
- Implementation of the corrective steps to be taken to address the grievances and other related matters.
- To deal with issues raised in anti-ragging committee, examination committee (Related to malpractice issues), Committee against sexual harassment, Women Empowerment committee etc.

Grievance Redressal mechanism

- The students can apply on student portal.
- On receipt of specific complains/ grievance from a student, the Redressal cell meets, analyze the matter and corrective measures are taken wherever necessary.
- In case of urgent issue, one can meet concerned officer at any time.

Anti-Ragging Committee:

- For prevention and prohibition of ragging in the Institute, an Anti-Ragging Committee as mandated by AICTE, has been formed by the institute.

Women Development Cell:

- Women Development Cell is a mandated body as per the Rules and Regulations laid down by AICTE/UGC and MHRD.
- The WDC works with a sole aim of creating hassle-free environment for female students and staff of the campus community thereby enhancing their self-respect and self-confidence.

9.1.4 Delegation of financial powers (05)**A. Demonstrate the utilization of financial powers for each of the assessment years (05)*****Delegation of Financial Powers***

Delegation of financial powers as per the State Government Rules explained as below:

- Controlling Officer – The Principal
- Drawing and Disbursing Officer (DDO) – The Principal
- All HODs are empowered to put the demand as per the requirement for the purchase of laboratory/utility equipment/books/furniture as follows:
 - Item costing above Rs. 25000/-, Head of Department sends proposal to CTE purchase committee through Principal office. CTE Purchase committee consist of domain specific senior faculties from the various Govt. Institutions, headed by respective Joint Director, approves and purchases centrally as per the budget provision. (Through open tendering or Government e-Market (GeM).
 - Item costing below Rs. 25000/-, purchase is made at the Institute level by concerned department with the help of store officer after due approval from Principal office.
 - Consumables as per the requirement are purchased by the HOD with due approval of Head of the Institute.
 - All section heads are empowered to scrutinize proposals made by relevant stakeholders and then purchase with due procedure.
- The institute has specific types of non-government funds such as Gymkhana fund, social gathering fund. The disbursement of these funds is done by the principal as per recommendation of relevant committee.

9.1.5 Transparency and availability of correct/unambiguous information in public domain (05)**A. Information on the policies, rules, processes is to be made available on web site (02)**

(Information on the policies, rules, processes is to be made available on web site. Provision of information in accordance with the Right to Information Act, 2005)

B. Dissemination of the information about student, faculty and staff (03)***Transparency and Availability of Information***

Information on policies, rules, processes and its dissemination are made available to the stakeholders on Institute/CTE/University website.

- All India Council for Technical Education (AICTE) EOA letters are available on Institute website.
- The information related to admission in professional courses in Gujarat State is available on ACPDC website (<https://acpdc.gujarat.gov.in>)
- All the necessary institute information regarding the students, staff and other co-curricular activities are available on the Institute website (<https://gppalanpur.ac.in>).
- The syllabus result and other relevant information for students and staff are available on the GTU website (<http://www.gtu.ac.in>).
- The vendor related information and the online bidding process are done through GeM portal for the procurement purpose.
- As a government institute, we are fully transparent in terms of policies, selection, rules, regulations and procedures.
- Details of policies, selection, rules, regulations and procedures are available on following websites.
 - Directorate of Technical Education, Gujarat (<https://www.dte.gujarat.gov.in/>).
 - Education Department, Government of Gujarat (<http://gujarat-education.gov.in>).
 - Gujarat Public Service Commission (<http://gpsc.gujarat.gov.in>).
- All the information pertaining to Right to Information Act is available on institute website (<https://gppalanpur.ac.in/rti/>).

9.2 Budget Allocation, Utilization, and Public Accounting at Institute level (10)

Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years.

