BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING FOR WOMEN

Electronics and Telecommunication Engineering

Part A : Institutional Information

1 Name and Address of the Institution

BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING FOR WOMEN,
Pune Satara Road, Dhankawadi, Taluka Haweli

2 Name and Address of Affiliating University

Savitribai Phule Pune University

3 Year of establishment of the Institution:

2000

4 Type of the Institution:

☐ University	☐ Autonomous
☐ Deemed University	☑ Affiliated
☐ Government Aided	

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:

Name of Institutions	Year of Establishment	Programs of Study	Location
Institute of Management and Entrepreneurship Development	1978	BBA, BCA, MCA, MBA, Ph.D.	Pune
New Law College, Pune	1978	B.A.LL.B, B.B.A.LL.B, LL.B,LL.M	Pune
Yashwantrao Mohite College of Arts, Science and Commerce	1978	B.A., B. Com., B.Sc., M.A., M.Sc.	Pune
Abhijit Kadam Institute of Management and Social Sciences, Solapur	1981	BBA,BCA,MBA and MCA	Solapur
Medical College, Pune	1981	MBBS, MD/MS, M.Sc.	Pune
Poona College of Pharmacy	1981	Pharm D, B. Pharm and M. Pharm	Pune
Social Sciences Centre (M.S.W)	1981	Master of Social Work(M.S.W)	Pune
Yashwantrao Chavan Institute of Social science studies and Research	1998	M.B.S (Master of Business Studies)	Pune
Dental College & Hospital, Pune	1989	B.D.S., M.D.S.	Pune
College of Ayurved	1990	B.A.M.S, MD,MS Ayurved	Pune
Homeopathic Medical College	1990	BHMS, M.D.	Pune
College of Nursing, Pune	1992	B.SC Nursing, M.SC Nursing	Pune
Institute of Hotel Management & Catering Technology	1992	BHMCT, BSc (H & HA)	Pune
Institute of Management and Research	1992	BBA, BCA, MBA, LL.B PhD	New Delhi
College of Physical Education	1994	B. PEd, M. PEd , PhD	Pune
Institute of Environment Education and Research	1994	M.Sc., PhD	Pune
Institute of Management and Rural Development Administration	1994	BBA, BCA, MBA and MCA	Sangli
Institute of Management	1994	MBA, MCA	Kolhapur
Yashwantrao Mohite Institute of Management	1994	BBA, BCA, MBA, MCA	Karad
Interactive Research School & Health Affairs	2001	PhD	Pune
Rajiv Gandhi Institute of Information Technology & Bio-Technology	2003	B.Sc., M.Sc. Ph.D.	Pune
Dental College & Hospital	2005	BDS, MDS	Navi Mumbai
Medical College & Hospital	2005	MBBS, MS, MD	Sangli
Dental College & Hospital	2006	BDS, MDS	Sangli
College of Nursing	2007	BSc, MSc	Sangli
College of Architecture	1994	B. Arch, March, PhD	Pune
College of Nursing	2009	BSc , MSc	Navi Mumbai
School of Physiotherapy	2021	Bachelor of Physiotherapy	Sangli

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

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 and Telecommunication Engineering	UG	2000	2000	60	Yes	120	Applying first time	--	--	Yes	4
Electronics and Telecommunication Engineering	PG	2013	2013	18	Yes	9	Not eligible for accreditation	--	--	No	2

Sanctioned Intake for Last Five Years for the Electronics and Telecommunication Engineering	
Academic Year	**Sanctioned Intake**
2024-25	09
2023-24	09
2022-23	09
2021-22	18
2020-21	18
2019-20	18

Information Technology	UG	2000	2000	60	No	60	Applying first time	--	--	0	4
Computer Engineering	UG	2000	2000	60	Yes	120	Applying first time	--	--	0	4

Sanctioned Intake for Last Five Years for the Computer Engineering	
Academic Year	**Sanctioned Intake**
2024-25	120
2023-24	60
2022-23	60
2021-22	60
2020-21	60
2019-20	60

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Computer Engineering
2	Under Graduate	Engineering & Technology	Information Technology
3	Under Graduate	Engineering & Technology	Electronics and Telecommunication Engineering

9 Total number of employees in the institution:

A. Regular* Employees (Faculty and Staff):

Items	2024-25		2023-24		2022-23	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	11	12	12	12	12	13
Faculty in Engineering (Female)	37	39	36	36	38	40
Faculty in Maths, Science & Humanities (Male)	08	08	05	05	05	05
Faculty in Maths, Science & Humanities (FeMale)	05	05	04	04	04	04
Non-teaching staff (Male)	46	46	43	43	40	40
Non-teaching staff (FeMale)	13	13	12	12	10	10

B. Contractual* Employees (Faculty and Staff):

Items	2024-25		2023-24		2022-23	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	0	1	0	1	0	0
Faculty in Engineering (Female)	0	1	2	2	2	2
Faculty in Maths, Science & Humanities (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (FeMale)	0	0	0	0	0	0
Non-teaching staff (Male)	0	0	0	0	0	0
Non-teaching staff (FeMale)	0	0	0	0	0	0

10 Total number of Engineering Students:

Engineering and Technology- UG	☑ Shift1	☐ Shift2
Engineering and Technology- PG	☑ Shift1	☐ Shift2
Engineering and Technology- Polytechnic	☐ Shift1	☐ Shift2
MBA	☐ Shift1	☐ Shift2
MCA	☐ Shift1	☐ Shift2

Engineering and Technology- UG Shift-1

Items	2024-25	2023-24	2022-23
Total no. of Boys	0	0	0
Total no. of Girls	1190	1088	1116
Total	**1190**	**1088**	**1116**

Engineering and Technology- PG Shift-1

Items	2024-25	2023-24	2022-23
Total no. of Boys	0	0	0
Total no. of Girls	5	4	2
Total	**5**	**4**	**2**

11 Vision of the Institution:

Women Empowerment through Technical Education.

12 Mission of the Institution:

M1: Develop women students to rise to their full potential.

M2: Impart knowledge and prepare competent engineers.

13 Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of the Institution	
Name	Prof. Dr. Pradeep Vitthal Jadhav
Designation	Principal
Mobile No.	9665696022
Email ID	pradeep.jadhav@bharatividyapeeth.edu

NBA Coordinator, If Designated

Name	Prof. Dr. Suvarna Sandip Chorage
Designation	Professor, Vice Principal, IQAC coordinator
Mobile No.	9881717562
Email ID	suvarna.chorage@bharatividyapeeth.edu

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60	57.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	120	112.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120	116.00
4	STUDENTS' PERFORMANCE	150	116.77
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	178.38
6	FACILITIES AND TECHNICAL SUPPORT	80	72.00
7	CONTINUOUS IMPROVEMENT	50	44.00
8	FIRST YEAR ACADEMICS	50	35.83
9	STUDENT SUPPORT SYSTEMS	50	44.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	110.00
	Total	**1000**	**886**

Part B

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

Total Marks 57.00

1.1 State the Vision and Mission of the Department and Institute (5)

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	Women Empowerment through Technical Education.
Mission of the institute	M1: Develop women students to rise to their full potential. M2: Impart knowledge and prepare competent engineers.
Vision of the Department	To develop women professionals to become a valuable resource for industry and society through Electronics and Telecommunication Engineering.
Mission of the Department	

Mission No.	Mission Statements
M1	To provide quality and value based education for women in the field of Electronics and Telecommunication Engineering.
M2	To train women to keep pace with rapidly changing technological needs of industry and research

1.2 State the Program Educational Objectives (PEOs) (5)

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Ability to apply electronics knowledge, to identify formulates and solve Engineering problems.
PEO2	Acquire knowledge to find out workable solutions in the field of Telecommunication.
PEO3	Exhibit programming skills with the use of various software tools
PEO4	Inculcate continuous learning through interdisciplinary approach

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

Total Marks 10.00

Institute Marks : 10.00

A. Adequacy in respect of publication and dissemination

Institutional Vision, Mission, and departmental Vision,Mission and PEOs are adequately published and effectively disseminated among all the internal and external stakeholders. Table 1 a) represents **Publication Media of Vision, Mission and PEOs and Table 1 b) represents Dissemination of Vision, Mission and PEOs.**

Table 1 a) Publication Media of Vision, Mission and PEOs

S.N.	Publishing Media	Internal Stakeholders	External Stakeholders	Outcome of the Effective Process Implementation
1	Institute Website https://coewpune.bharatividyapeeth.edu (https://coewpune.bharatividyapeeth.edu/)	Yes	Yes	1. Management can allocate budgets, faculty, and infrastructure more efficiently. 2.Students understand the purpose behind their learning. 3.Faculty and staff align their teaching, mentoring, and administrative roles accordingly. 4. Alumni actively participate in mentoring students aligned with institutional and departmental goals. 5. Industry institute interactions helps in training and upskilling support to students. 6. Parent-institute interaction is improved.
2	Department Academic Calendar	Yes		
3	Department Library	Yes		
4	Department Notice Board	Yes		
5	Academic Record Book	Yes		
6	Seminar Hall	Yes		
7	Classrooms	Yes		
8	Faculty Course Files	Yes		
9	ERP	Yes		
10	Department Laboratory	Yes		
11	Institute News Letter	Yes	Yes	
12	Institute Magazine	Yes	Yes	
13	Institute Brochure	Yes	Yes	
14	Department Corridors	Yes		
15	Department of E&TC – HoD’s cabin	Yes		
16	Email correspondence	Yes	Yes	

Table 1 b) Dissemination of Vision, Mission and PEOs

S.N.	Dissemination Method	Internal Stakeholders	External Stakeholders	Outcome of the Effective Process Implementation
1	Brochure and Flyers of Programs	Yes	Yes	1. Management can allocate budgets, faculty, and infrastructure more efficiently. 2.Students understand the purpose behind their learning. 3.Faculty and staff align their teaching, mentoring, and administrative roles accordingly. 4. Alumni actively participate in mentoring students aligned with institutional and departmental goals. 5. Industry institute interactions helps in training and upskilling support to students. 6. Parent-institute interaction is improved.
2	Conferences Organized	Yes	Yes	
3	Institute Programs	Yes	Yes	
4	Parent-Teacher Meetings	Yes	Yes	
5	Alumni Meetings	Yes	Yes	
6	Chapter Activities	Yes	Yes	
7	Email Correspondence	Yes	Yes	
8	Institute News Letter	Yes	Yes	
9	Institute Magazine	Yes	Yes	
10	Institute Brochure	Yes	Yes	
11	Academic Record Book	Yes		
12	Project Log Book	Yes		
13	Internship Log Book	Yes	Yes	

B. Process of dissemination among stakeholders

Vision, Mission and PEOs are disseminated to all the stakeholders of the program through meetings with management members, DAB meetings, IQAC meetings, faculty meetings, faculty development programs, student programs, student induction programs, alumni meetings, parent meetings, professional body activities. **Figure 1.3 depicts Dissemination Process Chart of Vision, Mission and PEOs. Dissimination diagram flow is from top to bottom.**

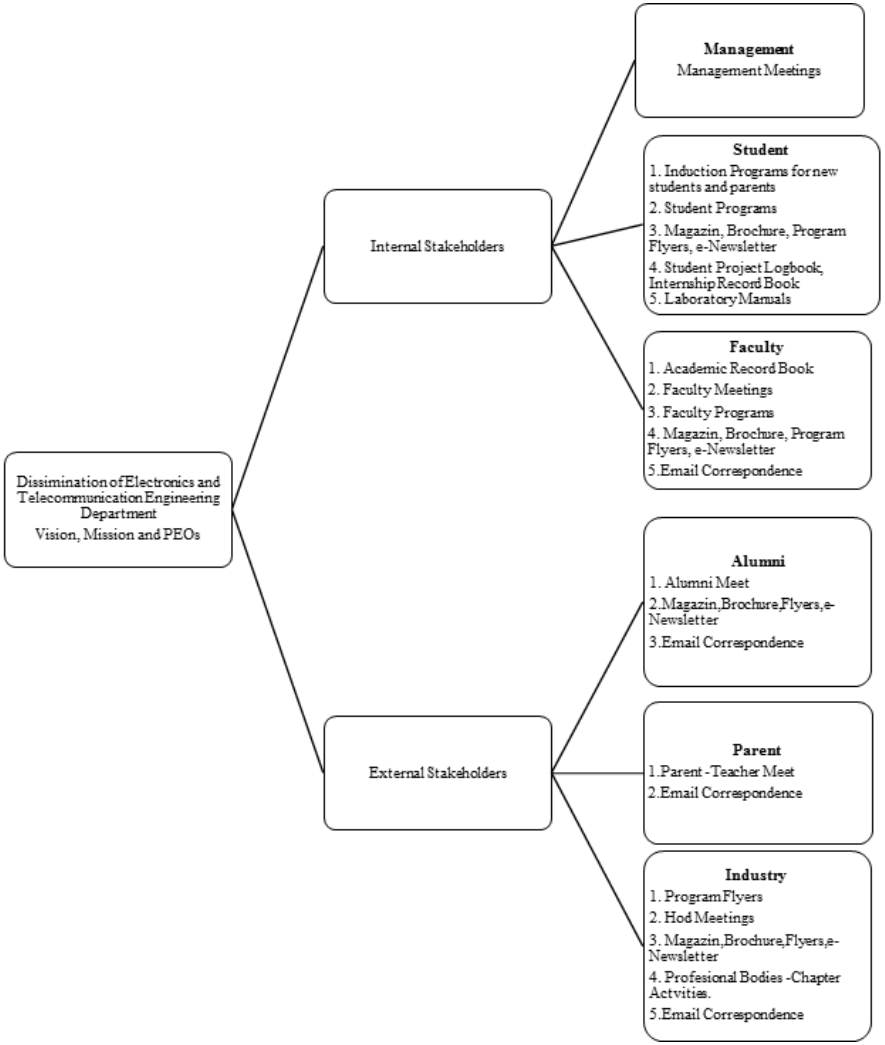


Fig. 1.3 Dissemination Process Chart

C. Extent of awareness of vision, mission and PEOs among the stake holders

Management : Vision, mission and PEOs dissiminated to management members through CDC,GB meetings. A**wareness** of the Vision, Mission, and Programme Educational Objectives (PEOs) among the **management** is **high.** The **management** is actively involved in supporting institutional governance and strategic decision-making. **Board of Governance (BOG) meetings, College development comittee meetings** and **IQAC presentations** regularly highlight the Vision, Mission, and PEOs.

Students: Awareness of vision, mission and PEOs is created among students in induction program through department presentation by HoD. Faculty disseminate vision, mission and PEOs during classroom teaching. Students are regularly exposed to these elements through various programs.

Faculty : Vision, mission and PEOs are disseminated to faculty during the department meetings. These elements are printed in faculty academic record book which is maintained by faculty for each semester. These elements are disseminated among faculty through department presentations during various programs such as workshops, FDPs, conferences etc.

Vision, mission and PEOs are disseminated to external stakeholders :Alumni, Parents and Employers during meetings through department presentations.

Alumni are informed about the Vision, Mission, and PEOs during their academic years, and their awareness is maintained through newsletters, meetings, and social media engagement.

Industry, who engage with the institution during campus placements, internships, and industry collaborations, provide valuable external perspectives.

Parents are informed through orientation programs, parent-teacher meetings, and institutional communication. While their direct engagement may be limited, structured feedback mechanisms help assess their understanding and support for the Vision, Mission, and PEOs. Their views collected during interactions provides insights into how well they internalize and reflect the institutions objectives in their professional lives.

DAB meetings : Vision, mission and PEOs are disseminated to external stakeholders in DAB meetings. These elements are finalized and approved in IQAC meetings.

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25) Total Marks 23.00

Institute Marks : 23.00

A. Description of process involved in defining the Vision and Mission of the Department

The process begins with the broader vision and mission set by the institute. The Department Advisory Board (DAB) convenes meetings to draft the Department's Vision and Mission aligned with the institutes vision and mission. The draft is then sent to the Internal Quality Assurance Cell (IQAC) and College Development Committee (CDC) for final review and approval. Once approved, the final version is published and disseminated to all stakeholders. The framing of vision and mission involved contributions from both internal and external stakeholders.

Internal Stakeholders:

- Management
- Faculty
- Students

External Stakeholders:

- Alumni
- Parents
- Industry

Process Steps Involved:

Step 1 : Views and suggestions were collected from stakeholders through formal meetings.

Step 2 : Brainstorming sessions were conducted in the DAB meetings.

Step 3 : The department vision and mission statements were formulated and revised during DAB meetings.

Step 4 : This formulated vision and mission statements were discussed in IQAC meetings.

Step 5 : These elements are finalized and approved in CDC meeting.

Step 6 : Vision and Mission communicated to management members through management meetings.

Step 7 : The approved department vision and mission statements were published and disseminated to all stakeholders.

B. Description of process involved in defining the PEOs of the Program

PEOs are broad statements that describe the career and professional accomplishments that graduates are expected to achieve within three years or more after graduation. These PEOs are derived from the **Institute Vision and Mission**, **Department Vision and Mission**, and the **Graduate Attributes** defined by NBA.

The framing of PEOs involves contributions from both **internal** and **external stakeholders**.

Internal Stakeholders:

- Management
- Faculty
- Students

External Stakeholders:

- Alumni
- Parents
- Industry

Discussions and brainstorming sessions were conducted among these stakeholders to formulate meaningful and realistic PEOs. After gathering inputs from stakeholders, the PEOs are formulated in the DAB meetings. The Department organizes sessions to discuss, review, and brainstorm potential PEOs using the input from the sources listed above. The formulated PEOs are submitted to the Internal Quality Assurance Cell (IQAC) for discussions and revisions. The finalization and approval is done in IQAC meeting.

Steps for Framing Programme Educational Objectives (PEOs)

Step 1. Identify Reference Inputs:

- Review Institute Vision and Mission.
- Review Department Vision and Mission.

- Consider NBA Graduate Attributes (GAs).

Step 2: Collect Stakeholder Inputs:

- Gather feedback from **internal stakeholders**.
- Collect suggestions from **external stakeholders**.

Step 3 : Formulation of PEOs in DAB meeting

- Organize discussions involving faculty and the Department Advisory Board (DAB).
- Analyze and interpret inputs from stakeholders.
- Align suggestions with the department's vision and mission.
- Formulate draft PEOs based on stakeholder inputs and DAB discussions.
- DAB reviews the draft PEOs in formal meetings.
- Ensure clarity, relevance, and feasibility of each objective.

Step 4 : Finalization and Approval by IQAC

- Discussion of PEOs in IQAC meeting.
- Finalization and approval in meeting.

Step 5 : Communication to Management

- PEOs communicated to management members through management meetings.