Total Income at Institute level:

Table 9.2.1: Institute Income and Expenditure, Year-wise, 2022-23 to 2025-26 (Rupees in Lakh)

Year	Students	Total Income (Rs/-)				Actual Expenses (Rs/-)			Expenses per student
		Fee	Govt.	Grant(s)	Other Sources *	Recurring incl. Salaries	Non-recurring	Special Projects / Any other **	
2025-26	692	1.57	12.66	1493.65	0.00	1488.54	0	10.09	2.17
2024-25	635	5.36	5.03	1483.50	5.11	1455.72	0	1.46	2.29
2023-24	543	4.53	5.32	1342.28	10.51	1337.15	0	8.53	2.48
2022-23	436	4.31	4.04	1313.31	7.06	1312.54	0	8.27	3.03

* **Other Sources:** 2025-26 — KCG: 0.00 2024-25 — KCG: 511000 2023-24 — KCG: 511000, SSIP: 540000
2022-23 — KCG: 255500, SSIP: 450000

** **Special Projects / Any other:** 2025-26 — KCG: 383250, CDTP: 138000, SSIP: 487837 2024-25 —
CDTP: 96500, RUSA: 1186, SSIP: 49005 2023-24 — KCG: 511000, CDTP: 28600, RUSA: 26500, SSIP: 287013
2022-23 — KCG: 511000, CDTP: 156168, RUSA: 22930, SSIP: 137303.5

Institute Utilization Table (Rupees in Lakh)

Table 9.2.2: Institute Budget Utilization – Item-wise Budget vs Expenses, 2022-23 to 2025-26

Sr. No	Item	2022-23		2023-24		2024-25		2025-26	
		Budget (Rs.)	Expenses (Rs.)	Budget (Rs.)	Expenses (Rs.)	Budget (Rs.)	Expenses (Rs.)	Budget (Rs.)	Expenses (Rs.)
1	Teaching and non-teaching staff salary	1220.13	1220.11	1233.00	1231.79	1292.00	1291.13	1385.0	1384.67
2	Contingency (light bill / telephone bill, training & travel, books, building maintenance)	25.00	24.26	32.98	30.02	54.78	32.77	38.78	34.00
3	Housekeeping & Contractual servants (security service & cleanliness), visiting faculty remuneration	62.42	62.41	76.30	75.35	84.67	80.64	68.49	68.47
4	Furniture, Laboratory equipment, consumables	5.76	5.75	0.00	0.00	52.05	51.17	1.384	1.382
5	Advance (festival & food grain) for class-4 staff	0	0	0	0	0	0	0	0
Total		1313.31	1312.54	1342.28	1337.15	1483.50	1455.72	1493.65	1488.54

9.2.1 Adequacy of budget allocation (04)

(The institution needs to justify that the budget allocated over the years was adequate)

Prior to each financial year, each department is preparing non-recurring budget requirement while account office is preparing the recurring budget requirement. The consolidated (recurring and non-recurring) budget requirement is prepared at institute level by the account office and submitted to Commissionerate of technical education for further approval of education department. Budget re-appropriation process is carried out at CTE level after 3rd quarter of the financial year to ensure the allocated budget is as per requirement for smooth functioning of the academic activities.

Details and justification of adequacy of Budget Allocation is as follows:

Table 9.2.3: Adequacy of Institute Budget Allocation – Allocation vs Expenditure

Sr. No	Year	Allocated Budget (Rs.)	Expenditure (Rs.)	Remarks
1	2025-26	1493.65	1488.54	Adequate
2	2024-25	1483.50	1455.72	Adequate
3	2023-24	1342.28	1337.15	Adequate
4	2022-23	1313.31	1312.54	Adequate

9.2.2 Utilization of allocated funds (04)

(The institution needs to state how the budget was utilized during the last three years)

Table 9.2.4: Utilization of Allocated Funds at Institute Level – Percentage Utilization

Sr. No	Year	Allocated Budget (Rs.)	Expenditure (Rs.)	Utilization (%)
1	2025-26	1493.65	1488.54	99.66
2	2024-25	1483.50	1455.72	98.13
3	2023-24	1342.28	1337.15	99.62
4	2022-23	1313.31	1312.54	99.94

The allocated budget by the government to the institute for last three years was satisfactory and was utilized as per the details provided in **Utilization Table**.

9.2.3 Availability of the audited statements on the institute's website (02)

(The institution needs to make audited statements available on its website)

In the Government Institute audit is carried out by

1. Our Head office i.e. Commissionerate of Technical Education, Gandhinagar, Gujarat State.
2. Office of Accountant General, Rajkot.

Audited statements are available on Institute website.

Last CTE and A G Audit detail are as follows:

Table 9.2.5: Latest CTE and Accountant General Audit Details

Audit	Visit Date	Period covered
CTE Audit	24-06-2024 to 26-06-2024	April-2023 to March-2024
A G Audit	06-12-2023 to 13-12-2023	December-2015 to October-2023

9.3 Department Specific Budget Allocation, Utilization (05)

EC Department

For 2025-26 (Rupees in Lakh)

As per the total staff member of faculties recurring amount has been specified for department.

Table 9.3.1: EC Department Income and Expenditure – 2025-26 (Rupees in Lakh)

Total Income: 181.52		Actual Expenditure: 181.52		Total No. of Students: 24
Income: Non recurring	Income: Recurring (Salary)	Expenditure: Non recurring	Expenditure: Recurring (Salary)	Expenditure per Student
2.31	179.22	2.31	179.22	7.56

Non –Recurring Table

Table 9.3.2: EC Department Non-Recurring Expenditure Breakup – 2025-26

Non –Recurring Expenditure	Amount (Rupees in Lakh)
Computer/Equipment	0.09
Furniture	2.02
Library (books)	0.20
Total	2.31

For 2024-25 (Rupees in Lakh)

As per the total staff member of faculties recurring amount has been specified for department.

Table 9.3.3: EC Department Income and Expenditure – 2024-25 (Rupees in Lakh)

Total Income: 145.54		Actual Expenditure: 145.54		Total No. of Students: 25
Income: Non recurring	Income: Recurring (Salary)	Expenditure: Non recurring	Expenditure: Recurring (Salary)	Expenditure per Student
7.96	137.58	7.96	137.58	5.82

Non –Recurring Table

Table 9.3.4: EC Department Non-Recurring Expenditure Breakup – 2024-25

Non –Recurring Expenditure	Amount (Rupees in Lakh)
Computer/Equipment	7.52
Furniture	0.44
Library (books)	0.00
Total	7.96

For 2023-24 (Rupees in Lakh)

As per the total staff member of faculties recurring amount has been specified for department.

Table 9.3.5: EC Department Income and Expenditure – 2023-24 (Rupees in Lakh)

Total Income: 151.15		Actual Expenditure: 151.15		Total No. of Students: 23
Income: Non recurring	Income: Recurring (Salary)	Expenditure: Non recurring	Expenditure: Recurring (Salary)	Expenditure per Student
1.27	149.88	1.27	149.88	6.57

Non –Recurring Table

Table 9.3.6: EC Department Non-Recurring Expenditure Breakup – 2023-24

Non –Recurring Expenditure	Amount (Rupees in Lakh)
Computer/Equipment	1.27
Furniture	0.00
Library (books)	0.00
Total	1.27

For 2022-23 (Rupees in Lakh)

As per the total staff member of faculties recurring amount has been specified for department.

Table 9.3.7: EC Department Income and Expenditure – 2022-23 (Rupees in Lakh)

Total Income: 134.32		Actual Expenditure: 134.32		Total No. of Students: 25
Income: Non recurring	Income: Recurring (Salary)	Expenditure: Non recurring	Expenditure: Recurring (Salary)	Expenditure per Student
4.32	130.00	4.32	130.00	5.37

Non –Recurring Table

Table 9.3.8: EC Department Non-Recurring Expenditure Breakup – 2022-23

Non –Recurring Expenditure	Amount (Rupees in Lakh)
Computer/Equipment	4.20
Furniture	0.11
Library (books)	0.00
Total	4.32

Utilization Table (EC Department) (Rupees in Lakh)