Step 6 : Documentation and Communication

- Document the approved PEOs in official records.
- Communicate them to all stakeholders (faculty, students, alumni,Industry,Parents)

1.5 Establish consistency of PEOs with Mission of the Department (15) Total Marks 14.00

Institute Marks : 14.00

A. Preparation of a matrix of PEOs and elements of Mission Statements

Table 1.5.1 Performance Key Indicators and Finding strength for PEOs-Mission Mapping Matrix

		PEO1 Ability to apply electronics knowledge, to identify formulates and solve Engineering problems. 1. **Apply** Knowledge 2. **Identify** Problem and **Solve Engg. Problem**	**PEO2** Acquire knowledge to find out workable solutions in the field of Telecommunication. 1**. Acquire Knowledge** 2. **Find Solution in Telecommunication**	**PEO3** Exhibit programming skills with the use of various software tools. **1. Exhibit Programming Skills** **2. Software Tools**	**PEO4** Inculcate continuous learning through interdisciplinary approach. **1. Interdisciplinary** **2. Continuous Learning**
M1 To provide **quality and value based education** for women in the field of E&TC Engineering.	**1.Training Programs** (Capacity Building Program, Zensar Training Programs etc.)	Yes	No	Yes	Yes
	2. Hands-on Experience (Workshop , Project Based Learning)	Yes	No	Yes	Yes
	3.Experiential Learning (Project Based Learning, Mini and Major Projects)	Yes	Yes	Yes	Yes
	4. Technical Competence (Student Participation in University/State/National Level Technical Events)	Yes	Yes	Yes	Yes

	5. Industry Readiness (Internships, MoUs, Sponsored Projects etc.)	Yes	Yes	Yes	No
	6. Soft-Skill and Professional Development (Seminar/Workshop/Student Associations (ETSA)/Chapters (IETE & IEI) activities for soft skills)	Yes	Yes	Yes	No
		3	**2**	**3**	**2**
M2 To train women to keep pace with **rapidly changing technological needs of industry and research.**	**1.Industry-Institute Interaction** (IIIC cell activities, MoUs,Industrial Visits)	Yes	No	Yes	No
	2. Skill-Based Training (Workshops on various topics, EV Battery Manufacturing etc)	Yes	Yes	Yes	Yes
	3. Internships and Projects	Yes	Yes	Yes	Yes
	4. Funding and Grants (MODROB grant)	Yes	Yes	Yes	No
	5. Innovation Culture (part of curriculum, sessions under IIC, student partcipation in various project competitions)	Yes	No	Yes	Yes
	6. Research (Student Paper publications and poster presentations)	Yes	No	Yes	Yes
		3	**2**	**3**	**2**

B. Consistency/Justification of co-relation parameters of the above matrix

Table 1.5.2 Justification of co-relation parameters of the above matrix

PEOs	Mission	Justification

PEO1 Ability to apply electronics knowledge, to identify formulates and **solve Engineering problems.**	**M1** To provide **quality and value based education** for women in the field of E&TC Engineering.	Students are groomed for quality and value based education through various initiatives such as • Quality Training Programs • Hands on Workshops • Internships • Mini and Major Projects • Industry-Institute Interactions • Technical Events • Soft Skills and Professional Body Activities.
	M2 To train women to keep pace with **rapidly changing technological needs of industry and research.**	To make them aware about various recent trends in industry: • Students are taken to various industrial visits and industrial seminars are organized. • Institute has signed MoUs with industry. • Third year students have completed Internships in various industries. • Students are encouraged to do their final year project, third year internship and Mini project, second year PBL projects on recent trends in technology and research. • Students are motivated for paper and poster presentations and publications based on recent research trends. • Students are groomed to participate in various technical competitions across the Nation such as Idea competition, NES, Hackathons, IETE project competition etc.cquire knowledge to find out workable solutions in the field of **Telecommunication.**
PEO2 Acquire knowledge to find out workable solutions in the field of Telecommunication.	**M1** To provide **quality and value based education** for women in the field of E&TC Engineering.	The learning environment provided in the institute is designed to mold students for quality and value based education in E&TC engineering by conducting various programs at the department and institute which will provide knowledge to students to find solutions in the field of telecommunication through • Mini and Major Projects • Internships
	M2 To train women to keep pace with **rapidly changing technological needs of industry and research.**	Students are encouraged to do their projects on recent trends in research in the field of Telecommunication through • Final Year Project • Third Year Mini Project • Second Year Project Based Learning • Third Year Internships

PEO3 Exhibit programming skills with the use of various **software tools**	**M1** To provide **quality and value based education** for women in the field of E&TC Engineering.	The learning environment provided in the institute is designed to mold students for quality and value based education in E&TC engineering by conducting various following programs to exhibit programming skills with the use of various **software tools.** • Hands-On Workshops At The Department/ Institute • Mini and Major Projects • Internships
	M2 To train women to keep pace with **rapidly changing technological needs of industry and research.**	• Students are encouraged to participate in Hackathons. • Students are encouraged to use modern research tools which are interdisciplinary and data-driven. Use of programming languages (e.g., Python, R, MATLAB) and tools (e.g., MATLAB, Multisim, Xilinx, Labview etc.) enables graduates to contribute effectively to research across various domains by providing computational support and developing custom research tools.
PEO4 Inculcate continuous learning through **interdisciplinary** approach	**M1** To provide **quality and value based education** for women in the field of E&TC Engineering.	• The learning environment provided in the institute is designed to mold students for quality and value based education in E&TC engineering by conducting various programs at the department and institute to Inculcate continuous learning through **interdisciplinary** approach. • Students are encouraged and motivated for further studies such as MS, MBA, Ph.D.
	M2 To train women to keep pace with **rapidly changing technological needs of industry and research.**	• Students are provided interdisciplinary courses on various platforms such as NPTEL certificate courses, AWS cloud computing, Oracle certificate courses to inculcate continuous learning. • Students are encouraged and motivated for further studies and start-ups and soft-skill trainings are provided for overall development.

PEO Statements	M1	M2
Ability to apply electronics knowledge, to identify formulates and solve Engineering problems.	3	3
Acquire knowledge to find out workable solutions in the field of Telecommunication.	2	2
Exhibit programming skills with the use of various software tools	3	3
Inculcate continuous learning through interdisciplinary approach	2	2

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120)

Total Marks 112.00

2.1 Program Curriculum (20)

Total Marks 17.00

2.1.1 State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexurel. Also mention the identified curricular gaps, if any (10)

Institute Marks : 8.00

A. Process used to identify extent of compliance of university curriculum for attaining the POs and PSOs

As an affiliated institute of Savitribai Phule Pune University (SPPU), the Electronics and Telecommunication (E&TC) Engineering program strictly adheres to the syllabus, curriculum structure, and academic guidelines prescribed by the university. The program is thoughtfully designed to offer a comprehensive and balanced education that integrates the core domains of electronics, Analog and Digital Communication, Signal Processing, Control Systems, Embedded Systems, VLSI Design, and Wireless Technologies etc.

In addition to these technical areas, the curriculum emphasizes the importance of foundational subjects such as Applied Mathematics, Engineering Physics, Programming Fundamentals, and Management Studies, which are essential for developing analytical thinking and interdisciplinary skills.

The program structure incorporates laboratory work, mini-projects, final-year major projects, and internships to bridge the gap between theoretical knowledge and industrial applications. These components help students to gain hands-on experience of modern tools, platforms, and technologies, fostering innovation and practical problem-solving skills.

Each course within the curriculum is designed with clearly defined Course Outcomes (COs), which are systematically mapped to the Program Outcomes (POs), as outlined in the Outcome-Based Education (OBE) framework. Regular assessments and continuous monitoring of these outcomes allow for data-driven academic planning and improvement.

To further support the curriculum compliance, the department organizes a diverse range of academic and co-curricular activities such as:

- Skill enhancement workshops on current technologies (e.g. IoT, MATLAB, Python, PCB Design)
- Expert sessions and guest lectures by industry leaders, researchers, and domain specialists
- Hands-on training and certification programs in emerging technologies
- Industrial visits to leading companies and research organizations to expose students to real-world engineering practices
- Technical competitions, paper presentations, and hackathons at the state, national, and international levels
- Entrepreneurship and innovation cell activities to nurture start-up culture and creative thinking

This structured academic approach ensures curriculum compliance while preparing E&TC Engineering graduates to be technically proficient, industry-ready, and capable of pursuing successful careers in industry, research, or higher education globally.

The subsequent methodology is employed to ascertain the degree of alignment between the University curriculum and the achievement of Program Outcomes (POs) as well as Program Specific Outcomes (PSOs).

Table.2.1.1.1 Comparative Analysis of AICTE Model Curriculum and SPPU Pune

Sr. No.	Types of Courses	AICTE Model Curriculum		SPPU Curriculum 2019	
		Courses	Credits	Courses	Credits
1	Core Subjects	28	68	30	80
2	Humanities and Social Science	5	15	7	15
3	Basic Science	6	23	6	23
4	Engineering Science	6	17	8	19
5	Elective +Open Elective Subjects	8	24	6	25
6	Project	3	17	3	8
	Total	**56**	**160**	**60**	**170**

In alignment with the AICTE Model Curriculum (as outlined at AICTE Model Syllabus) and the curriculum prescribed by Savitribai Phule Pune University (SPPU), Certain gaps are observed. These curriculum gaps are natural, given the evolving demands of the industry and rapid technological advancements. To address these gaps proactively beyond the classroom approach is used by taking thoughtful and meaningful extra efforts. This includes organizing skill-development workshops, hands-on training sessions, expert talks by professionals from industry and academia, industrial visits, internships, mini-projects, and encouraging student participation in technical competitions and innovation challenges. These initiatives not only supplement the university curriculum but also help our students to gain practical exposure, develop essential soft skills, and stay industry-ready.

- **Actions Taken to Address Curriculum Gaps**

Regular efforts are made to identify gaps in the existing curriculum of the Electronics and Telecommunication Engineering program. These gaps are systematically reviewed and shared with the Board of Studies (BoS) for considerations. The categorization of these gaps enables a more structured approach to curriculum revision.

Faculty members actively contribute to curriculum enhancement by participating in BoS-led Faculty orientation workshop of syllabus framing and faculty orientation programs. During these sessions, they present the deficiencies observed through academic delivery and industry interactions. These insights play a vital role in refining course content.

The major gaps identified are addressed through targeted activities and interventions, ensuring that students are equipped with the necessary knowledge and skills beyond the core syllabus. In addition to this activity following steps are also taken to identify the curriculum gaps.Evaluation of the model curriculum established by AICTE in conjunction with SPPU Pune Assessing the mapping of Course Outcomes (CO) and Program Outcomes-Program Specific Outcomes (PO-PSO)

Following table illustrates the mapping of Program Outcomes (POs) and Program Specific Outcomes (PSOs) with various curriculum components under the 2019 course structure. Each course has been evaluated to determine its contribution to achieving specific POs and PSOs, which are critical for the holistic development of engineering graduates.

To analyze the strength of alignment between the curriculum and the outcomes, the number of courses mapped to each PO/PSO is identified, and the corresponding percentage of mapping is then calculated. Based on it, the strength of mapping is categorized as:

- **Weakly Mapped** – Below 40%
- **Moderately Mapped** – 40% to 60%
- **Highly Mapped** – Above 60%

Table.2.1.1.2 PO & PSO Mapping

PO / PSO	No. of Courses Mapped	% Mapping	Category
PO1	72	100	Highly Mapped
PO2	72	100	Highly Mapped
PO3	66	92	Highly Mapped
PO4	67	93	Highly Mapped
PO5	61	85	Highly Mapped
PO6	31	43	Moderately Mapped
PO7	28	39	Weakly Mapped
PO8	19	26	Weakly Mapped
PO9	33	46	Moderately Mapped
PO10	42	58	Moderately Mapped
PO11	23	32	Weakly Mapped
PO12	43	60	Moderately Mapped
PSO1	59	98	Highly Mapped
PSO2	53	88	Highly Mapped
PSO3	57	95	Highly Mapped
PSO4	55	92	Highly Mapped

**PO mapping has been done for 72 courses and PSO mapping for 60 courses, with the percentage of contribution calculated based on the number of courses mapped to each PO/PSO.*

B. List of curriculum gaps for the attainment of defined POs and PSOs

The following table identifies specific gaps within the current curriculum, highlighting areas that require revision or enhancement to better align with academic standards and industry needs.

Table.2.1.1.3 List of curriculum gaps

Gap No.	POs	Gap Description
1	PO6, PO8	Lack of sufficient content addressing social and ethical responsibilities.
2	PO7	Inadequate coverage of environmental sustainability topics
3	PO10	Minimal exposure to comprehensive training in structured communication skills
4	PO11	Limited exposure to project management and financial principles

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

Institute Marks : 9.00

A. Steps taken to get identified gaps included in the curriculum.(e.g. letter to university/BOS)

Institutions systematically bridge gaps in the university curriculum by delivering content beyond the syllabus to enhance the attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs). Methods include classroom instruction on advanced or prerequisite topics, additional laboratory experiments, case-study assignments, project development, expert-led seminars/workshops, industrial visits, internships, soft-skills training, and online certification courses. These activities are supported through student associations; Student Development Officer led programs, National Service Schemes and professional bodies like IEEE, IEI, and IETE to foster communication skills, critical thinking, practical application, and industry readiness.

Each intervention is then **mapped to specific POs/PSOs** using related competencies required to meet specific outcome defined by the accreditation process. For example, a workshop might target PO3 (communication), PO4 (investigation), PO9 (teamwork), and PSO2 (industry preparedness), while industrial visits support PO1 (engineering knowledge), PO6 (design for sustainability), and PO8 (ethics) alongside PSO1. Formal records—including planning documents, attendance, and mapping matrices—are maintained to ensure transparent linkage between extra-curricular content and outcome attainment

B. Delivery details of content beyond syllabus

Delivery Method	Purpose	Relevance of POs
Guest lectures, seminars, workshops	Introduce emerging and advanced topics not in curriculum	PO6, PO7, PO8, PO10, PO11
Classroom lectures on extra topics	Deepens foundational or specialized knowledge	PO6, PO7, PO8, PO10, PO11
Hands-on/value-added training courses	Practical skill enhancement beyond core syllabus	PO6, PO7, PO8, PO10, PO11
Remedial classes & online video modules	Fill learning gaps with self-paced tools (MOOCs, NPTEL, videos)	PO6, PO7, PO8, PO10, PO11
Soft-skills & placement training	Boost interpersonal, presentation, employability skills	PO6, PO7, PO8, PO10, PO11
Industrial visits, in-plant training, internships	Provide real-world exposure	PO6, PO7, PO8, PO10, PO11
Additional lab experiments	Promote deeper experimental and design skills	PO6, PO7, PO8, PO10, PO11

C. Mapping of content beyond syllabus with the POs and PSOs

2023-24

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	G3:Minimal exposure to comprehensive training in structured communication skills	A session on "Improving Analytical Ability" was organized to boost students' problem-solving and reasoning skills.	01/09/2023	Mr. Raghunath Nanivadekar, Pune	40	PO10
2	G1:Lack of sufficient content addressing social and ethical responsibilities.	An awareness session on "Career Opportunities in Biomedical Engineering" was conducted.	01/02/2024	Mrs. Vaishnavi Banke, Medi Facts Inc., Pune	51	PO6, PO8
3	G2:Inadequate coverage of environmental sustainability topics	A seminar on "Generation of Electricity from Green Energy" was held to promote sustainability concepts.	21/02/2024	Mr. Rahul Nalawade	40	PO7
4	G4:Limited exposure to project management and financial principles	A session on Technology in Project Management	08/08/2023	Mr. Mahajan Chittaranjan	70	PO11
5	G1:Lack of sufficient content addressing social and ethical responsibilities.	"An awareness session on 'Copyright and Patent Publication' was conducted."	09/02/2024	Prof.Dr. Vinayak Bairagi	100	PO8
6	G3:Minimal exposure to comprehensive training in structured communication skills	“Effective Research Communication and Presentation Skills” was conducted	11/09/2023	Prof.Dr. Vinayak Bairagi	100	PO10
7	G1:Lack of sufficient content addressing social and ethical responsibilities.	A technical session on "Cyber Security" was arranged to educate students on digital security practices.	09/02/2024	Mr. Manish Singh, Inflow Technologies Pvt. Ltd	100	PO8

2022-23

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	G1:Lack of sufficient content addressing social and ethical responsibilities.	A webinar on "Your Study Abroad Journey" was organized to guide students on international education opportunities.	07/09/2022	Mr. Anand Bannatkar, ASAP Foreign Language Institute	64	PO8
2	G2:Inadequate coverage of environmental sustainability topics	A webinar on "Data Structures & Algorithms" was conducted to reinforce students' programming skills.	15/09/2022	Mr. Nagesh Mhatre, Click In Computer	69	PO7
3	G3:Minimal exposure to comprehensive training in structured communication skills	A placement assessment test was conducted to evaluate students' aptitude and technical skills.	13/04/2023	Mr. Dipendra Wagh, Campus Credentials	80	PO10
4	G4:Limited exposure to project management and financial principles	A session on Project Management	14/09/2022	Mr. Mahajan Chittaranjan	75	PO11
5	G1:Lack of sufficient content addressing social and ethical responsibilities.	"An awareness session on 'Research Methodology was conducted	02/02/2023	Prof.Dr. Vinayak Bairagi	100	PO8
6	G3:Minimal exposure to comprehensive training in structured communication skills	A session on “Communication and Presentation Skills for Engineers” was conducted	15/09/2022	Prof.Dr. Vinayak Bairagi	100	PO10
7	G1:Lack of sufficient content addressing social and ethical responsibilities.	5 days hands on workshop on IOT	11/10/2023	Mr. Mahajan Chittaranjan	100	PO6
8	G1:Lack of sufficient content addressing social and ethical responsibilities.	5 days hands on workshop on Circuit building and PCB making	10/04/2023	Mr. Mahajan Chittaranjan	100	PO6

2021-22

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	G1:Lack of sufficient content addressing social and ethical responsibilities.	A webinar on “How to Plan for Start-up and Legal & Ethical Steps” was conducted to introduce entrepreneurship and legal basics.	28/09/2021	Prof. Makarnd Velankar	70	PO6
2	G2:Inadequate coverage of environmental sustainability topics	A webinar on “Framework for Technology-Driven Social Innovation” was conducted to link tech with social impact.	29/10/2021	Prof. Dr. Sunita Dhotre	80	PO7
3	G3:Minimal exposure to comprehensive training in structured communication skills	A webinar on “Design Thinking, Critical Thinking, and Innovation Design” was organized.	02/03/2022	Prof. Dr. N.J. Uke	50	PO10
4	G4:Limited exposure to project management and financial principles	A session on Project Management	21/08/2021	Mr. Dahivale Rohan	90	PO11
5	G2:Inadequate coverage of environmental sustainability topics	A webinar on “Framework for Technology-Driven Social Innovation” was conducted to link tech with social impact.	29/10/2021	Prof. Dr. Sunita Dhotre	80	PO6,PO7

2.2 Teaching - Learning Processes (100) Total Marks 95.00

2.2.1 Describe processes followed to improve quality of Teaching & Learning (25)

Institute Marks : 23.00

A. Adherence to Academic Calendar

The Institute carefully follows the SPPU Academic Calendar. by following a structured preparation and execution process coordinated by IQAC

- **Institute Academic Calendar Preparation**: After SPPU finalizes its academic calendar detailing semester start/end dates, internal and external exams, it circulates it to all affiliated colleges. The institutes IQAC then drafts the institute calendar—integrating these dates and issues it to departments. The institute's academic calendar is made available on the official website at the beginning of each semester.
- **Department Academic Calendar Planning**: Department prepares its own calendar, aligning it with the institute's schedule. This includes timetables for lectures, labs, department meetings, Departmental Advisory Board (DAB) and Program Advisory Committee (PAC) meetings, project reviews, industrial visits, and more. All planned activities including classes, assessments (unit tests, assignments, and mock/practical/oral exams), remedial and extra classes, guest lectures, workshops, technical and sports events, project presentations/exhibitions, industrial visits, and celebrations of state/national days via SDO and NSS are executed precisely as per this calendar. Faculty scheduled assignments, internal tests, and feedback mechanisms on academic processes are also embedded into the calendar. Alignment and adherence are monitored through feedback surveys conducted each semester**.**

The institute ensures systematic adherence to the academic calendar. Initially, the institute academic calendar is published in alignment with the SPPU guidelines, indicating the start and end dates of semesters, end-semester and re-exams, along with a list of holidays. Following this, the department prepares academic calendar at the department level. Teaching planning and distribution are then carried out, which include subject load allocation and preparation of timetables. Co-curricular and industry interaction activities are also planned, encompassing industrial visits, internal assessments, seminars, and workshops. The curriculum is implemented effectively and in a structured manner through the use of ICT tools, learning management systems (LMS), and practical sessions. Assessment monitoring involves conducting internal assessments, daily or weekly attendance tracking, and ensuring regularity. Finally, continuous evaluation is undertaken through assessment reports and attendance review meetings to maintain academic standards and foster improvement.