Table 9.3.9: EC Department Budget Utilization – Item-wise Budget vs Expenses, 2022-23 to 2025-26

Sr. No	Item	2022-23		2023-24		2024-25		2025-26	
		Budget (Rs.)	Expenses (Rs.)	Budget (Rs.)	Expenses (Rs.)	Budget (Rs.)	Expenses (Rs.)	Budget (Rs.)	Expenses (Rs.)
1	Infrastructure Built-up	0	0	0	0	0	0	0	0
2	Library	0	0	0	0	0	0	0.2	0.2
3	Laboratory Equipment	4.20	4.20	1.27	1.27	7.52	7.52	0.09	0.09
4	Software	0	0	0	0	0	0	0	0
5	Furniture	0.11	0.11	0	0	0.44	0.44	2.02	2.02
6	Laboratory Consumables	0	0	0	0	0	0	0	0
7	Maintenance and Spares	0	0	0	0	0	0	0	0
8	R&D	0	0	0	0	0	0	0	0
9	Teaching & non-teaching staff salary	130.00	130.00	149.88	149.88	137.58	137.58	179.22	179.22
10	Miscellaneous expenses (Light, Rent, Public Advert)	0	0	0	0	0	0	0	0
11	Training & Travel	0.14	0.14	0.15	0.15	0.37	0.37	0.21	0.21
Total		134.45	134.45	151.30	151.30	145.91	145.91	181.74	181.74

9.3.1 Adequacy of budget allocation (02)

(In this section, the institution needs to justify that the budget allocated over the assessment years was adequate)

Prior to each financial year, each department is preparing non-recurring budget requirement while account office is preparing the recurring budget requirement. The consolidated (recurring and non-recurring) budget requirement is prepared at institute level by the account office and submitted to Commissionerate of technical education for further approval of education department. Budget re-appropriation process is carried out at CTE level after 3rd quarter of the financial year to ensure the allocated budget is as per requirement for smooth functioning of the academic activities.

EC Department

Details and justification of adequacy of Budget Allocation is as follows:

Table 9.3.10: Adequacy of EC Department Budget Allocation – Allocation vs Expenditure

Sr. No	Year	Allocated Budget (Rs.)	Expenditure (Rs.)	Remarks
1	2025-26	181.74	181.74	Adequate
2	2024-25	145.91	145.91	Adequate
3	2023-24	151.30	151.30	Adequate
4	2022-23	134.45	134.45	Adequate

9.3.2 Utilization of allocated funds (03)

(In this section, the institution needs to state how the budget was utilized during the last three assessment years)

EC Department

Table 9.3.11: Utilization of Allocated Funds – EC Department Percentage Utilization

Sr. No	Year	Allocated Budget (Rs.)	Expenditure (Rs.)	Utilization (%)
1	2025-26	181.74	181.74	100%
2	2024-25	145.91	145.91	100%
3	2023-24	151.30	151.30	100%
4	2022-23	134.45	134.45	100%

9.4 Library and Internet (20)

It is assumed that zero deficiency report was received by the institution, Effective availability and utilization to be demonstrated.

9.4.1 Quality of learning resources (hard/soft) (10)

A. Availability of relevant learning resources including e-resources and Digital Library (07)

- The library acts as a key resource and learning center of the Institute. Library maintains records of books, Journals and Newsletters. The library issues the books to the students.
- The books are arranged in dedicated cupboards and labeled relevantly. The books related to technical courses are available in the library of all available programs.
- Books related to soft skills also available in the library. As a part of digitalized library, the Institute is having access of various E-books, Library blog and e-content.
- Details of the library and its services are mentioned in Table 9.4.1, various types of Learning resources are available in the library.
- Library contains technical as well as soft skill related books. New titles added every year are specified in Table 9.4.2
- E-Journal details are mentioned in Table 9.4.3