B. Use of various instructional methods and pedagogical initiatives

Contemporary pedagogical techniques are employed to motivate students, enhance understanding, and promote long-term knowledge retention. These innovative approaches help to cultivate a positive attitude toward the course being taught.

The institute fosters comprehensive student development through experiential, participatory, problem-solving, and collaborative learning approaches. Experiential learning is promoted via internships, industry-sponsored projects, MOOCs like NPTEL and Coursera, and industrial visits. Participatory learning is encouraged through student involvement in hackathons, seminars, workshops, and national-level technical festivals. Students are also motivated to engage in co-curricular and via platforms like ETSA and IETE to develop leadership and interpersonal skills. Problem-solving is integrated through time-bound assignments, mini and major projects, and competitions. Collaborative learning is facilitated through the formation of student teams to engage in projects, discussions, or product design, so promoting teamwork and innovation.

Table 2.2.1.1 Various instructional methods

Pedagogical Initiative	Description	Supporting Documents/ Evidence
Application-Based Teaching	Case studies and Integration of current industrial problems and practical use to contextualize theoretical concepts.	- Lesson Plans -Studies/Assignments
Collaborative Learning	Adoption of group projects, peer-to-peer teaching, think-pair-share activities, and discussion forums to promote teamwork and knowledge co-construction.	- Group activity - Assessment sheets - Student feedback forms - Google Classroom
ICT-Supported Learning	Extensive use of smart boards, MOOCs, simulations, virtual labs to facilitate digital learning.	- Screenshots of Google Classroom - Links to NPTEL/SWAYAM integration
Interactive Classrooms	Use of techniques such as flipped classrooms, quizzes, and real-time feedback mechanisms to foster an active learning environment.	- Quiz (Google Forms) - Feedback from students and faculty observers

The department makes sure that courses are taught well by using a variety of ICT technologies in the classroom. To help students grasp technology better, they learn how to use simulation software like MATLAB and Multisim. Google Classroom, WhatsApp groups, and ERP are all ways to communicate study materials and school news. Students are also urged to sign up for NPTEL and SWAYAM courses. Smart boards, lecture capture systems, online quizzes, V-Labs, and YouTube videos are all employed to make learning more fun and easy to get to. All of these things together make students more interested and help them keep studying.

- **Course File**

A Course File is a comprehensive record maintained by faculty for each course they teach. It serves as an academic dossier that documents the entire lifecycle of a course from planning and delivery to assessment and outcome evaluation. The primary objective of the course file is to ensure structured and effective implementation of the curriculum while meeting institutional and accreditation standards.

Following are the contents of the course file.

Table 2.2.1.2 Course file details

Sr. No.	Document Title	Description
1	Units (Syllabus Report)	Detailed breakdown of syllabus units as per university curriculum

2	Course Outcomes (COs)	Specific outcomes students are expected to achieve upon course completion
3	CO-PO Mapping	Mapping of Course Outcomes with relevant Program Outcomes
4	CO-PO Mapping Justification	Justification and rationale for each CO-PO linkage
5	Course Objectives	General goals and intended purpose of the course
6	Student List	Complete list of students enrolled in the course
7	Proposed Planning	Weekly or daily teaching plan aligned with syllabus
8	Completion Report	Confirmation and documentation of course content delivery
9	Tutorial Completion Report	Record of tutorials conducted as per the syllabus
10	Syllabus Completion Report	Declaration and proof of completed syllabus by course instructor
11	Defaulter Students List	List of students falling short of minimum attendance requirements
12	Faculty Weekly Timetable	Instructor’s detailed weekly academic schedule
13	Program Outcomes (POs)	Department’s Program Outcomes as per NBA guidelines
14	Direct Attainment Report	Report of CO attainment through direct tools such as tests, assignments, etc.
15	Indirect Attainment Report	Report of CO attainment through feedback, surveys, etc.
16	Combined Direct and Indirect Outcome Report	Comprehensive report of total CO attainment from direct and indirect sources
17	List of Internal Examinations	Record of all internal assessments like unit tests, tutorials, and assignments
18	List of External Examinations	Information on external (university-level) examinations
19	Result Analysis Modules with Performance	Analysis of student performance with result trends and insights

20	List of Assignments	Record of all assignment questions and topics shared with students
21	Meetings Report	Minutes or summaries of academic and departmental meetings
22	Mentees List	List of students under the mentorship of the faculty
23	Attendance Report (As per Completion Date)	Detailed attendance record till syllabus completion
24	Rubrics Attainment (Tabular Format)	CO attainment using rubrics in structured tabular format

C. Methodologies to support weak students and encourage bright students

A classroom comprises students with various learning level capabilities. Some students demonstrate exceptional learning capabilities and are referred to as bright students, while others with weak learning capability are identified as weak students. Overall purpose of the identification is only to enhance the gray areas of their academic and overall performance.

The identification of slow and bright learners is carried out based on defined academic and behavioral parameters. Additionally, the actions taken for both categories of students, along with their impact analysis, are systematically documented and evaluated.

Table 2.2.1.3 Criteria/ Parameters and Process to identify slow and bright Students

Student	Identification Criteria	Action Taken	Impact Analysis
Bright Students	• Students scoring mark between 80% and 100% for Unit Test I and Unit Test 2 in a given course • .Mentor observations	• Encourage to register for MOOC/SWAYAM courses • Orientation and Induction in various students Clubs • Motivate to Publish and present Papers • Arrange Workshop/Seminar on current trends • Participate in University, National level Competitions like Avishkar, Hackathons etc.	• Participation in Technical Events is improved • Participation in National and International Conferences
Weak Students	• Students scoring between 0% and 39% for Unit Test I and Unit Test 2 in a given course • Mentor observations	• Remedial lectures • Re-test for improvement • Counseling – special hints & techniques • Question bank • Guidance for Seminar/Project presentation	• Improvement in academic performance of students • Active participation of the students in various programs

D. Quality of classroom teaching (Observation in a Class)

- The institutes classrooms are thoughtfully designed to provide an optimal learning environment that fosters academic engagement and student participation.
- Each classroom is equipped with internet connectivity to support ICT-based teaching and facilitate multimedia content delivery.
- Smart classroom with an interactive Smart Board is available to enhance the effectiveness of the teaching-learning process through advanced digital tools.
- Faculty members ensure punctuality and follow a structured teaching approach. Each session typically begins with a recap of the previous lecture, followed by interactive questioning and introduction of new topics.
- Faculty members share relevant video lectures from platforms such as NPTEL, SWAYAM, and YouTube to reinforce classroom learning and provide students with additional learning resources.
- The teaching methodology emphasizes logical reasoning and conceptual understanding. Real-life examples involving application, analysis, synthesis, evaluation, and creation are integrated into lessons to ensure meaningful and outcome-based learning.

E. Conduct of experiments (Observation in Lab)

- Laboratory manuals are prepared by the respective course faculty and shared with students well in advance of the experiment sessions. These manuals contain detailed instructions, safety, Protocols, and expected outcomes to ensure students are well-prepared.
- To facilitate effective hands-on learning, each batch is divided into 4 to 5 subgroups, and a dedicated experimental setup is assigned to each subgroup to ensure active participation and equal opportunity for practical exposure.

- Each laboratory session is supervised by the assigned faculty member and supported by a technical staff member to guide students and ensure safe and effective experiment execution.
- A designated Laboratory In-Charge is responsible for ensuring the readiness of the lab, including equipment functionality, cleanliness, and availability of materials. The Head of the Department oversees the overall conduct of lab sessions and implements real-time corrective actions when needed to maintain high-quality standards.
- **Key Laboratory Components Maintained:**
  - **Lab Manuals:** Contain a list of experiments, including newly added ones aligned with current industry trends and curriculum updates.
  - **Equipment Manuals:** Available for student and staff for reference.
  - **Lab Maintenance Records:** Maintained regularly to ensure equipment safety, functionality.

F. Continuous Assessment in the laboratory

- Faculty members evaluate each student based on their performance during every lab session. This includes assessing their practical execution, understanding of the experiment, and overall engagement. After each experiment, an oral viva is conducted to ensure conceptual clarity and evaluate performance.
- The department places strong emphasis on the principle of *continuous improvement* in academic practices and student learning outcomes.
- Each faculty member uses a standardized Continuous Assessment Sheet(CAS) to monitor and evaluate students' performance in laboratory sessions. This system supports ongoing improvement and personalized feedback.

Student performance in the CAS sheet is assessed based on the following key parameters:

i. Timely submission

ii. Presentation

iii.Understanding

G. Student feedback of teaching learning process and action taken

The Institute is committed to maintaining a robust feedback mechanism involving various stakeholders. The centralized feedback committee collects online feedback from students, teachers, parents, alumni, and employers to enhance the overall development of the institution. The feedback process is designed to ensure continuous improvement in academic and administrative functions.

2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20) Institute Marks : 20.00

A. Process for Internal Semester Question Paper setting and evaluation and effective process implementation

Two unit tests are conducted every semester as part of the internal evaluation process. Unit Test 1 covers the topics outlined in Unit 1 and Unit 2, while Unit Test 2 assesses the content from Unit 4 and Unit 5. These tests are strategically scheduled to evaluate students grasp of both foundational and advanced concepts, allowing for continuous monitoring of academic progress. The results from these tests contribute to the overall internal assessment marks and provide early indicators for areas requiring further academic support, thus ensuring comprehensive coverage of the curriculum throughout the semester.

Following is the process of internal semester question paper setting

- The syllabus for the Unit Test-I is Unit No. I and II. The Unit Test-I will be of 30 marks (1 Hr.)duration.
- The syllabus for the Unit Test-II is Unit No. IV and V. The Unit Test-II will be of 40 marks (1 Hr. 30 min) duration.
- All Question papers shall have 4 questions
- Each question will have three sub questions
- The question paper is generated from ERP software only.
- Question papers have proper Course Outcome (CO's) for Unit Test I as CO1 & CO2 and for Unit Test II as CO4 & CO5.
- Course Outcome (CO's) statements are added after the instruction to the student.
- All questions are mapped to proper Bloom's Taxonomy Level (BTL).
- Two sets of question papers are submitted.
- The question papers are submitted in sealed form with the course teacher and H.O.D. signatures.
- These sealed envelopes shall be submitted to the Exam Section of the institute through the Department Exam Coordinator
- Out of two sets, one paper will be selected randomly & the other will be used for the Retest.

Table 2.2.2.1 Unit Test I Question Paper Format

	Question	Marks	Blooms Taxonomy Level	COs
Q.1 or Q.2	Q.1) a)	5 Marks	BTL	CO1
	b)	5 Marks	BTL	CO1
	c)	5 Marks	BTL	CO1
	Q.2) a)	5 Marks	BTL	CO1
	b)	5 Marks	BTL	CO1
	c)	5 Marks	BTL	CO1
Q.3 or Q.4	Q.3) a)	Marks	BTL	CO2
	b)	5 Marks	BTL	CO2
	c)	5 Marks	BTL	CO2
	Q.4) a)	5 Marks	BTL	CO2
	b)	5 Marks	BTL	CO2
	c)	5 Marks	BTL	CO2

B. Process to ensure questions from outcomes/learning levels perspectives

- Internal assessments such as class tests and assignments are carefully designed to align with Course Outcomes (COs), ensuring that student performance is evaluated directly against the intended learning objectives.
- Each question is mapped to specific COs, and the marks obtained are systematically used to calculate the attainment levels of COs, which are further mapped to relevant Program Outcomes (POs) and Program Specific Outcomes (PSOs).
- To promote comprehensive learning, assessment questions are developed across various cognitive levels as defined in Bloom's Taxonomy, covering understanding, application, and analytical skills.
- All question papers undergo a validation process by the Question Paper Quality Assessment Internal Committee (QPQAIC) to ensure appropriate CO alignment, cognitive level distribution, and overall quality of the assessment.

C. Evidence of COs Coverage in Continuous Internal Assessments Examination

- The course teacher prepares the internal assessment question paper for their respective course, ensuring alignment with Course Outcomes (COs) and cognitive levels as per Bloom's Taxonomy.
- The prepared question paper is then submitted to the Question Paper Quality Assessment Internal Committee (QPQAIC) for review and final approval.
- In case any modifications are suggested by the committee, the question paper is returned to the respective course teacher for necessary revisions.

- After incorporating the required changes, the revised question paper is resubmitted by the course teacher to the examination section for final processing.
- On the scheduled date of the examination, the examination section officially releases the approved question paper to the respective class for conduct of the examination.
- **Evaluation and Result Communication**
- The internal assessment process is conducted in a transparent and systematic mnner to ensure fairness and academic integrity.
- Course teachers are responsible for the timely evaluation of answer sheets and maintaining the accuracy of marks awarded.
- Once the assessments are evaluated, the marks obtained by students are recorded, shared, and the evaluated answer sheets are shown and discussed with the students in class to provide constructive feedback.
- In case of any doubts or discrepancies, students are encouraged to approach the respective course teacher directly for clarification and resolution.
- Results are communicated within a stipulated timeframe through class announcements or the institutes ERP system.
- Following the evaluation, the course teacher compiles and submits essential examination records to the Department Examination Coordinator, including a copy of the question paper, the mark sheet in the prescribed format, sample evaluated answer sheets, slow and bright learner lists ensuring proper documentation and compliance with academic procedures.
- All submitted records are securely archived by the Department Examination Coordinator and made available for academic audits, CO-PO attainment analysis.
- All submitted records are securely archived by the Department Examination Coordinator and made available for scrutiny during internal and external audits, including NBA, NAAC, and University audits.

D. Quality of Assignment

Assignments serve as a crucial tool for continuous internal assessment and play a significant role in achieving the desired Course Outcomes (COs). The following practices are adopted to ensure the quality and effectiveness of assignments.

- Course teachers prepare two assignments per semester, with the first based on Unit 3 of the syllabus and the second on Unit 6.
- The assignment questions are designed in alignment with Bloom’s Taxonomy to address various cognitive learning levels.
- The assignment submission schedule is outlined in the academic calendar and formulated by the subject teacher.
- Evaluation is carried out using a well-defined rubric and marking scheme to maintain objectivity, consistency, and fairness and before distribution, assignment rubrics are explained to students to ensure clarity in expectations and evaluation criteria.
- To assess students understanding, orals are conducted and Course teachers provide constructive feedback along with the marks to help students identify their strengths and areas for improvement.
- Marks are awarded based on timely submission, comprehension of content, and communication skills.
- The final term work marks for each course are calculated by considering the combined scores from both unit tests and assignments.

2.2.3 Quality of student projects (25)

Institute Marks : 24.00

A. Identification of Projects and allocation Methodology to Faculty Members

Project identification and allocation is a systematic and structured process which ensures that students undertake meaningful projects while receiving appropriate guidance from faculty.

- Project allocation process is initiated within 15 days from commencement of the VII semester.
- An orientation session is planned and conducted by the Head of Department (HOD) along with the Project Coordinator to guide students in selecting their project domains. The session covers essential guidelines for choosing a project and outlines the various phases involved in its planning and execution.
- Project lists from the previous three years are displayed on the department notice board, and project reports are made available in the department library for reference.
- Students are given a choice in finalizing the projects. They may opt for sponsored projects or in-house projects or extension of mini projects or internships project.
- Students are required to submit the names of group members along with their chosen domain of interest within one week after the orientation session.
- A list of faculty members along with their areas of interest is shared with students, allowing them to approach and consult faculty based on relevant expertise.
- After the submission of project domains by students, guides are allocated by the project committee based on the faculty member's area of interest/specialization.
- Students then discuss and finalize the project title, objectives, and scope with their assigned guide by referring to reputed resources such as research papers, journals, conference proceedings, patents, etc.
- A project evaluation committee, comprising all faculty members, is formed to review the proposed projects.
- Students present their problem statements and proposed titles in front of the committee.
- The committee provides suggestions for refining the title, scope, and objectives, taking into account project feasibility, market relevance, and literature survey.
- Once finalized, students submit the project synopsis with the approval of their respective guides.

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

- Students are actively encouraged to develop innovative solutions to real-world problems through their final year projects.
- Projects are designed to go beyond academic boundaries, enabling students to address practical challenges with creativity and technical competence.
- Projects are classified into various categories such as application-based, product development, research-oriented, and review-based projects. While classifying and executing these projects, key factors such as environmental impact, safety considerations, ethical implications, cost-effectiveness, and compliance with relevant standards are carefully taken into account.
- This classification ensures the application of appropriate strategies, tools, and methodologies**,** enhancing the quality and relevance of each project.
- Final year projects significantly contribute to the attainment of several POs, including:
    - Engineering Knowledge
    - Problem Analysis
    - Design and Development of Solutions
    - Investigation of Complex Problems
    - Modern Tool Usage
    - Team Work
    - Ethical Practices
    - Environmental and Societal Considerations
- Each project is mapped to relevant Course Outcomes (COs), Program Outcomes (POs), and Program Specific Outcomes (PSOs). Evaluation of the projects is carried out through both internal and external assessments during examinations. The results of these evaluations are incorporated into the overall PO and PSO attainment calculations, ensuring alignment with outcome-based education objectives.

Table 2.2.3.1 Project Classification for Quality of Project

Sr. No.	Academic Year	Total No. of Project Groups	Type of Project		
			Application	Product	Research
1	2024-25	44	17	15	12
2	2023-24	49	18	14	17
3	2022-23	30	10	12	8
4	2021-22	38	12	12	14

**The relevant data will be provided at the time of committee visit.*

- **Course outcomes and its Mapping with POs and PSOs**

The final year project course is designed to provide students with an opportunity to apply their theoretical knowledge to real-world problems, fostering innovation, critical thinking, and professional skills.

- **Course outcomes -Project Stage-1**

CO1: Demonstrate a sound technical knowledge in the field of E&TC in the form of a project.

CO2: Undertake real life problem identification, formulation and solution.

CO3: Design engineering solutions to complex problems utilizing a systematic approach.

CO4: Demonstrate the knowledge, effective communication skills and attitudes as a professional engineer.

Table 2.2.3.2 CO-PO mapping Project Stage-1

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	3	2	3	1	2		1	1	1	2	2	2	3	3	2	2
CO2	2	3	3	2	2	1	1	1	2	2	2	2	3	2	2	3
CO3	2	3	3	2	3	1	1	1	2	2	2	3	3	3	3	2
CO4	1	1	2			2	1	2	3	3	2	2	2	2	2	3

C. Process of Monitoring and Evaluation

Project Stage-1 and Project Stage-2 are two separate but related parts of the project that must be performed in accordance with the curriculum guidelines. Students are expected to collaborate in groups and meet weekly with their assigned project guide to review assignments, ask questions, and get feedback.
The Project Guide must verify and sign a project workbook that contains an assessment report every week. Before the semester ends, turn in this workbook to the project coordinator.Two review presentations are held per semester to keep track of progress and make sure everything is finished on schedule. A Project Evaluation Committee reviews these reports and assesses the work based on predefined evaluation criteria.

Table 2.2.3.3 Project Monitoring Mechanism and Evaluation

Phase	Stage	Description
Project Phase-I	Project Title Presentation	Title finalized based on team presentation and interaction during review discussion.
	Review-1	Assessed based on literature and market survey, methodology identification, and component selection.
	Review-2	Evaluation focused on design and development of the selected approach to address the problem.
	Phase-I Examination	External assessment conducted as per the university (SPPU) examination schedule.
Project Phase-II	Review-3	Evaluated on implementation aligned with hardware/software requirements, testing, and result validation.
	Review-4	Assessment based on final product/system demonstration and individual contributions.
	Final Project Demonstration	Comprehensive system demo and evaluation by internal and external panel.
	Phase-II Examination	External examination as per university (SPPU) guidelines and schedule.

D. Process to assess individual and team performance

The project evaluation process is a structured approach that assesses students technical knowledge, problem-solving abilities, and professional skills demonstrated through their final year projects. It begins with project proposal approval, followed by allocation to faculty based on domain expertise. Students are continuously monitored through internal assessments, including log book maintenance, planning, teamwork, and progress presentations. Final evaluations involve both internal and external assessors who evaluate design, implementation, testing, innovation, and documentation. The evaluation marks are mapped to Course Outcomes (COs), Program Outcomes (POs), and Program Specific Outcomes (PSOs), contributing to overall attainment metrics. This process ensures academic rigor, industry relevance, and holistic student development.

The performance of the individual team member of the project is assessed at the time of review presentations and rubrics on following parameters and levels such as Excellent (100%), Acceptance (80%), Need Improvement (60%).

Table 2.2.3.4 Project Evaluation Rubrics of Project Phase-I

Rubric- Performance Indicator	Max Marks	Excellent (100%)	Acceptance (80%)	Needs Improvement (60%)
Innovative Idea	5	Highly original and impactful idea	Thoughtful idea with real-world relevance	Common/basic idea with limited novelty
Literature Survey	5	In-depth, relevant, structured, rich references	Good references and mostly relevant	Minimal relevance and weak references
Depth of Understanding	5	Demonstrates insight and full clarity	Good understanding with minor gaps	Weak grasp of concepts
Attendance	5	Fully present, punctual, and engaged	Minor absence or lateness	Frequent absences
Work According to Plan	5	All milestones met on time	Mostly on schedule with few delays	Multiple missed or late tasks
Maintaining Log Book	5	Fully updated, accurate, and signed	Updated with minor gaps	Irregular or missing entries
Presentation	10	Clear, confident, well-organized	Structured, some clarity issues	Unclear or incomplete delivery
Implementation	5	Working prototype with all features	Working with minor bugs	Incomplete or limited implementation
Seminar Report	5	Complete, formatted, referenced	Acceptable with small errors	Weak or missing details

E. Quality of completed projects/working prototypes

The quality of completed projects is assessed through a multi-dimensional evaluation process. The department organizes project exhibitions or demonstrations where external experts are invited to evaluate the technical quality, innovation, and presentation of the projects. Based on their feedback, the best projects are identified and awarded. Students are also encouraged to participate in intercollegiate project competitions, which provide broader exposure and benchmarking opportunities. Projects that lead to research publications in reputed journals are considered high-quality due to their academic contribution. Additionally, industry-sponsored projects are given special recognition for their relevance and real-world applicability. Projects addressing societal needs or demonstrating potential for product development are also regarded as indicators of strong quality and impact.

- **List of Student participation in project Competitions stating quality of project.**

The department actively encourages and facilitates student participation in **internal and external project exhibitions** as part of the overall strategy to enhance experiential learning and practical knowledge. These exhibitions provide a platform for students to demonstrate their technical competencies, creativity, and problem-solving abilities through innovative project work.

Table 2.2.3.5 Student Winners in Project Competition

Sr. No.	Academic Year	Name of student	Recognition /Award	Organized By
1	2024-25	Gayatri Yeole	Ist Prize	IETE Cometition at MES Wadia College of Engineering. Pune
2		Tanushree Velapure		
3		Sakshi Talekar		
4		Ananya Wagh	Ist Prize	DIPEX-2025, at College of Engineering, Pune
5		Nikita Wadhule		
6		Snehal Shinde		
7	2022-23	Sayli Patil	Ist Prize	Concepts 23, at Pune Institute of Computer Technology, Pune
8		Mitali Waghmode		
9		Shrutika Pawar		

Table 2.2.3.6 Student Participation in Project Competition

Sr. No.	Academic Year	Total No. of Project Groups	Participation in National Level Project competition

1	2024-25	44	41
2	2023-24	49	12
3	2022-23	30	26
4	2021-22	38	23

**The relevant data will be provided at the time of committee visit.*

F. Evidence of papers published /Awards received by projects etc.

Students are actively encouraged and guided to publish technical papers based on their project work in reputed national and international conferences or journals. This initiative aims to enhance their research aptitude, technical writing skills, and academic visibility. Faculty mentors provide support in identifying suitable publication platforms, structuring the paper, and refining the content. Publishing a paper not only validates the quality and originality of the project but also boosts students' confidence and strengthens their resumes. It also fosters a culture of innovation, critical thinking, and knowledge dissemination within the department.

Table 2.2.3.7 Student Participation in Paper Publication

Sr. No.	Academic Year	Total No. of Project Groups	Paper Publications	
			Journal	Conference
1	2024-25	44	2	9
2	2023-24	49	4	3
3	2022-23	30	21	-
4	2021-22	38	6	-

**The relevant data will be provided at the time of committee visit.*

2.2.4 Initiative related to industry interaction (15) Institute Marks : 14.00

A. Industry supported laboratories

The industry-supported laboratories significantly enhance the teaching-learning process by integrating industry best practices, benefiting both students and faculty. This initiative fosters professionalism, instills appropriate behavioral traits, and builds awareness of industry expectations. It also helps align students aspirations with industry needs while promoting career guidance through expert talks by industry professionals and collaborations established via Memorandums of Understanding (MoUs). The detailed information of industry-supported laboratories is provided in the following table.

- **AWS Academy Industry-Supported Lab**

In 2019, Bharati Vidyapeeth College of Engineering for Women (BVCOEW) collaborated with Amazon Web Services (AWS) to launch the BVCOEW-AWS Academy, a visionary initiative focused on revolutionizing cloud computing education. This collaboration bridges the gap between academic learning and the dynamic demands of the tech industry. The **AWS Academy Lab,** developed as an industry-supported facility, equips students and faculty with the foundational skills and practical knowledge needed to navigate modern cloud infrastructure. Faculty members benefit from continuous professional development and AWS certification programs, while students engage with an industry-driven curriculum that includes hands-on labs and exposure to real-world tools and technologies. Through this program, students also have the opportunity to earn globally recognized AWS Certifications, enhancing their employability and industry readiness.

- **Oracle Academy Industry-Supported Lab**

The Oracle Academy Lab, established in collaboration with Oracle Corporation, functions as an industry-supported laboratory, aimed at narrowing the gap between academic instruction and current industry practices. This lab provides students and faculty with access to advanced Oracle technologies, including Oracle Cloud, Java, and Database systems, ensuring hands-on experience with industry-relevant tools. It promotes experiential learning through cloud-based simulations, expert-led technical workshops, and academic software licensing. This initiative not only enhances the overall teaching-learning process but also strengthens innovation, employability, and digital competency among students, aligning with the objectives of Industry 4.0

B. Industry involvement in the program design and partial delivery of any regular courses for students

Institute is affiliated with Savitribai Phule Pune University (SPPU), and the curriculum followed is meticulously designed by the Board of Studies (BOS) in Electronics and Telecommunication (E&TC) of SPPU, Pune. The curriculum development process is both dynamic and inclusive, aiming to keep pace with the latest advancements in the field of Electronics and Telecommunication.

To ensure that the curriculum remains relevant and aligned with industry needs, industry experts from leading organizations are regularly invited to participate in curriculum review meetings and workshops. The suggestions provided by these experts are thoroughly evaluated by the BOS and are incorporated into the curriculum revisions where appropriate.

- **Conduction of Technical Workshop/ Expert lectures / Seminar by Industrial Experts.**

Department conducts hands-on workshops, Expert talk and seminars by Industry Experts for the partial delivery of course content.

Table 2.2.4.1 Lectures by industry expert 2024-25

Sr. No.	Date	Name of the Event	Name of the Speaker	Designation & company address	Class	No. of students	Relevance of POs
1	10/07/2024	Seminar on Advanced Data Structure	Mr. Nagesh Mhetre	Click In Computer, Pune	SE	76	PO1, PO2, PO5
2	9/07/2024	Training Demo session on Aptitude, Technical	Mr. Vedant Krishna,	Inlustro, Pune	BE	45	PO1, PO2, PO10
3	10/07/2024	Training Demo session on Aptitude, Technical	Ms.Vaishali Valve, Tejal Sathe , Ajinkya Gaikwad	Six phrases, Pune	BE	22	PO1, PO2
4	19/07/2024	Training Demo session on Aptitude, Technical	Mr. Musharaf	Campus Credential, Pune	BE	45	PO1, PO2, PO10
5	30/01/2025	Seminar on Career Opportunities in Biomedical Engineering Field	Mrs. Vaishnavi Banke	Medi facts Inc, Pune	BE	50	PO6, PO7, PO12
6	20/03/2025	Bridging microcontrollers and the cloud: A hands-on one day workshop on IoT, Automation, and AI	Mr. Santosh Yadav	CADD Career, Pune	TE	36	PO1, PO2, PO3, PO5, PO12

Table 2.2.4.2 Lectures by industry expert 2023-24

Sr. No.	Date	Name of the Event	Name of The Speaker	Designation & company address	Class	No. of students	Relevance of POs
1	22/08/2023	Seminar on Advanced Data Structure	Mr. Nagesh Mhetre	Click In Computer, Pune	SE	104	PO1, PO2, PO5
2	25/08/23	Seminar on Discovery day AWS cloud workshop	Mr. Amey Vaidya Mr.Pranav Phadke	Brainfloss, Pune	TE	95	PO1, PO3, PO5, PO12
3	19/10/23	Seminar on Cloud Computing Applications, Job Market and Business Opportunities	Mr.Mubeen Shaikh	Principal Consultant in Ansira, Mentor for startup names Ironalytics Pvt. Ltd.	BE	134	PO1, PO5, PO12
4	10/01/2024	Workshop on Placement Assistance	Mr.Aditya Wakodkar	SevenSense, Pune	BE	70	PO10, PO12
5	1/02/2024	Career Opportunities in Biomedical Engineering Field	Mrs. Vaishnavi Banke	Medi facts inc, Pune	BE	77	PO6, PO7, PO12
6	9/02/2024	Cyber Security	Mr. Manish Singh	Inflow Technologies Pvt. Ltd	SE	106	PO1, PO2, PO6, PO12
7	9/02/2024	Cyber Security	Mr. Manish Singh	Inflow Technologies Pvt.Ltd	TE	65	PO1, PO2, PO6, PO12
8	28/03/2024	Webinar on Job opportunities in VLSI/Semiconductor industry	Mr. Laxmi Narsimha	Takshila VLSI Institute	TE, BE	60	PO1, PO3, PO5, PO12

Table 2.2.4.3 Lectures by industry expert 2022-23

Sr. No.	Date	Name of the Event	Name of The Speaker	Designation & company address	Class	No. of Students	Relevance of POs
1	15/09/2022	Webinar on Data Structures & Algorithms	Mr. Nagesh Mhatre	Click In Computer	SE	127	PO1, PO2, PO5
2	11/10/2022 to 15/10/2022	Workshop on IOT	Mr.Chittranjan Mahajan	Dolphin Lab, Pune	BE	80	PO1, PO3, PO4, PO5, PO12
3	25/2/2023	Webinar on Demo session on Aptitude, Technical	Mr. Aditya Wakodkar	Seven Sense Talent Solution, Pune	TE	171	PO1, PO2, PO10
4	11/03/2023	Training Demo session on Aptitude, Technical	Mr. Aditya Wakodkar	Seven Sense Talent Solution, Pune	BE, SE	65	PO1, PO2, PO10
5	11/03/2023	Training Demo session on Aptitude, Technical	Mr. Avinash	Carpe Diem Boot Camp	TE	56	PO1, PO2, PO10

6	21/03/2023	Training Demo session on Aptitude, Technical	Mr. Vishal	EDU Plus, Pune	TE	65	PO1, PO2, PO10
7	25/03/2023	Webinar on Coding Supper power	Ms. Bhakti	BrightSea Technology Pvt. Ltd., Pune	SE	71	PO1, PO2, PO5
8	12/04/2023	Workshop on PCB designing	Mr.Chittranjan Mahajan	Dolphin Lab, Pune	SE	124	PO1, PO3, PO5

Table 2.2.4.4 Lectures by industry expert 2021-22

Sr.No	Date	Name of Event	Name of the Speaker	Designation & company address	Class	No. of Students	Relevance of POs
1	20/10/2021	Webinar on Recent Trends in Campus Placements and Expectation from Freshets	Prof. Prasad Muley	Director corporate relations, T&P, Shivajirao Kadam Institute of Technology and Management, Indore	SE,TE	110	PO8, PO9, PO10
2	21/10/2021	Webinar on Impact Social Media on Internships and Placements	Prof. Sudarshan Suter	TPO, D. Y. Patil group of Institutes, Kolhapur	SE,TE	155	PO8, PO9, PO10
3	21/10/2021	Webinar on Creating competitive Culture for Better Placement	Prof. Manoj Khadalkar	T&P Head in AIT, Pune	SE,TE	154	PO8, PO9, PO10
4	17/09/2021	Webinar on How to prepare for Campus interviews	Simi Thomas	TCS, Pune	SE,TE,BE	135	PO8, PO9, PO10
5	02/02/2022	Workshop on Electronic Skill Development	Prof. Abhijeet Deogirikar	Founder and CEO , Copper Cloud IoTtech, Pune	SE	50	PO1, PO3, PO5, PO12
6	2/3/2022	Webinar on Design Thinking Critical Thinking and Innovation Design	Prof. Dr. N.J Uke	Trinity Academy of Engineering	TE	144	PO1, PO2, PO3, PO4, PO12

C. Impact analysis of industry institute interaction and actions taken there of

The department actively promotes industry interaction through a variety of structured initiatives aimed at bridging the gap between academic learning and real-world industrial practices. Guest lectures by industry experts are regularly organized to provide students with insights into current technologies, trends, and professional expectations. Industrial visits are arranged to expose students to actual working environments, helping them understand industrial processes, tools, and practices firsthand. The department also signs Memorandums of Understanding (MOUs) with reputed industries to facilitate long-term collaboration in areas such as training, consultancy, and joint projects. Sponsored projects from industry partners provide students with opportunities to work on real-time challenges, enhancing their problem-solving and technical skills. Additionally, internships are encouraged and facilitated to give students hands-on experience and to prepare them for professional roles in their respective fields. These initiatives collectively strengthen the industry-academia link and improve students' employability and industry readiness.