Table 9.4.1: Library Service Overview

Library Service	Yes
The total area of the library (in Sq. meter)	769.20 Square meter
Total seating capacity	30
Number of Books Issued Per day(average)	2
Number of visitors per day	20
Number of library staff	1
Computerization for search	Yes
Issue/return records maintained	Yes
Library Additional Services	Internet, Library Blog, e-Journals, e-Books, new arrivals display

Table 9.4.2: Library Titles and Volumes Added Year-Wise

Year	Number of New Titles Added	Number of Volumes Added	Amount utilized (Rs)
2018-2019	113	227	86299/-
2019-2020	189	1049	63443/-
2020-2021	20	122	37699/-
2021-2022	154	170	27956/-
2022-2023	10	41	17275/-
2023-2024	07	43	26846/-

Year	Number of New Titles Added	Number of Volumes Added	Amount utilized (Rs)
2024-2025	38	138	110635/-
2025-2026	32	73	60037/-

Table 9.4.3: Subscribed e-Journals by Programme

Program	NAME OF JOURNAL	Publisher Name
E.C. Engineering	Inventi Impact Antennas & Propagation	Inventi Journals Pvt. Ltd.
IT & ICT Engineering	Inventi Impact Artificial Intelligence	Inventi Journals Pvt. Ltd.
Civil Engineering	Inventi Impact Civil Structures	Inventi Journals Pvt. Ltd.
Electrical Engineering	Inventi Impact Electrical Engineering	Inventi Journals Pvt. Ltd.
Mechanical Engineering	Inventi Impact Mechanical Engineering	Inventi Journals Pvt. Ltd.
EC and ICT Engineering	Inventi Impact VLSI	Inventi Journals Pvt. Ltd.

Table 9.4.4: Free Open-Access e-Journals Linked on the Library Blog

E-Journals (Free Open Access) link available on library blog	
Sr. No.	Name of Journal
1	International Journal of Advances in Applied Sciences
2	International Journal of Informatics and Communication Technology
3	International Journal of Social Networking and Virtual Communities
4	International Journal of Electronic and Telecommunications
5	Advances in Electrical and Electronic Engineering
6	Journals of Civil and Environmental Engineering
7	Advances in Automobile Engineering
8	Industrial Engineering And Management
9	International Journal of Advance Innovations, Thoughts and Ideas
10	International Journal of Sensor Networks and Data Communications
11	Irrigation & Drainage Systems Engineering
12	Journal of Applied Mechanical Engineering
13	Journal of information Technology and Software Engineering
14	Journal of Telecommunication System and Management
15	Lovotics
16	Advances in Robotics and Automation

E-Journals (Free Open Access) link available on library blog	
Sr. No.	Name of Journal
17	Biosensors Journal
18	Global Journal of Technology and Optimization
19	Innovative energy and Research
20	International Journal of Advancements in Technology
21	Journal of Aeronautics and Aerospace Engineering
22	Journal of Architectural Engineering Technology
23	Journal of Electrical and Electronics Systems
24	Journal of Steel Structures & Construction
25	Journal of Textile science and Engineering
26	International Journal of Advance Research in Electrical, Electronics and Instrumentation Engineering
27	International Journal of Innovative Research in Computer and Communication Engineering
28	International Journal of Innovative Research in Science, engineering and Technology
29	Journal of Global Research in Computer Sciences
30	Research & Reviews: Journal of Engineering and Technology
31	Research & Reviews: Journal of Educational Studies
32	Research & Reviews: Journal of Engineering and Technology

B. Accessibility to students (03)

- Details of accessibility to Learning Resources center to students is mentioned below

Table 9.4.5: Digital Library and Internet Facilities for Students

Digital Library Service	Yes, (Students and Staff are registered at NDLI and ONOS)
Availability of Internet with computing facilities	Yes
The library resources for diploma students	Textbooks, General Reference Material, and Newspapers are available for reference.
User Orientation	During orientation program of 1st year, students visit Library and are Oriented to utilize effective resources. Department co-ordinates are also guiding the students for efficient use of resources.
Library slot for students	Library slots are included in timetable

9.4.2 Internet (10)

A. Available bandwidth (04)

Table 9.4.6: Available Internet Bandwidth and Service Provider

Sr. No	Name of Internet Service provider (ISP)	Bandwidth	Remarks
1	Bharat Sanchar Nigam Limited (BSNL) (Broadband)	200 Mbps	...