Table 2.2.4.5 Number of activities conducted related to each industry institute interaction

Sr. No.	Activities	Number of Activities Conducted for A.Y.			
		2024-2025	2023-2024	2022-2023	2021-2022
01	Guest Lecture by Industry Person	6	8	8	6
02	Industrial Visits	1	01	01	01
03	Memoranda of Understanding	6	6	8	16
04	Sponsored Projects	9	8	7	4

Table 2.2.4.6 List of MOU's identified industry by faculties for A. Y. 2024-25

Sr. No.	Name of the Industry	Purpose of the MOU	Duration	List the actual activities under each MOU	Relevance of POs
1	Aashay Measurements Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship -05 Students Invited Mr.Rakesh Nalawade as Judge for StartUp idea Competition	PO1, PO2, PO3, PO9, PO10, PO12
2	H.T.Switchgears	Internship, Workshop, Seminar	1 Year	Invited Mr.Sukumar Badave as Judge for Project Competition	PO1, PO2, PO10, PO12
3	Dolphin Labs	Internship, Workshop, Seminar	1 Year	Internship, Workshop	PO1, PO2, PO3, PO5, PO9, PO12
4	Akshay Embedded Pvt .ltd	Internship, Workshop, Seminar	1 Year	Internship -02 Students	PO1, PO2, PO5, PO12
5	Ergen Technovation Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship - 30 students Sponsorship to Start-up Idea Competition (Innoventure-24) = 10,000/-	PO1, PO2, PO3, PO7, PO9, PO12
6	Mikro Innotech India Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship - 13 Students	PO1, PO2, PO5, PO9, PO12

Table 2.2.4.7 List of MOU's identified industry by faculties for A. Y. 2023-24

Sr. No.	Name of the Industry	Purpose of the MOU	Duration	List the actual activities under each MOU	Relevance of POs
1	Aashay Measurements Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship -05 Students. Invited Mr. Rakesh Nalawade as Judge for StartUp idea Competition	PO1, PO2, PO3, PO9, PO10, PO12
2	H.T. Switchgears	Internship, Workshop, Seminar	1 Year	Invited Mr. Sukumar Badave as Judge for Project Competition	PO1, PO2, PO3, PO10, PO12
3	Dolphin Labs	Internship, Workshop, Seminar	1 Year	Seminar	PO1, PO2, PO5, PO12
4	Akshay Embedded Pvt. .ltd	Internship, Workshop, Seminar	1 Year	Internship -02 Students	PO1, PO2, PO5, PO12
5	Ergen Technovation Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship - 30 students Sponsorship to Start-up Idea Competition (Innoventure-24) = 10,000/-	PO1, PO2, PO3, PO9, PO12
6	Mikro Innotech India Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship - 13 Students	PO1, PO2, PO5, PO12

Table 2.2.4.8 List of MOU's identified industry by faculties for A. Y. 2022-23

Sr. No.	Name of the Industry	Purpose of the MOU	Duration	List the actual activities under each MOU	Relevance of POs
1	Aashay Measurements Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Invited Mr. Rakesh Nalawade as Judge for Poster Presentation	PO1, PO2
2	H.T.Switchgears	Internship, Workshop, Seminar	1 Year	Invited Mr. Sukumar Badave as Judge for Project Competition	PO1, PO2, PO3
3	Dolphin Labs	Internship, Workshop, Seminar	1 Year	Workshop on PCB Making" Students -135	PO1, PO2, PO5, PO12
4	Akshay Embedded Pvt. ltd	Internship, Workshop, Seminar	1 Year	Internship	PO1, PO2, PO5, PO12
5	Ergen Technovation Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship - 30 students Industrial Visit - 148 students + 5 staff	PO1, PO2, PO5, PO9, PO10 PO12
6	Mikro Innotech India Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship	PO1, PO2, PO5, PO12

Table 2.2.4.9 List of MOU's identified industry by faculties for A. Y. 2021-22

Sr. No.	Name of the Industry	Purpose of MoU	Duration	List the actual activities under each MOU	Relevance of POs
1	Elon Power	Internship, Workshop, Seminar	1 Year	Internship, Industrial Visit	PO1, PO2, PO5, PO9, PO10, PO12
2	Aashay Measurements Pvt. Ltd	Internship, Workshop, Seminar	1 Year	Internship	PO1, PO2, PO5, PO12
3	Dolphin Labs	Internship, Workshop, Seminar	1 Year	Seminar	PO1, PO2, PO10, PO12

2.2.5 Initiative related to industry internship/summer training (15)

Institute Marks : 14.00

A. Industrial training/tours for students

The department regularly organizes industrial tours and visits to reputed industries, aiming to bridge the gap between classroom-based theoretical knowledge and real-world industrial practices. These visits expose students to the latest technologies, production processes, safety practices and management systems adopted by industries, enhancing their practical understanding and technical competency. The department actively motivates and guides students to undertake industrial training or internships during semester breaks. Faculty coordinators assist students in identifying opportunities, applying to companies, and completing required documentation. Through such training, students gain hands-on experience, develop professional skills and understand workplace expectations.

Table 2.2.5.1 Industrial Tours organized

Sr. No.	Visited Industry	Academic Year	No. of Students	Coordinator	PO	PSO
1	Siemens Kalwa, Mumbai	2024-25	30	Prof. Dr.R. M. Shamalik	PO1,PO6,PO7,PO10,PO12	PSO1,PSO2
2	Spark Minda Stoneridge, Pune.	2023-24	30	Prof. Dr. R. M. Shamalik	PO1,PO6,PO7,PO10,PO12	PSO1,PSO2
3	Mikro Innotech Pvt. Ltd., Pune	2022-23	70	Prof. Dr.R. M. Shamalik	PO1,PO6,PO7,PO10,PO12	PSO1,PSO2
4	Ergen Technovation Pvt Ltd., Pune	2021-22	100	Prof. Dr.R. M. Shamalik	PO1,PO6,PO7,PO10,PO12	PSO1,PSO2

B. Industrial/internship/summer training of more than two weeks and post training Assessment

The department actively promotes internships and summer training programs as part of its effort to bridge the gap between academic learning and industry practices. Students are encouraged to undertake internships or summer training during vacations in core industries, startups, or research organizations. These experiences help students gain practical exposure, develop professional skills, and apply theoretical knowledge to solve real-world problems. The department provides mentorship and support in identifying relevant opportunities and ensures proper documentation and evaluation of the training. MoUs with industries and feedback mechanisms further strengthen the effectiveness of these initiatives. Overall, such activities significantly enhance students' industry readiness and contribute to the attainment of POs and PSOs.

Table 2.2.5.2 Number of students completed Internship yearwise

Academic Year	No. of students done internship	Software Industries IT+DS+AIML	Hardware Industries ELEX+PE+CE+ Embedded Systems+IoT
2024-25	90	68	22
2023-24	147	31	116
2022-23	133	69	64
2021-22	111	48	63

**The relevant data will be provided at the time of committee visit.*

C. Impact analysis of industrial training

Industrial training has a significant impact on enhancing students' technical competence, employability, and professional development. It provides students with real-time exposure to industrial processes, tools, and technologies, allowing them to understand the practical application of theoretical knowledge. Through hands-on involvement in live projects and tasks, students develop skills such as teamwork, communication, problem-solving, time management, and adherence to safety and ethical standards. Industrial training also helps students identify their areas of interest and align their career goals accordingly. Feedback from industry mentors and post-training evaluations help students reflect on their strengths and areas for improvement. Students also gain exposure to project management and financial aspects in real-world settings. Overall, industrial training plays a key role in achieving several Program Outcomes (POs) such as PO5 (modern tool usage), PO9 (individual and teamwork), PO10 (communication), and PO12 (lifelong learning), and Program Specific Outcomes (PSOs) related to industry-readiness.

Table 2.2.5.3 Impact analysis of industrial training (Zensar Technologies,Pune Training)

Academic Year	Total Selected Students	Total Placed students
2023-24	98	48
2022-23	42	18
2021-22	38	23

The internship assessment is conducted based on a comprehensive set of qualitative and quantitative parameters. Key evaluation criteria include depth of technical knowledge, teamwork, creativity, planning and organizational skills, adaptability, attitude and behavior, ethical understanding, and societal awareness. Additionally, regularity, punctuality, attendance, and the maintenance of a log book are considered to ensure consistent engagement. The evaluation also includes the quality of the internship report and the student's feedback on the internship experience.

The assessment is categorized into levels such as Excellent (100%), Very Good (80%), Good (70%), Satisfactory (70%), Average (60%), Below Average (50%), and Poor (40%). Marks are awarded for each parameter, ensuring a fair, transparent, and structured evaluation of the students overall performance during the internship.

Table 2.2.5.4 Internship Evaluation Rubrics

Performance Indicator	Max. Marks	Excellent(100%)	Good(80%)	Satisfactory (70%)	Average(60%)	Below Average (50%)	Poor (40%)
Depth of Knowledge & Communication Skills	5	Demonstrates in-depth technical knowledge; excellent clarity in written and oral communication.	Good understanding; communicates clearly.	Basic understanding; occasionally clear.	Moderate knowledge; needs improvement in articulation.	Basic knowledge; struggles with communication.	Lacks basic concepts and communication ability.
Team Work	5	Actively collaborates, shares responsibilities, and supports team members.	Works well in a team with occasional support.	Occasionally contributes; requires prompting.	Limited collaboration; requires direction.	Passive involvement in team activities.	Uncooperative; avoids team responsibilities.
Creativity	5	Consistently introduces innovative ideas or solutions.	Shows originality in solving problems.	Some creative efforts; needs development.	Occasionally demonstrates creativity.	Rarely contributes new ideas.	No evidence of creativity or innovation.
Planning & Organizational Skills	5	Highly organized; plans work effectively and meets deadlines.	Manages time well with occasional support.	Can organize with regular guidance.	Basic planning evident; needs better execution.	Disorganized; inconsistent in following plans.	Unable to plan or manage tasks effectively.
Adaptability & Analytical Skills	5	Quickly adapts to changes; strong problem-solving skills.	Adapts well with minor difficulties; solves problems effectively.	Shows some flexibility; needs guidance.	Adapts slowly; basic analysis.	Struggles with new situations; poor problem-solving.	Cannot adapt or analyze problems effectively.
Attitude & Behavior at Work	5	Always professional, respectful, and positive.	Generally positive and respectful.	Shows effort to maintain professional behavior.	Inconsistent attitude; needs guidance.	Occasionally displays unprofessional behavior.	Frequently negative or disrespectful.
Societal Understanding	5	Clearly understands social impact of work; empathetic and responsible.	Displays awareness and social responsibility.	Shows concern for social aspects when prompted.	Basic understanding; limited engagement.	Minimal awareness of social implications.	No understanding or concern for societal context.
Ethics	5	Displays strong ethical behavior in all actions.	Generally ethical; minor guidance required.	Understands ethics; shows improving behavior.	Understands ethics but inconsistently applied.	Occasionally shows unethical behavior.	Often unethical or dishonest.
Regularity & Punctuality	5	Always present and on time.	Regular with few delays.	Some lapses but improving.	Occasional absence or lateness.	Frequently late or absent.	Irregular attendance.
Attendance Record	5	≥ 95% attendance	90–94%	85–89%	80–89%	70–79%	< 70%
Log Book	5	Fully completed with detailed, timely entries.	Mostly complete and clear.	Entries made regularly with guidance.	Entries present but lacking depth.	Incomplete entries.	Very few or no entries.
Internship Report	25	Comprehensive, well-written, and professionally formatted.	Clear and mostly complete with minor issues.	Meets format and content expectations with help.	Meets minimum expectations; basic content.	Lacks structure and content depth.	Incomplete or poorly presented report.

Feedback from External Supervisor	20	Outstanding performance; proactive and technically sound.	Strong performance with consistent effort.	Basic performance with some support required.	Acceptable, with areas for improvement.	Minimal involvement; low effectiveness.	Unacceptable performance; lacks skills and discipline.

D. Student Feedback on initiative

At the conclusion of each student's internship, feedback is systematically collected from the respective external mentors or industry supervisors under whom the student has worked. This feedback process serves as a vital component of the internship evaluation framework, providing insights into the student's performance in a real-world professional setting.

Student feedback on the internship and industrial training initiatives has been highly positive. Students have expressed that these experiences enhanced their practical skills, industry exposure, and overall confidence, significantly contributing to their career readiness.

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

Total Marks 116.00

Define the Program specific outcomes

3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

Total Marks 20.00

:

PSO1	Give techniques and solutions by using acquired knowledge and skills.
PSO2	Design and develop Electronics and Telecommunication-based systems.
PSO3	Create, select and adapt techniques, resources and tools with understanding of associated limitations.
PSO4	Identify and address their own needs in the changing world through lifelong learning.

3.1.1 Course Outcomes(COs)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (5)

Institute Marks : 5.00

Note : Number of Outcomes for a Course is expected to be around 6.

Course Name :	C2 03	Course Year :	2021-2022

Course Name	Statements
C2 03.1	Assimilate the physics, characteristics and parameters of MOSFET towards its application as amplifier.
C2 03.2	Design MOSFET amplifiers, with and without feedback, & MOSFET oscillators, for given specifications.
C2 03.3	Analyze and assess the performance of linear and switching regulators, with their variants, towards applications in regulated power supplies.
C2 03.4	Explain internal schematic of Op-Amp and define its performance parameters.
C2 03.5	Design, Build and test Op-amp based analog signal processing and conditioning circuits towards various real time applications.
C2 03.6	Understand and compare the principles of various data conversion techniques and PLL with their applications.

Course Name :	C2 16	Course Year :	2021-2022

Course Name	Statements
C2 16.1	Describe the principles of object oriented programming.
C2 16.2	Apply the concepts of data encapsulation, inheritance in C++.
C2 16.3	Understand Operator overloading and friend functions in C++.
C2 16.4	Apply the concepts of classes, methods inheritance and polymorphism to write programs in C++.
C2 16.5	Apply Templates, Namespaces and Exception Handling concepts to write programs in C++.
C2 16.6	Describe and use of File handling in C++.

Course Name :	C3 06	Course Year :	2022-2023

Course Name	Statements
C3 06.1	Interpret and process discrete/digital signals and represent DSP system.
C3 06.2	Analyze the digital systems using the Z-transform techniques.
C3 06.3	Implement efficient transform and its application to analyze DT signals.
C3 06.4	Design and implement IIR filters.
C3 06.5	Design and implement FIR filters.
C3 06.6	Apply DSP techniques for speech/ biomedical/ image signal processing.

Course Name :	C3 16	Course Year :	2022-2023

Course Name	Statements

C3 16.1	Understand the Concepts of Sensors/Transducers, classify and evaluate static and Dynamic Characteristics of Measurement Systems.
C3 16.2	Choose the proper sensor comparing different standards and guidelines for measurements of Temperature and Humidity.
C3 16.3	Choose the proper sensor comparing different standards and guidelines for measurements of Force, Pressure, Stress and Flow.
C3 16.4	Choose the proper sensor comparing different standards and guidelines for measurements of Displacement, Vibration, Acceleration and Level.
C3 16.5	Explore sensors to profound areas like environmental, Agricultural and bio-medical equipment and sustainability.
C3 16.6	Explore IoT based applications of Sensors and Transducers.

Course Name :	**C4 01**	**Course Year :**	**2023-2024**

Course Name	Statements
C4 01.1	Apply the fundamentals of electromagnetic to derive free space propagation equation and distinguish various performance parameters of antenna.
C4 01.2	Identify various modes in the waveguide. Compare: coaxial line, rectangular waveguides & strip lines and identify applications of the same.
C4 01.3	Explore construction and working of principles passive microwave devices/components.
C4 01.4	Explore construction and working of principles active microwave devices/components.
C4 01.5	Analyze the structure, characteristics, operation, equivalent circuits and applications of various microwave solid state active devices.
C4 01.6	Know the various microwave systems, device set ups of microwave measurement devices and Identify the effect of radiations on environmental sustainability.

Course Name :	**C4 10**	**Course Year :**	**2023-2024**

Course Name	Statements
C4 10.1	Describe the origin of various biomedical signals and Interpret the meaning of various parameters associated with biomedical signals.
C4 10.2	Analyze ECG Signals with extraction of meaningful information.
C4 10.3	Explain Processing of EEG signals for Diseases of Central Nervous System.
C4 10.4	Analyze EMG signals for understanding Neuromuscular Diseases.
C4 10.5	Analyze various Biomedical Signals.
C4 10.6	Process the biomedical signals to remove adaptive interference and noise.

3.1.2 CO-POmatrices of courses selected in 3.1.1(Six matrices to be mentioned; one per semester from 3rd to 8th semester) (5) Institute Marks : 5.00

1 . course name : C203

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C203.1	3	1	1	2	-	-	-	-	-	-	-	-
C203.2	3	1	1	2	-	-	-	-	-	-	-	-
C203.3	3	1	1	2	-	-	-	-	-	-	-	-
C203.4	3	1	1	-	-	-	-	-	-	-	-	-
C203.5	3	1	1	-	-	-	-	-	-	-	-	-
C203.6	3	1	1	-	-	-	-	-	-	-	-	-
Average	**3.00**	**1.00**	**1.00**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2 . course name : C216

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C216.1	3	-	-	-	-	-	-	-	-	-	-	-
C216.2	3	2	-	-	-	-	-	-	-	-	-	-
C216.3	3	-	1	-	-	-	-	-	-	-	-	-
C216.4	3	2	-	-	-	-	-	-	-	-	-	-
C216.5	3	2	-	-	1	-	-	-	-	-	-	-
C216.6	3	2	1	-	1	-	-	-	-	-	-	-
Average	**3.00**	**2.00**	**1.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3 . course name : C306

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C306.1	3	2	1	2	2	-	-	-	-	-	-	-
C306.2	3	2	1	3	2	-	-	-	-	-	-	-
C306.3	3	2	3	3	2	-	-	-	-	-	-	-
C306.4	3	2	3	3	2	-	-	-	-	-	-	-
C306.5	3	2	3	3	2	-	-	-	-	-	-	-
C306.6	1	-	-	2	2	-	-	-	-	-	-	-
Average	**2.67**	**2.00**	**2.20**	**2.67**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4 . course name : C316

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C316.1	2	3	-	1	2	2	-	-	-	-	-	-
C316.2	2	2	2	1	-	2	-	-	-	-	-	-
C316.3	2	2	2	1	-	2	-	-	-	-	-	-
C316.4	2	2	2	1	1	-	-	-	-	-	-	-
C316.5	2	2	2	1	1	3	-	-	-	-	-	-
C316.6	2	1	2	2	1	3	-	-	-	-	-	-
Average	**2.00**	**2.00**	**2.00**	**1.17**	**1.25**	**2.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

5 . course name : C401

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C401.1	2	2	1	-	1	-	-	-	-	2	-	-
C401.2	2	2	1	-	1	-	-	-	-	2	-	-
C401.3	2	2	1	-	1	-	-	-	-	2	-	-
C401.4	2	2	1	-	1	-	-	-	-	2	-	-
C401.5	2	2	1	-	1	-	-	-	-	2	-	-
C401.6	2	2	1	-	1	-	1	-	-	2	-	-
Average	**2.00**	**2.00**	**1.00**	**0.00**	**1.00**	**0.00**	**1.00**	**0.00**	**0.00**	**2.00**	**0.00**	**0.00**

6 . course name : C410

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C410.1	2	2	1	-	-	-	-	-	-	-	-	-
C410.2	2	2	1	-	-	-	-	-	-	-	-	-
C410.3	2	2	1	-	-	-	-	-	-	-	-	-
C410.4	2	2	1	-	-	-	-	-	-	-	-	-
C410.5	2	2	1	-	-	-	-	-	-	-	-	-
C410.6	2	2	1	-	-	-	-	-	-	-	-	-
Average	**2.00**	**2.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

1 . Course Name : C203

Course	PSO1	PSO2	PSO3	PSO4
C203.1	2	2	-	-
C203.2	2	3	-	-
C203.3	2	2	-	-
C203.4	2	2	-	-
C203.5	2	3	-	-
C203.6	2	2	-	-
Average	**2.00**	**2.33**	**0.00**	**0.00**

2 . Course Name : C216

Course	PSO1	PSO2	PSO3	PSO4
C216.1	3	-	-	-
C216.2	3	-	2	-
C216.3	3	-	2	-
C216.4	3	-	-	-
C216.5	3	-	2	-
C216.6	3	-	2	-
Average	**3.00**	**0.00**	**2.00**	**0.00**

3 . Course Name : C306

Course	PSO1	PSO2	PSO3	PSO4
C306.1	2	2	2	2
C306.2	2	2	2	2
C306.3	2	2	2	2
C306.4	2	2	2	2
C306.5	2	2	2	2
C306.6	2	2	1	2
Average	**2.00**	**2.00**	**1.83**	**2.00**

4 . Course Name : C316

Course	PSO1	PSO2	PSO3	PSO4
C316.1	1	-	-	-
C316.2	2	-	-	-
C316.3	2	-	-	-
C316.4	2	-	-	-
C316.5	2	2	1	1
C316.6	2	2	1	1
Average	**1.83**	**2.00**	**1.00**	**1.00**

5 . Course Name : C401

Course	PSO1	PSO2	PSO3	PSO4
C401.1	2	2	1	-
C401.2	2	1	1	-
C401.3	2	1	-	-
C401.4	2	1	-	-
C401.5	2	2	1	-
C401.6	2	2	2	1
Average	**2.00**	**1.50**	**1.25**	**1.00**

6 . Course Name : C410

Course	PSO1	PSO2	PSO3	PSO4
C410.1	2	2	1	1
C410.2	2	1	1	1
C410.3	2	1	-	1
C410.4	2	1	-	1
C410.5	2	2	1	1
C410.6	2	2	2	1
Average	**2.00**	**1.50**	**1.25**	**1.00**

3.1.3 - A Program level Course-PO matrix of all courses INCLUDING first year courses (10) Institute Marks : 10.00

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

C1101	3	3	PO3	2	2	PO6	PO7	PO8	PO9	1	PO11	1
C1102P	3	2	2	3	2.4	PO6	PO7	PO8	3	2	PO11	2
C1102C	3	2.5	1.8	PO4	1.7	3	1.5	PO8	1.8	2	PO11	1
C1103	3	2.33	1.6	1.2	1	2	1.8	PO8	PO9	1	PO11	1
C1104EE	2.67	2	2	2	PO5	2	PO7	PO8	1	1	PO11	1.5
C1104EX	3	1.83	1.67	PO4	1.5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C1105P	2	2	1.8	2	2	PO6	PO7	PO8	1.25	2	PO11	2
C1105E	3	3	1.67	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C1106	3	1	3	PO4	PO5	3	PO7	1	2	PO10	PO11	2
C1201	3	3	PO3	2	2	PO6	PO7	PO8	PO9	1	PO11	1
C1205	3	2	1.5	PO4	2.17	1.33	PO7	PO8	PO9	1.67	PO11	PO12
C1206	3	2	2.75	2.75	2.75	2.25	2.25	2.25	3	2.5	2.25	3
C201	3	2.8	2.2	2.6	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202	3	2.8	2.2	2.6	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C203	3	1	1	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C204	2	1	1.8	2	1	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205	2.67	3	PO3	PO4	PO5	1	1	PO8	PO9	PO10	PO11	1
C206	3	2	2	1.4	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C207	3	1	1	2	1	PO6	PO7	PO8	3	1.33	PO11	1
C208	2	1.5	1.67	1.67	1.75	1.8	PO7	PO8	1.8	1.8	PO11	1.6
C209	3	2.33	2.5	1.5	1	PO6	PO7	PO8	2	1.67	PO11	2.16
C210	3	3	3	2	3	PO6	PO7	PO8	2	1.5	PO11	1
C211	2.67	2.5	2.6	2.4	2.8	2	2	2	3	3	PO11	2.5
C212	3	3	PO3	PO4	1	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C213	3	2.5	2	2.16	1.83	PO6	PO7	PO8	PO9	PO10	PO11	1
C214	3	2.67	2.16	3	2.83	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C215	3	2	2	PO4	3	PO6	PO7	PO8	PO9	2	PO11	PO12
C216	3	2	1	PO4	1	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C217	3	3	2.5	2	3	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C218	3	3	PO3	2	3	PO6	PO7	PO8	1.5	PO10	PO11	1
C219	1.83	2.67	2.5	1.5	2.33	1	PO7	1	1.16	1.33	PO11	1.33

C220	2.83	2.16	2.5	2.67	2.83	PO6	PO7	PO8	1	2	PO11	2.33
C221	2.67	2.5	2.6	2.4	2.8	2	2	2	3	3	2.2	2.5
C222	3	3	3	2.5	2.5	2	2	2	3	3	1	2
C301	3	2.8	2	2.3	2	1	1	PO8	PO9	2	PO11	1
C302	2.83	2.33	2.16	2.5	2.67	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303	2.83	2.33	2.16	2.5	2.67	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C304	1.17	2	1	1.2	1	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C305	3	2	1.5	PO4	1.4	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C306	2.67	2	2.2	2.67	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C307	3	3	2.4	3	2	1	1	PO8	1	2	PO11	2
C308	1.16	2	1	1.2	1	1.67	1	1	1	1	PO11	PO12
C309	3	2	3	2.25	2.67	PO6	PO7	PO8	2	2	PO11	2
C310	3	2	2.33	2.66	2.16	2	PO7	1.66	2	1.5	PO11	1.83
C311	3	1.5	1	1	1	1	1	1	1	1.2	PO11	1.2
C312	3	2	1.8	2	1.4	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C313	1.83	1.6	2.5	1	1.4	1.8	1	1.8	2.16	2.33	3	2.16
C314	3	1.17	1.33	1	1.5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C315	3	1.67	1.83	1.83	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C316	2	2	2	1.17	1.25	2.4	PO7	PO8	PO9	PO10	PO11	PO12
C317	2.17	3	3	2.33	2.6	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C318	3	1.83	2	1.33	1.75	1.25	1.2	PO8	1	PO10	PO11	1.17
C319	3	1.83	2	1.33	1.75	1.25	1.2	PO8	1	PO10	PO11	1.17
C320	2	2	3	2	2.33	3	PO7	1.5	1.5	1.5	PO11	1.67
C321	3	2	2	PO4	PO5	2.5	2	2.5	2.25	2.33	2.4	2.6
C322	3	2.5	2.5	2	3	1	1	3	2.5	3	2	2.75
C401	2	2	1	PO4	1	PO6	1	PO8	PO9	2	PO11	PO12
C402	3	2.83	2.83	2.16	2.83	1.5	PO7	PO8	1.33	PO10	PO11	PO12
C403	2.5	2	2.5	2	2.33	PO6	PO7	PO8	PO9	PO10	PO11	1.8
C404	3	3	3	3	2	PO6	PO7	1	PO9	1	PO11	2
C405	2	2	1	PO4	PO5	PO6	1	PO8	PO9	2	PO11	PO12
C406	2.08	2.17	1.62	2.33	2	PO6	1	PO8	PO9	2	PO11	1.25

C407	3	2.91	2.91	2.58	2.41	1.5	1.5	1	1.33	1.16	PO11	1.5
C408	2	2.25	2.75	1.66	2.33	1.33	1	1.25	2	2.25	2	2.25
C409	3	3	2	2	1	PO6	PO7	PO8	PO9	2.5	PO11	PO12
C410	2	2	1	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C411	2	1	2	PO4	PO5	PO6	1	PO8	PO9	3	PO11	2
C412	2.5	2	2.5	2	2.5	2.33	2	2.5	PO9	2.2	PO11	2
C413	2.67	2.33	2.67	2.5	2.5	2	PO7	1	2	3	PO11	2
C414	3	3	2	PO4	1	PO6	PO7	PO8	PO9	2.5	PO11	PO12
C415	2.16	2.5	PO3	2	3	2	1	PO8	3	1	PO11	2
C416	2	2.25	2.75	1.67	2.33	1.33	1	1.25	2	2.25	2	2.25

3.1.3 - B Program level Course-PSO matrix of all courses INCLUDING first year courses :

Course	PSO1	PSO2	PSO3	PSO4
C201	3	2.6	PSO3	1.4
C202	3	2.6	PSO3	1.4
C203	2	2.33	PSO3	PSO4
C204	1.67	1	1	1
C205	3	1	1	2
C206	2.16	PSO2	2	PSO4
C207	2	2.33	2	1
C208	1.6	1.67	2	1.67
C209	2.67	2.67	2.33	2
C210	3	PSO2	2.5	2
C211	2.83	2.67	2.67	2.67
C212	3	3	2	2
C213	3	PSO2	3	PSO4
C214	3	2.5	2.67	1.16
C215	3	3	3	1
C216	3	PSO2	2	PSO4
C217	3	2.33	3	1.5
C218	3	2	3	PSO4
C219	2.83	PSO2	2.67	1.33

C220	3	PSO2	2.83	2.33
C221	2.83	2.67	2.67	2.67
C222	1.75	1.25	2.33	1.2
C301	3	1	1	1
C302	3	2.5	2.67	1.83
C303	2.83	2.61	2.43	2.06
C304	2	2	1.8	PSO4
C305	3	1.5	1	1
C306	2	2	1.83	2
C307	3	2.67	1.25	1.6
C308	1.67	1.83	2	2
C309	3	1.5	1.4	1.4
C310	2	2	1.83	2
C311	2.6	1	1	1
C312	1.80	1.39	1.25	1.25
C313	2.83	1.83	2.67	2.16
C314	3	1	1	1
C315	3	1.83	2	2
C316	1.83	2	1	1
C317	2.17	1.67	1.5	1.5
C318	3	1.5	1.33	1.5
C319	3	1.5	1.33	1.5
C320	1.83	1.33	1.67	2
C321	2.16	2.33	2	2.5
C322	3	3	2.75	3
C401	2	1.5	1.25	1
C402	3	2	2.83	2
C403	2.66	2.5	2.66	PSO4
C404	3	3	1	1
C405	2	1.5	1.25	1
C406	2.25	2.08	1.95	1

C407	3	2.5	1.91	1.5
C408	2.75	2.5	2.25	2.5
C409	2.33	3	1	1
C410	2	1.5	1.25	1
C411	PSO1	PSO2	2	1.17
C412	2.16	3	2.2	2.4
C413	2.83	1.16	2.5	2.16
C414	2.33	3	1	1
C415	3	2	2.83	2.16
C416	2.75	2.5	2.25	2.5

3.2 Attainment of Course Outcomes (50) Total Marks 47.00

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

Institute Marks : 9.00

A.Process Details:

Assessment of Course Outcome: Assessing course outcomes is an important part of evaluating the effectiveness of a course and determining whether it has achieved its intended goals.This process is carried out using following steps:

1. Define the Course Outcomes: The initial step is to clearly outline the course outcomes by identifying the specific knowledge, skills, and competencies, students are expected to develop by the end of the course. The course is usually structured into six units, and for each unit, the course teacher defines Course Outcomes (COs), referencing the COs specified in the university syllabus at the start of the semester.

2. Use Assessment Tools: The evaluation is done by using assessment tools like Unit Tests, Assignments, University In semester and End Semester examinations,course termwork,practical and oral examinations. The course teacher in alignment with the specified course outcomes evaluates different cognitive levels as outlined in Bloom's Taxonomy while designing the specific assessment tool.This includes setting the question paper and checking unit test answer sheets and assignments, evaluating lab experiments, internships and projects.

3. Prepare Attainment Sheet: Once evaluation is done by using the assessment tools the marks are collected , the attainment sheet is prepared to find Course Outcome Attainment by individual course teacher. It is used to determine how well students have achieved the course outcomes.

4. Implement data-driven improvements to the course: Finally, course attainment analysis highlights specific course outcomes where improvement is needed in course content, instructional methods, or assessment strategies . This analysis informs evidence-based decisions for preparing action plan to enhance student learning outcomes.

B. Evaluation of Course Outcomes (COs) of all courses is measured using Direct Assessment Method:

Direct Assessment Method: Direct Assessment Method is used to evaluate, measure, and document students'learning progress, skills, knowledge, or performance in relation to the intended course outcomes of a particular course. The assessment of Course Outcomes (COs) includes internal examination assessment and external University examination assessments. Internal examination assessments contribute 20% and external University examination assessment contributes 80% to the overall assessment of COs.

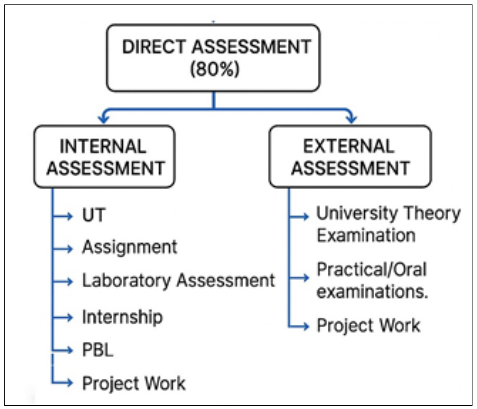


Figure: 3.2.1.1 CO Attainment Tools

1.Theory Assessment:

Internal Examination Assessment: To make sure that students are keeping up with the course content, internal unit tests and assignments are used as effective measures of their progress. The course is usually divided into six units (as per University syllabus), each of which is evaluated through a corresponding unit test or assignment. The questions in these assessments are designed in accordance with Blooms Taxonomy and are mapped to the specific Course Outcomes (COs) of the course. The Course Teacher sets target level for COs considering averaging performance of current year, against which the students performance is evaluated.Internal Assessment performance is calculated based on the marks scored by the student in Unit Test-I (30M), Unit Test-II (40 M), and Assignment 1 (15 M) and Assignment 2 (15 M). The COs are distributed as shown in Table 3.2.1.1

Table 3.2.1.1 Distribution % of COs of Theory for Internal Assessment

Assessment Tool	CO1	CO2	CO3	CO4	CO5	CO6
Unit Test - I	15%	15%				
Unit Test - II				20%	20%	
Assignment I			15%			
Assignment II						15%

External Assessment: University Examination: The university conducts both In-semester and End-semester examinations to evaluate students understanding of the course contents. The In semester examination covers two units of the course and assesses two specific Course Outcomes (COs), while the End semester examination covers the remaining 4 units and evaluates all 4 remaining COs. These examinations are designed to test students knowledge and comprehension of the course contents, as well as their ability to apply that knowledge to real-world situations.

Theory Course Performance – University Assessment: The University Examination scheme has two examinations, In semester examination for 30 Marks and an End semester examination for 70 Marks. All the COs are distributed as shown in Table 3.2.1.2

Table 3.2.1.2 Distribution of COs for University Theory Exam

Assessment Type	CO1	CO2	CO3	CO4	CO5	CO6
University Theory In semester Exam	15%	15%				
University Theory End semester Exam			18%	17%	18%	17%

2.Practical/Lab Assignment:

Internal Assessment: Lab practice courses provide students with valuable hands-on experience, allowing them to apply theoretical concepts learned in class and develop the practical skills essential for respective course outcome. To assess students performance in these practical aspects of the course, a Continuous Assessment of Term Work is done. By implementing Continuous Assessment of Term Work, teacher can monitor students progress to enhance their skills and understanding of lab assignments during Midterm Submission and Final Submission as per scheduled in Academic Calendar.

External Assessment: The university practical oral examination may be conducted in the form of either an oral examination or a practical examination, depending on the course requirements .Oral and Practical evaluation is conducted by both an external examiner and an internal examiner to ensure that the assessment is fair and objective. Through this examination, students are tested on their ability to apply the knowledge and skills they have acquired throughout the course .

3. Project:

Project work evaluation is a key component in assessing the attainment of Course Outcomes. A structured process, coordinated by the Project Coordinator, is followed for forming student groups, selecting project topics, and allocating guides based on domain expertise. Once topics are approved by a faculty panel, internal guides are assigned to mentor the teams. Continuous monitoring is ensured through weekly review meetings and project work book , with detailed records maintained in project work book. Evaluation is conducted throughout the semester by internal guide using defined rubrics and external examiner at the time of examination . Final comprehensive evaluations take place at the end of Semesters VII and VIII, ensuring consistent academic rigor and progress tracking.

Project Stage 1: The project topic selection process begins with students exploring current trends, industry requirements, and their individual areas of interest. Through preliminary research and discussions, students ensure the selected topic is feasible, innovative, and aligned with academic goals. The topic is finalized after a formal presentation before a faculty panel and the Project Coordinator.Project evaluation for this stage includes Term Work (50 marks), assessed based on several key parameters listed below.

Table: 3.2.1.3 Rubrics for Project Stage 1

Rubrics Questions	Marks
Innovative Idea	5
Literature Survey	5
Depth of Understanding	5
Attendance on Project day	5
Work according to plan activity	5
Maintaining project work book	5
Presentation	10
Implementation	5
Seminar Report	5
Total	**50**

Project Stage 2: This phase involves developing, testing, and validating the proposed solution. Evaluation includes Term Work (100 marks) and a Final Oral Exam (50 marks). Assessment focuses on different parameters listed below.

Table: 3.2.1.4 Rubrics for Project Stage 2

Rubrics Questions	Marks
Literature Survey	10
Design	15
Implementation	15
Test and Results	20
Attendance on project Day	10
Work according to plan activity	10
Maintaining project work book	10
Paper presentation ,project exhibition and Participation	5
Awards ,prize if any	5
Total	**100**

4.Internship:

As per the Savitribai Phule Pune University curriculum, third-year Electronics and Telecommunication Engineering students undergo a 4 to 6-week internship during the sixth semester to gain practical industry exposure. The departmental internship coordinator assigns mentors to student groups and monitor the entire process. Students submit details of their internship organization, and mentors coordinate with external supervisors to track progress. Interns are required to maintain an internship record book throughout the internship period. Final evaluation involves a presentation of their work to the mentor and is based on a detailed rubric listed below. The internship coordinator then conducts Course Outcome (CO) attainment analysis based on overall performance.

Table: 3.2.1.5 Rubrics for Internship

Rubrics Questions	Marks
Depth of Knowledge	5
Team Work	5
Creativity	5
Planning & Organizational Skills	5
Adaptability and Analytical Skills	5
Attitude & Behavior at Work	5
Societal Understanding	5
Ethics	5
Regularity and Punctuality	5
Attendance Record	5
Internship Record Book	5
Internship Record	25
Feedback from External Supervisor	20
Total	**100**

5.Project Based Learning (PBL): In the PBL implementation for Semester IV, student groups identify real-world or academic problems, propose suitable solutions, and develop corresponding projects. They submit a detailed report outlining the problem, proposed solution, and implementation process. Performance is assessed by the course teacher using predefined rubrics listed below, and Course Outcome (CO) attainment is submitted to the department.