B. Wi-Fi availability (02)

Table 9.4.7: Wi-Fi Availability – Access Points and Bandwidth

No. of Access points	Bandwidth	Remarks
30	200 Mbps	...

C. Internet access in labs, classrooms, library and offices of all Departments (02)

- Internet Access Available in all Laboratories and Classrooms through Campus LAN and Wi-Fi.
- Internet Access Available in offices (Establishment, Exam control room, Account Section and Student Section) through common CWAN LAN as well as separate GSWAN Lease line.
- Total 347 No. of Internet Nodes available in Institute.

D. Security Arrangements (02)

Table 9.4.8: Network Security Arrangement – Firewall Details

Name of Firewall	Model No.	Remarks
Cyberoam	CR500ia	Partially Working

9.5 Institutional Contribution to the Community Development/ Go-green (05)

List of Contribution to the Community Development/ Go-green is attached.

Government Polytechnic, Palanpur contribute their share in Community Development through following activities.

- **CDTP:** Community Development through Polytechnics (CDTP) Scheme is funded by MHRD, New Delhi. Details of CDTP activities are as follows:

Community Wing project was started at Government Polytechnic, Palanpur in the year 1994. Then the scheme is revised as CDTP (Community development through Polytechnic) in 2008. The grant allocation for the project is being done by MHRD, New Delhi. It is governed by the coordinator (Principal) of the institute with the advice of advisory committee as well as executive committee.

For the implementation of CDTP Project, a survey of rural area is being done on primary basis to identify the skill-based need of the society. On the basis of such survey, different short term training program is conducted to enhance employability as well as their self-employment. For the smooth operation of the scheme a community consultant is hired on contract base. In this scheme trainer given remuneration on hour basis and the trainees are trained without any charge means free of cost. Last three years, financial status & progress data is as under.

Table 9.5.1: CDTP Financial Status and Progress – Grants, Expenditure and Persons Trained

Year	Recurring grant (Rs.)	Non-recurring grant (Rs.)	Total (Rs.)	Expenditure (Rs.)	Nos. of trained person	Nos. of employment / self-employment after training
2022-23	2118914.50	593700.00	2712614.50	156168.50	92	44
2023-24	2034580.00	593700.00	2628280.00	28600.00	17	05
2024-25	2077132.00	593700.00	2670832.00	96500.00	76	37
2025-26	2052731.00	593700.00	2646431.00	138000.00	71	44

Table 9.5.2: CDTP Skill Development Training Programmes Conducted in 2024-25

Sr. No	Course Name	No. of Trained person
1	Dress making	20
2	Beauty parlour	15
3	Dress making	16
4	Beauty parlour	11
5	Wiremen	14
Total		76

- **Driving Learning License Center:** Driving Learning License Center of RTO is functioning at institute. Online test through RTO portal is carried out and on successful completion of the test, the applicant is issued a learning license.

Table 9.5.3: Learning Licences Issued at the Institute RTO Centre

Sr No	Year	Number of learning license issued
1	2023	1824
2	2024	1576
3	2025	942

9.6 Alumni Performance and Connect (10)

Government Polytechnic Palanpur Alumni Association (GPPLAA) was established in 2020 with aim to promote brotherhood among alumni, exchange ideas, spread knowledge, stimulate thinking and help Government Polytechnic Palanpur to provide excellence in the field of engineering. Alumni awareness programs and alumni meet is arranged in Institute.