Table: 3.2.1.6 Rubrics for Project Based Learning

Rubrics Questions	Marks
Idea Inception	5
Design of PPTs	5
Presentation skills	10
Understanding level	10
Demonstration and Technical Ability	25
Project Outcome	20
Report writing	10
Attendance	10
Participation/Publication potential/ Patent Potential	5
Total	**100 (converted into 50 marks)**

Table 3.2.1.7: Overview of Course Outcome Assessment Tools

Assessment Type	Assessment Tool	Course Type	Frequency of Assessment
Direct Assessment: Internal	Unit Test	Theory	Twice in Semester
	Assignment Oral	Theory	Twice in Semester
	Rubrics	Project based Learning, Internship,Miniproject Project Stage 1 & Project Stage 2	As per defined
Direct Assessment: External	University In-semester Exam	Theory	Mid of Semester
	University End-Semester Theory Exam	Theory	At semester end
	University Oral / Practical Exams	Practical Assignment	At semester end
	University Project Exam as per Rubrics defined	Miniproject,Project Stage 2	At semester end

3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (40)

Institute Marks : 38.00

Evaluation of CO Attainment by Direct Assessment Tool:

The evaluation of course outcome (CO) attainment by assessment tool involves a systematic process of collecting and analyzing data to determine the extent to which the course outcomes have been achieved. The following steps are taken for this evaluation:

a) Communicate assessment details: Clearly establish and communicate the assessment criteria and tools to students at the beginning of the semester to ensure they understand the expectations and how their performance is evaluated. This promotes transparency and effectively guides students efforts.

b) Conduct Assessment and Evaluation: Tools such as Unit Tests, Assignments, and Continuous Assessments are conducted in a fair, consistent, and standardized manner as per schedule in Academic Calendar. The results are conveyed to students after evaluation by the Course Teacher.

c) Analyze results and prepare an action plan: The assessment results are analyzed to determine the extent to which the Course Outcomes (COs) are achieved and are submitted to the Exam Coordinator. Remedial actions are planned for slow learners, while additional activities are designed for bright learners to enhance their skills. Based on the evaluation of CO attainment levels, any identified gaps are measured, and an action plan is implemented to address them.

Attainment Levels:

- Attainment level is measured in terms of student performance in internal examinations with respect to Course Outcomes of a course and university examinations.
- Target is stated as the average marks in the corresponding examination for respective academic year.

The assessment gives a quantitative measure in each course, and these exhibit the level of attainments of course outcomes as follows:

- Level 1- 40% of students score more than or equal to target marks.
- Level 2- 50% of students score more than or equal to target marks.
- Level 3: 60% of students score more than or equal to target marks.

Mapping of Assessment Tools and COs:

Mapping assessment tools and COs is an important part of the assessment process and can help to ensure that student performance is evaluated consistently and effectively. Mapping of assessment tools and course outcomes (COs) involves identifying which assessment tools are appropriate for evaluating specific COs. This process ensures that the assessment tools align with the intended learning outcomes and measure the desired knowledge, skills, and abilities. This process also helps to ensure that the assessment tools are valid and reliable, and that they provide accurate information about outcome.

Notations Used:

L1 = 40% to 49% students scoring ≥ target marks

L2 = 50% to 59% students scoring ≥ target marks

L3 = 60% and above students scoring ≥ target marks

$CO_i\_AT\_int$= Internal attainment of i^{th} CO(individual CO)

$CO_i\_AT\_ext$= External attainment of i^{th} CO(individual CO)

n = Number of Course Outcomes considered (typically n = 6)

$CO_i\_AT\_Dir$= Direct attainment of i^{th} CO

$CO_i\_AT\_Final$= Final attainment of i^{th} CO

W_{int}= Weight for internal assessment (0.2)

W_{ext}= Weight for external assessment (0.8)

Table: 3.2.2.1 Details for Mapping of COs and Assessment Tools for Theory Examination

Assessment Tool	**Internal Assessment (20% weightage)** $CO_i\_AT\_int$				**External Assessment (80% weightage)** $CO_i\_AT\_ext$	
	Unit Test 1	Unit Test 2	Assignment 1(Oral)	Assignment 2 (Oral)	In semester Theory Exam.	End semester Theory Exam.
COs Mapped	CO1, CO2	CO4, CO5	CO3	CO6	CO1, CO2	CO3, CO4, CO5, CO6

Table: 3.2.2.2 Details for Mapping of COs and Assessment Tools for Practical Examination

Assessment Tool	Internal Assessment (20% weightage) CO_i_AT_int	External Assessment (80% weightage) CO_i_AT_ext
	Term Work	Practical/Oral Examination
COs Mapped	CO1, CO2,CO3,CO4, CO5,CO6	CO1, CO2,CO3,CO4, CO5,CO6

Steps involverd in evaluation of Course Outcome attainment:

1.Measuring individual CO attainment through Internal Assessment for unit Testes and assignments:

$$CO_i\_AT\_int = \sum_{i=1}^{n} (L1 + L2 + L3) \quad \text{.....(3.2.2.1)}$$

2. Measuring individual CO attainment through External Assessment for in semester examination and end semester examination:

$$CO_i\_AT\_ext = \sum_{i=1}^{n} (L1 + L2 + L3) \quad \text{.....(3.2.2.2)}$$

3.Course Outcome Attainment:

$$CO_i\text{\_AT\_Dir} = W_{int} * CO_i\text{\_AT\_int} + W_{ext} * CO_i\text{\_AT\_ext} \quad \text{.....(3.2.2.3)}$$

Set Target for the Course Outcome Attainment: At the beginning of the semester, the course teacher sets a target level for Course Outcome (CO) attainment, which serves as a benchmark for evaluating the effectiveness of the course in achieving its intended outcomes. After the declaration of university results, the actual CO attainment is calculated and compared with the predefined target. If the attainment meets or exceeds the target, the CO is considered *Attained*; otherwise, it is marked as *Not Attained*. In such cases, areas for improvement are identified, and a focused action plan is implemented to address the gaps.

Action upon Course Outcome attainment :

Course Outcome target is not attained:

Corrective actions are taken based on the CO attainment values in order to improve the quality of education provided. If the attainment value for any CO is low, it indicates that students are not achieving the expected outcomes for that particular Course .

In this case, the following corrective actions can be taken by Course Teacher:

a) **Course Support Group:** A course support group is formed among students to enhance query resolving and additional input are given to students performing low by Course Teacher.

b) **Course Mentor:** A Course Mentor is assigned to provide continuous support and guidance to the Course Teacher. The mentor assists in planning and improving instructional strategies, aligning teaching methods with course outcomes, and addressing challenges in course delivery. This mentorship aims to enhance the overall quality of teaching and ensure that the course is conducted effectively and in accordance with academic standards.

c) Educational Material: The availability and accessibility of learning resources can be improved to better support student learning and the achievement of the COs.

d) **Faculty Development:** Teachers can be offered professional development opportunities to strengthen their teaching skills and stay current with the latest pedagogical methods and strategies.

e) Evaluate the difficulty level of COs: The complexity of course outcomes can vary, with some being inherently more challenging than others. Therefore, its important to take the difficulty level into account when evaluating whether to adjust target values. COs that already exhibit high attainment may not need further increases in targets, while those with lower attainment and greater difficulty may require additional focus and support.

f) **Teaching methodology:** The teaching methodology should be regularly evaluated and refined to ensure its effectiveness and alignment with the course outcomes. This may involve adopting innovative instructional strategies or modifying existing approaches to better support student learning.

Course Outcome target is attained: When Course Outcome target is attained, it is important to revisit the Course Outcome target and set new target for the next academic year.

Here are some suggestions to improve this process:

a) Examine the CO attainment values: Before setting new CO targets, it is important to analyze the CO attainment values to identify areas of strength and areas for improvement. This analysis can help in the setting of new targets that are challenging and realistic.

b) Incorporate industry and program standards: CO target must align with industry and program standards to ensure students are adequately prepared for future placement opportunities and career success. Therefore, these standards should be carefully considered when establishing new CO targets.

Table 3.2.2.3 Individual Course Outcome Attainment Table A.Y 2020-21 to 2023-24

Course Code	CO1	CO2	CO3	CO4	CO5	CO6
C1101	2.8	2.8	1.4	1.4	1.4	1.4
C1102P	3	3	1.4	1.4	1.4	1.4
C1102C	3	3	3	3	3	3

C1103	3	3	2	2	2.2	2.2
C1104EE	2.8	2.8	3	2.6	2.8	3
C1104EX	2.6	2.6	3	3	3	3
C1105P	3	3	2.2	2.2	2	2.2
C1105E	3	3	3	3	2.8	2.8
C1106*	3	3	3	3		
C1201	3	3	1.4	1.4	1.2	1.4
C1205	3	3	2.2	2.2	2.2	2.2
C1206*	3	3	3			
C201	2.6	2.6	2.2	2.2	2.1	2.2
C202	2	2	2	2	2	2
C203	3	2.7	2.6	2.3	2.3	2.4
C204	2.8	2.9	2.6	2.4	2.4	2.4
C205	3	3	2.8	2.9	2.9	3
C206	2.9	3	2.9	3	2.9	3
C207	2	2	2	2	2	2
C208	3	3	3	3	3	3
C209	2.5	2.5	2.5	2.5	2.5	2.5
C210	3	3	3	3	3	3
C211	3	3	3	3	3	3
C212	3	3	2.6	2.6	2.6	2.6
C213	3	3	3	3	3	3
C214	2.9	2.8	2.2	2.2	2.2	2.2
C215	2.5	2.5	2.6	2.4	2.6	2.6
C216	3	2.9	2.2	2.2	2.2	2.2
C217	3	3	3	3	3	3
C218	3	3	3	3	3	3
C219	2.5	2.5	2.5	2.5	2.5	2.5
C220	3	3	3	3	3	3
C221	3	3	3	3	3	3
C222	3	3	3	3	3	3
C301	2.6	2.6	2.2	2.2	2.2	2.2
C302	2.4	2.4	2.2	2.2	2.2	2.2
C303	3	3	3	3	3	3
C304	2.4	2.3	2.6	2.5	2.6	2.6
C305	2.1	2	2.4	2.5	2.6	2.4

C306	2.7	2.7	2.2	2.2	2.1	2.2
C307	3	3	3	3	3	3
C308	2	2	2	2	2	2
C309	1.5	1.5	1.5	1.5	1.5	1.5
C310	2.5	2.5	2.5	2.5	2.5	2.5
C311	3	3	3	3	3	3
C312	2.6	2.6	2.2	2.2	2.2	2.2
C313	2	2.1	2.2	2.2	2	2.1
C314	2	2.1	2.2	2	2.1	2.2
C315	2.2	2.2	1.4	1.4	1.4	1.4
C316	3	3	2.2	2.2	2.2	2.2
C317	2.5	2.5	2.5	2.5	2.5	2.5
C318	2	2	2	2	2	2
C319	2	2	2	2	2	2
C320	3	3	3	3	3	3
C321	3	3	3	3	3	3
C322	3	3	3	3	3	3
C401	2.8	2.7	2.6	2.5	2.5	2.6
C402	2.9	3	2.6	2.6	2.6	2.6
C403	2.6	2.6	2.2	2.2	2.1	2.2
C404	3	3	2.6	2.6	2.3	2.6
C405	2.4	2.3	2.4	2.4	2.5	2.6
C406	2.35	2.35	2.35	2.35	2.35	2.35
C407	2.55	2.55	2.55	2.55	2.55	2.55
C408*	3	3	3	3		
C409	2.2	2.1	2.2	2	2	2.2
C410	2.6	2.4	2.3	2.2	2.5	2.6
C411	2.9	2.9	2.2	2.2	1.8	2.2
C412	3	3	3	3	3	3
C413	3	3	3	3	3	3
C414	2.6	2.6	2.6	2.6	2.6	2.6
C415	2.5	2.5	2.5	2.5	2.5	2.5
C416*	3	3	3	3		

* Course has Four COs.

3.3 Attainment of Program Outcomes and Program Specific Outcomes (50) Total Marks 49.00

3.3.1 Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

Institute Marks : 9.00

The assessment of Program Outcome and Program Specific Outcome is done using two assessment methods as following:

Direct Assessment Method: It includes the assessment of each Course contributing towards the attainment of the Program Outcome (80% weightage). The direct methods display the student's knowledge and skills from their performance in the internal assessment tests, assignment, laboratory work and supporting activities such as projects, internship, assignments, mini project etc.

Indirect Assessment Method: It includes stakeholder feedback correlated with the attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs), carrying a weightage of 20%. This indirect assessment method is conducted through structured surveys, reflecting the views and perceptions of various stakeholders. The institute gathers and analyzes this feedback to evaluate graduates knowledge, skills, and overall preparedness as perceived by stakeholders such as employers, alumni and graduate exit survey.

a) Process for Direct Assessment Method:

The direct assessment method gives a quantitative measure in each course, and these exhibit the level of attainment of course outcomes related to that course. Thus, the mapping of course outcomes with program outcomes and program specific outcome will result in % attainment of each POs and PSOs. The assessment of each course outcome is done systematically by the course teacher. The direct assessment methods of COs are considered in the attainment of mapped POs and PSOs.

- The direct assessment method is further classified into two types namely internal assessment (20% weightage) and external assessment (80% weightage).
- The internal assessment includes assessment of internal examinations such as unit tests, assignments, progressive assessment of practical/seminar/project work, presentations etc. In the internal assessment methods, the faculty records the performance of each student in unit test, assignment and Term work. This indicates the knowledge and skill sets gained by the students against the CO and related corresponding PO and PSO.
- The external assessment consists of University In semester, End semester & Practical/Oral/Project examinations. In the external assessment method, after the declaration of University Examination results, the performance of the students in In semester, End semester, Oral and Practical examinations are evaluated against each CO and related corresponding PO and PSO.

To assess attainment levels of Program Outcomes (POs) and Program-Specific Outcomes (PSOs), the same tools and criteria used to define course outcomes (COs) attainment levels are applied. As a result, the attainment levels of COs are used to calculate the attainment levels of POs and PSOs.

Direct assessment of POs and PSOs is based on the attainment levels of COs and the degree of correlation between them. Sample calculation for PO/PSO attainment comprises following steps:

Notations used:

W_{int}= Weight for internal assessment (0.2)

W_{ext}= Weight for external assessment (0.8)

W_{dir}= Weight for direct attainment (0.8)

$_{Windir}$= Weight for indirect attainment (0.2)

PO_i_PSO_i_AT= PO/PSO attainment

PO_i_PSO_i_Dir_AT=Direct PO/PSO Attainment

PO_i/PSO_i_Indir_AT=Indirect PO/PSO Attainment

Total_Course_AT= Total Course Attainment

Avg_CO_IA_AT = Average Course Internal Attainment

Avg_CO_EA_AT = Average Course External Attainment

W_t_PO_{ij}_PSO_{ij} = Average Weight of particular PO for individual COs of the Course

N=No. of courses from first year to final year in the program

Steps involved in evaluation of PO/PSO Direct attainment:

Step 1: Course total attainment is a weighted calculation of Internal Attainment and External Attainment as follows:

$$\text{Avg\_CO\_IA/EA\_AT} = \frac{\sum_{i=1}^{n} CO_i\text{\_AT\_int/ext}}{n} \quad \text{.....(3.3.1.1)}$$

$$Total\_Course\_AT = (W_{int} * \text{Avg\_CO\_IA\_AT} + W_{ext} * \text{Avg\_CO\_EA\_AT}) \quad \text{.....(3.3.1.2)}$$

Step 2: Calculation of attainment of POs through Direct Assessment:

$$PO_i / PSO_i\_Dir\_AT = \frac{\sum_{j=1}^{N} (Total\ Course\_AT * Wt\_PO_{ij}/PSO_{ij})/3}{N} \quad \text{.....(3.3.1.3)}$$

Example of above process is shown below:

The following calculation demonstrates the attainment of CO for **Sensors in Automation (C316) Course**.

Table 3.3.1.1 CO Attainment sheet of course "Sensors in Automation"

		Assessment Type	Internal Examination Assessment						External Examination Assessment	
		Assessment Tools	UT1	UT1	Assignment1	UT2	UT2	Assignment2	In semester	End semester
		Course Outcomes	CO1	CO2	CO3	CO4	CO5	CO6	CO1,CO2	CO3 to CO6
		Max. Marks	15	15	15	15	15	15	30	70
Sr. No.	Roll No	Student Name								
1	31201	KOLAJ SHWETA SANJAY	14	2	15	4	4	15	14	48
2	31202	KOLI SAMIKSHA ADIKRAO	14	2	15	5	4	15	22	40
3	31203	KOPULWAR AISHWARYA S.	15	11	15	9	9	15	19	47
4	31204	KOTRANGE SWATI REONATH	12	2	15	2	2	15	13	40
5	31205	KSHIRSAGAR SAYALI MANOJ	12	14	15	4	4	15	22	36
6	31206	KSHIRSAGAR SHWETA	5	7	15	5	6	15	18	42
7	31207	KULKARNI YASHASHRI G.	10	7	15	5	4	15	14	59
8	31208	KUMBHAR SHREEYA B.	13	8	15	4	4	15	13	31
9	31209	KUMBHAR TEJASWINI T.	12	5	15	8	8	15	18	39
10	31210	LAD MADHURA DHANAJI	9	8	15	5	0	15	22	39
11	31211	MAHADIK DHANSHRI PARAJI	9	7	15	5	5	15	22	35
12	31212	MAHESHWARI ADITI M.	13	5	15	3	3	15	18	33
13	31213	MANDAVE VAISHNAVI C.	14	5	15	6	6	15	14	42
14	31214	MASAL ASHWINI K.	15	9	15	4	5	15	20	42
15	31215	MASLEKAR MRUNAL M.	15	11	15	6	6	15	15	30
16	31216	MESHRAM ANJALI P.	15	11	15	7	7	15	21	50
17	31217	MITTAL KHUSHI PRAMOD	11	11	15	5	5	15	22	47
18	31218	MORE KOMAL VITTHAL	10	9	15	5	5	15	15	48
19	31219	MORE SALONI DATTATRAYA	8	11	15	0	0	15	16	44
20	31220	MUGALE SHIVANI SHIVKANT	7	7	15	6	5	15	16	30
21	31221	MUNALE SHRUTI DILIP	10	4	15	10	9	15	20	51
22	31222	NAGARGOJE YASHSHRI V.	15	12	15	8	8	15	25	30
23	31223	NAWALE SAYALI LAXMAN	15	9	15	6	6	15	23	59
24	31224	PACHPUTE ANURADHA S.	11	9	15	4	4	15	22	59
25	31225	PANDHARIPANDE SHREYA A.	7	5	15	4	3	15	16	37