Objectives of the Alumni Association

- To strengthen the connection between the alumni of the institution and the current students of the institution, the officers/staff/teachers and to provide/make infrastructural facilities in the institution for the educational and all-round development of the institution and present students.
- To involve the alumni of the institution in various activities conducted by the institution for institutional and social development.
- To find employment opportunities for current and former students of the institution.
- To provide scholarships for educational assistance to needy students studying in the institution.
- To give achievement/encouragement awards to brilliant students studying in the institution.
- To provide reimbursement of registration fees and travel expenses as an incentive to the students and faculty members of the institution to participate in educational activities such as conferences, workshops, technical symposia held in the state and across India.
- To organize different types of activities for the welfare of the alumni of the institution.
- To organize the alumni of the institution and make them partners in achieving scientific and technological development of the nation and the world by organizing various activities.
- To organize institutional/political/national discussions and seminars to provide guidance on knowledge and career progression to the current and former students of the institution.
- To manage the funds collected in the organization in a systematic manner as per the requirement and to increase it by investing it partially/fully in appropriate places.
- To organize activities that encourages students to develop entrepreneurial qualities and contribute to technological innovation.
- To strengthen the institution's linkages with industrial organizations.
- To organize other pre-planned or incidental activities falling within the legal provisions similar to the above activities to fulfill the objectives of the organization.

Alumni committee

Table 9.6.1: Alumni Committee – Institute-Level Composition

Sr. No	Name	Name of Department	Designation
1	Mr.A.R.Patel	EE	Convener
2	Mr.F.A.Mukhi	CIVIL	Co-Convener
3	Mr.N.A.Modi	ME	Member
4	Dr.R.N.Patel	EC	Member
5	Mr.V.A.Chauhan	IC	Member
6	Mr.P.K.Bhavsar	EE	Member

Alumni Association Executive Committee

Table 9.6.2: Alumni Association Executive Committee – Office Bearers

Sr. No	Name	Designation
1	Mr.Sureshbhai Dalabhai Dabhi	President
2	Mr.Mohanbhai Danabhai Parmar	Vice-President
3	Mr.AshokKumar Ramjibhai Patel	Secretary
4	Mr.Wasimkhan Sikandarkhan Sama	Treasurer
5	Mr.Ishwarbhai Dahyalal Chaudhary	Member
6	Mr.Rohitkumar Manubhai Prajapati	Member
7	Mr.Chauhan Gautamkumar Nanjibhai	Member
8	Mrs.Kusumben Chandrakant Rawal	Member
9	Mr.Kirankumar Chhaganlal Desai	Member

Alumni meetings

Table 9.6.3: Alumni Meets Held – Dates and Participation

Sr. No	Event	Date	Participant
1	Alumni Meet-2022	26-06-2022	12
2	Alumni Meet-2023	05-02-2023	62
3	Alumni Meet-2024	19-11-2023	16
4	Alumni Meet-2025	19-01-2025	6
5	Alumni Meet-2026	11-01-2026	15

Part III

Part C

Declaration

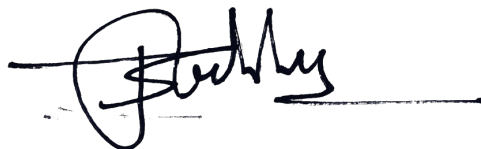
The head of the institution needs to make a declaration as per the format given below:

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institute shall fully abide by them.

It is submitted that information provided in this Self- Assessment Report is factually correct. I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA in case any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

Date: _____

Place: Palanpur



Signature

Name: Mr. Sureshkumar D. Dabhi

**Designation of the Head of the Institution
with seal**

Principal (I/C),
Government Polytechnic, Palanpur

Annexure 1

(A) Program Outcomes (POs)

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
2. **Problem analysis:** Identify and analyse well-defined engineering problems using codified standard methods.
3. **Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
4. **Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
5. **Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
6. **Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
7. **Life-long learning:** Ability to analyse individual needs and engage in updating in the context of technological changes.

(B) Program Specific Outcomes (PSOs)

The Diploma programme in Electronics & Communication Engineering specifies the following two Program Specific Outcomes:

1. **PSO1:** Demonstrate proficiency in installation and problem solving of electronics and communication equipment.
2. **PSO2:** Proficiency in specialized software packages and coding useful for the analysis of electronics engineering systems and PCB design.