26	31226	PARDESHI SHUBHANGI S.	15	2	15	0	0	15	22	36
27	31227	PATANGE VAISHNAVI R.	15	8	15	3	0	15	22	34
28	31228	PATHAK MANSI RAJENDRA	10	2	15	3	0	15	9	32
29	31229	PATHAK POOJA	11	2	15	5	5	15	13	56
30	31230	PATIL AYUSHI PRAKASH	15	2	15	7	7	15	10	34
31	31231	PATIL GEETANJALI ISHWAR	7	5	15	0	0	15	19	35
32	31232	PATIL KIRTI SANDIP	11	13	15	6	5	15	18	21
33	31233	PATIL NANDINI HEMANT	8	9	15	8	5	15	22	35
34	31234	PATIL PRAJAKTA SHANKAR	12	13	15	10	7	15	24	56
35	31235	PATIL RAJSHREE KISHOR	8	11	15	3	4	15	20	42
36	31236	PAWAR SAKSHEE B.	11	9	15	4	4	15	21	46
37	31237	PAWAR SANJANA SAMBHAJI	15	12	15	5	4	15	25	49
38	31238	PISAL MANSI UMESH	7	3	15	3	3	15	12	53
39	31239	PISAL PRANALI PRAKASH	15	14	15	10	15	15	27	62
40	31240	POTDAR MADHURA MAHESH	5	5	15	10	1	15	13	54
41	31241	PURANIK MEDHAVI R.	15	11	15	0	0	15	20	28
42	31242	PURIGOSAVI AISHWARYA S.	11	2	15	10	3	15	14	37
43	31243	RALEBHAT KALYANI ASHOK	11	9	15	5	5	15	22	37
44	31244	RANE VAISHNAVI V.	9	12	15	11	11	15	23	52
45	31245	RATHI DHANASHRI JAGDISH	13	11	15	6	6	15	23	55
46	31246	SADAMATE GAUTAMEE S.	14	7	15	15	13	15	22	52
47	31247	SALVE PRACHI PRAKASH	9	3	15	4	4	15	2	36
48	31248	SANIKA D.SALUNKHE	5	7	15	0	0	15	23	63
49	31249	SAUMYA MISHRA	14	6	15	4	4	15	23	16
50	31250	SHAH LABDHI JAGADISH	11	5	15	6	6	15	16	62
51	31251	SHAIKH NADIYA SHARIF	14	11	15	6	6	15	23	48
52	31252	SHEDAGE NIKITA RAJENDRA	11	11	15	5	5	15	23	50
53	31253	SHENDKAR BHAGYASHRI S.	10	9	15	5	5	15	23	41
54	31254	SHERAL AMRUTA PRAKASH	10	6	15	10	11	15	15	49
55	31255	SHETTY KHUSHI RAJU	14	6	15	5	5	15	20	47
56	31256	SHINDE AKSHATA H.	11	5	15	5	4	15	16	53
57	31257	SHINDE PRAJAKTA R.	14	10	15	4	4	15	20	51
58	31258	SHINDE RESHMA MAHADEV	15	4	15	4	3	15	22	46

59	31259	SHINDE RUTIKA MAHADEV	12	7	15	5	5	15	21	45
60	31260	SHIRKE SAKSHI BALASAHEB	15	12	15	5	5	15	23	52
61	31261	SHIVALE SHWETA S.	15	14	15	10	3	15	27	37
62	31262	SHRUTI SINGH	15	11	15	7	0	15	25	62
63	31263	SONAWANE MAHIMA R.	8	5	15	7	0	15	14	47
64	31264	SONAWANE NITA RAJENDRA	8	4	15	7	0	15	19	28
65	31265	SURWADE PRERNA GOKUL	9	11	15	0	0	15	26	47
66	31266	TARATE PRITI RAJARAM	6	6	15	12	0	15	23	39
67	31267	THOTE VANSHIKA RAJU	8	10	15	4	0	15	25	28
68	31268	TOTAWAR NAMRATA B.	15	8	15	7	0	15	24	35
69	31269	UTTEKAR RUCHITA SANJAY	15	9	15	5	0	15	25	48
70	31270	VAIDEHI PATIL	8	12	15	3	0	15	18	45
71	31271	VETAL ISHA PRASHANT	14	2	15	6	0	15	12	46
72	31272	WAGHMARE PUJA ARJUN	7	5	10	0	0	10	10	29
73	31273	ZAINAB AJIJ SHAIKH	5	7	10	10	0	10	18	10
74	31274	ZENDE BHAGYASHRI SUHAS	12	11	15	15	3	15	19	43
Total no. of students			74	74	74	74	74	74	74	74
Total no. of absent students			0	0	0	0	0	0	0	0
Total no. of appeared students			74	74	74	74	74	74	74	74
Target Marks			11	7	14	5	3	14	19	42
No. of students achieved Target			46	46	72	48	52	72	45	42
% No. of students achieved Target			62.162	62.16	97.2972973	64.86	70.27	97.2972973	60.81081081	56.75675676
CO_i_AT			3	3	3	3	3	3	3	2
Avg_CO_IA_AT			3						2.5	
Total_Course_AT			2.6							

Step – 1

Total_Course_AT= 0.2*3 + 0.8 *2.5 =2.6

Table 3.3.1.2 CO –PO mapping of course Sensors in Automation

		Program Outcomes											
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

Course Outcomes	C316.1	2	3	-	1	2	2	-	-	-	-	-	-
	C316.2	2	2	2	1	-	2	-	-	-	-	-	-
	C316.3	2	2	2	1	-	2	-	-	-	-	-	-
	C316.4	2	2	2	1	1	-	-	-	-	-	-	-
	C316.5	2	2	2	1	1	3	-	-	-	-	-	-
	C316.6	2	1	2	2	1	3	-	-	-	-	-	-
Average	**C316**	2	2	2	1.17	1.25	2.4	-	-	-	-	-	-

Step – 2

Total_Course_AT(Course Attainment Value) : 2.6

Sample PO1 Attainment Calculation:

PO_1_Dir_AT=(2.6*2)/3 = 1.73

Table 3.3.1.3 PO attainment of course Sensors in Automation

Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C316	1.73	1.73	1.73	1.01	1.08	2.08	-	-	-	-	-	-

b) Process for Indirect assessment Method:

- The indirect assessment method is conducted through structured surveys such as the Graduate Exit Survey, Alumni Survey, and Employer Survey.
- Feedback and suggestions are collected from graduating students at the end of the academic year, contributing to the evaluation of POs and PSOs attainment.These surveys help offering valuable input for the periodic review and revision of POs and PSOs attainment if needed. Indirect assessment provides insights into students' perceptions of their learning experiences and the extent to which they believe they have achieved the intended outcomes.

Notations used :

Indir_GES_AT= Indirect attainment -Graduate exit survey

Indir _AlS_AT = Indirect attainment – Alumni Survey

Indir _EmpS_AT = Indirect attainment- Employer Survey

$$PO_i/PSO_i\_Indir\_AT=Average(Indir\_GES\_AT+Indir\_AlS\_AT + Indir\_EmpS\_AT) \quad .....(3.3.1.4)$$

Final PO/PSO attainment is calculated for Direct and Indirect attainment.:

$$PO_i/PSO_i\_AT=(W_{dir}*PO_i/PSO_i\_Dir\_AT)+(W_{indir}*PO_i/PSO_i\_Indir\_AT) \quad .....(3.3.1.5)$$

By combining direct and indirect tools, the department gains a more comprehensive understanding of the programs effectiveness in achieving its intended outcomes.

The attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs) is measured using both direct and indirect assessment tools. The Target for PO/PSO Attainment refers to the expected level of achievement or proficiency that students should demonstrate for each outcome. This target is defined by the department offering the program and serves as a benchmark for evaluating the effectiveness of the curriculum in achieving its intended learning outcomes.

By setting clear and measurable targets, course teachers and the program can effectively monitor student progress, identify gaps, and implement necessary improvements to achieve the desired outcomes. Once the attainment is analyzed, a comprehensive PO and PSO attainment report is prepared and submitted to the department for further review and action planning.

3.3.2 Provide results of evaluation of PO&PSO (40)

Institute Marks : 40.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C1101	1.81	1.81	PO3	1.21	1.21	PO6	PO7	PO8	PO9	0.6	PO11	0.6

C1102P	1.88	1.25	1.25	1.88	1.5	PO6	PO7	PO8	1.88	1.25	PO11	1.25
C1102C	3	2.5	1.8	PO4	1.7	3	1.5	PO8	1.8	2	PO11	1
C1103	2.37	1.84	1.27	0.95	0.79	1.58	1.42	PO8	PO9	0.79	PO11	0.79
C1104EE	2.51	1.88	1.88	1.88	PO5	1.88	PO7	PO8	0.94	0.94	PO11	1.41
C1104EX	2.87	1.75	1.59	PO4	1.44	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C1105P	1.6	1.6	1.47	1.6	1.6	PO6	PO7	PO8	1	1.6	PO11	1.6
C1105E	2.93	2.93	1.63	0.98	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C1106	3	1	3	PO4	PO5	3	PO7	1	2	PO10	PO11	2
C1201	1.85	1.85	PO3	1.23	1.23	PO6	PO7	PO8	PO9	0.62	PO11	0.62
C1205	2.44	1.63	1.22	PO4	1.76	1.08	PO7	PO8	PO9	1.36	PO11	PO12
C1206	2	2.75	2.75	2.75	2.25	2.25	2.25	3	2.5	2.25	3	3
C201	2.38	2.22	1.75	2.06	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202	2	1.87	1.47	1.73	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C203	2.61	0.87	0.87	1.74	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C204	1.77	1.59	1.59	1.77	0.88	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205	2.6	2.93	PO3	PO4	PO5	0.97	0.97	PO8	PO9	PO10	PO11	0.97
C206	2.94	1.96	1.96	1.37	1.96	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C207	2	0.67	0.67	1.33	0.67	PO6	PO7	PO8	2	0.89	PO11	0.67
C208	2	1.5	1.67	1.67	1.75	1.8	PO7	PO8	1.8	1.8	PO11	1.6
C209	2.5	1.94	2.08	1.25	0.83	PO6	PO7	PO8	1.67	1.39	PO11	1.80
C210	3	3	3	2	3	PO6	PO7	PO8	2	1.5	PO11	1
C211	2.67	2.5	2.6	2.4	2.8	2	2	2	3	3	PO11	2.5
C212	2.66	2.66	PO3	PO4	0.88	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C213	3	2.5	2	2.16	1.83	PO6	PO7	PO8	PO9	PO10	PO11	1
C214	2.54	2.26	1.83	2.54	2.39	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C215	2.53	1.69	1.69	PO4	2.53	PO6	PO7	PO8	PO9	1.69	PO11	PO12
C216	2.58	1.72	0.86	PO4	0.86	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C217	3	3	2.5	2	3	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C218	3	3	PO3	2	3	PO6	PO7	PO8	1.5	PO10	PO11	1
C219	1.53	2.22	2.08	1.25	1.94	0.83	PO7	0.83	0.97	1.11	PO11	1.11
C220	2.83	2.17	2.5	2.67	2.83	PO6	PO7	PO8	1	2	PO11	2.33
C221	2.67	2.5	2.6	2.4	2.8	2	2	2	3	3	2.2	2.5
C222	3	3	3	2.5	2.5	2	2	2	3	3	1	2

C301	2.46	2.32	1.64	1.91	1.64	1	1	PO8	PO9	1.64	PO11	1
C302	2.20	1.81	1.68	1.94	2.07	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303	2.83	2.33	2.17	2.5	2.67	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C304	0.94	1.62	0.81	0.97	0.81	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C305	2.23	1.49	1.12	PO4	1.04	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C306	2.20	1.65	1.81	2.2	1.65	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C307	3	3	2.4	3	2	1	1	PO8	1	2	PO11	2
C308	0.78	1.33	0.67	0.8	0.67	1.11	0.67	0.67	0.67	0.67	PO11	PO12
C309	1.5	1.2	1.5	1.12	1.33	PO6	PO7	PO8	1	1	PO11	1
C310	2.5	1.67	1.94	2.21	1.8	1.67	PO7	1.38	1.67	1.25	PO11	1.52
C311	2.5	1.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1	PO11	1
C312	2.4	1.6	1.44	1.6	1.12	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C313	1.27	1.11	1.74	0.69	0.97	1.25	0.69	1.25	1.50	1.62	2.09	1.50
C314	2.1	0.82	0.93	0.7	1.05	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C315	1.8	1	1.1	1.1	1.2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C316	1.73	1.73	1.73	1.01	1.08	2.08	PO7	PO8	PO9	PO10	PO11	PO12
C317	1.80	2.29	2.5	1.94	2.16	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C318	2	1.22	1.33	0.88	1.16	0.83	0.8	PO8	0.67	PO10	PO11	0.78
C319	2	1.22	1.33	0.88	1.16	0.83	0.8	PO8	0.67	PO10	PO11	0.78
C320	2	2	3	2	2.33	3	PO7	1.5	1.5	1.5	PO11	1.67
C321	3	2	2	PO4	PO5	2.5	2	2.5	2.25	2.33	2.4	2.6
C322	3	2.5	2.5	2	3	1	1	3	2.5	3	2	2.75
C401	1.74	1.74	0.87	PO4	0.86	PO6	0.86	PO8	PO9	1.74	PO11	PO12
C402	2.70	2.55	2.55	1.95	2.55	1.35	PO7	PO8	1.20	PO10	PO11	PO12
C403	1.91	1.53	1.91	1.53	1.78	PO6	PO7	PO8	PO9	PO10	PO11	1.38
C404	2.68	2.68	2.68	2.68	1.78	PO6	PO7	0.89	PO9	0.89	PO11	1.78
C405	1.81	1.81	0.90	PO4	PO5	PO6	0.9	PO8	PO9	1.81	PO11	PO12
C406	1.64	1.71	1.30	1.94	1.62	PO6	0.73	PO8	PO9	1.47	PO11	1.04
C407	2.55	2.49	2.49	2.24	2.00	1.1	1.1	0.85	0.98	0.97	PO11	1.33
C408	2	2.25	2.75	1.67	2.33	1.33	1	1.25	2	2.25	2	2.25
C409	2.12	2.12	1.41	1.41	0.71	PO6	PO7	PO8	PO9	1.77	PO11	PO12
C410	1.46	1.46	0.73	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C411	1.53	0.8	1.56	PO4	PO5	PO6	0.8	PO8	PO9	2.34	PO11	1.56

C412	2.5	2	2.5	2	2.5	2.33	2	2.5	PO9	2.2	PO11	2
C413	2.67	2.33	2.67	2.5	2.5	2	PO7	1	2	3	PO11	2
C414	2.45	2.6	1.73	PO4	0.86	PO6	PO7	PO8	PO9	2.16	PO11	PO12
C415	1.81	2.08	PO3	1.67	2.5	1.67	0.83	PO8	2.5	0.83	PO11	1.67
C416	2	2.25	2.75	1.67	2.33	1.33	1	1.25	2	2.25	2	2.25
PO Attainment	2.19	1.91	1.81	1.69	1.76	1.54	1.34	1.56	1.71	1.68	1.99	1.57

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.28	1.95	1.81	1.73	1.74	1.63	1.20	1.56	1.67	1.68	2.09	1.54
InDirect Attainment	1.81	1.75	1.82	1.55	1.82	1.18	1.89	1.58	1.86	1.66	1.57	1.70

PSO Attainment

Course	PSO1	PSO2	PSO3	PSO4
C201	2.38	2.06	PSO3	1.11
C202	2	1.73	PSO3	0.93
C203	1.74	2.03	PSO3	PSO4
C204	1.47	0.88	0.88	0.88
C205	2.93	0.98	0.98	1.95
C206	2.12	PSO2	1.96	PSO4
C207	1.33	1.55	1.33	0.66
C208	1.6	1.67	2	1.67
C209	2.22	2.22	1.94	1.67
C210	3	PSO2	2.5	2
C211	2.83	2.67	2.67	2.67
C212	2.66	3	1.78	1.78
C213	3	PSO2	3	PSO4
C214	2.54	2.12	2.25	0.98
C215	2.53	2.53	2.53	0.84
C216	2.58	PSO2	1.72	PSO4
C217	3	2.3	3	1.5
C218	3	2	3	PSO4
C219	2.36	PSO2	2.22	1.11
C220	3	PSO2	2.83	2.33

C221	2.83	2.67	2.67	2.67
C222	1.75	1.25	2.33	1.2
C301	2.47	0.82	0.82	0.82
C302	2.33	1.94	2.07	1.42
C303	2.83	2.61	2.43	2.06
C304	1.62	1.62	1.48	PSO4
C305	2.23	1.12	0.74	0.74
C306	1.65	1.65	1.51	1.65
C307	3	2.67	1.25	1.6
C308	1.11	1.22	1.33	1.33
C309	1.5	0.75	0.7	0.7
C310	1.67	1.67	1.52	1.67
C311	2.2	0.8	0.8	0.8
C312	2.13	2.4	2.13	2.13
C313	1.97	1.27	1.85	1.50
C314	2.1	0.7	0.7	0.7
C315	1.8	1.1	1.2	1.2
C316	1.59	1.73	0.87	0.87
C317	1.80	1.39	1.25	1.25
C318	2	1	0.89	1
C319	2	1	0.89	1
C320	1.83	1.33	1.67	2
C321	2.17	2.33	2	2.5
C322	3	3	2.75	3
C401	1.74	1.30	1.08	0.86
C402	2.7	1.8	2.55	1.8
C403	2.04	1.70	2.04	PSO4
C404	2.68	2.68	0.89	0.89
C405	1.81	1.35	1.13	0.90
C406	1.78	1.66	1.57	0.73
C407	2.55	2.18	1.52	1.21
C408	2.75	2.5	2.25	2.5
C409	1.65	2.12	0.71	0.71

C410	1.46	1.09	0.91	0.73
C411	PSO1	PSO2	1.56	0.91
C412	2.17	3	2.2	2.4
C413	2.83	1.17	2.5	2.17
C414	2.02	2.6	0.87	0.87
C415	2.5	1.67	2.36	1.80
C416	2.75	2.5	2.25	2.5
PSO Attainment	2.12	1.76	1.76	1.48

PSO Attainment Level

Course	**PSO1**	**PSO2**	**PSO3**	**PSO4**
Direct Attainment	2.23	1.79	1.73	1.45
InDirect Attainment	1.66	1.65	1.87	1.62

4 STUDENTS' PERFORMANCE (150) Total Marks 116.77

:

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23(CAYm2)	2021-22(CAYm3)	2020-21(CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
Sanctioned intake of the program(N)	120	120	120	120	120	120	120
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	120	70	105	98	71	61	63
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	63	28	35	57	10	27
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	120	133	133	133	128	71	90

Table 4.2

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	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	IV year
2024-25 (CAY)	120	0	0	0	0
2023-24 (CAYm1)	133	39	0	0	0
2022-23 (CAYm2)	133	42	51	0	0
2021-22 (CAYm3)	133	64	51	47	0
2020-21 (LYG)	128	71	76	66	66
2019-20 (LYGm1)	71	51	60	57	57
2018-19 (LYGm2)	90	12	38	38	38

Table 4.3

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2024-25 (CAY)	120	0	0	0	0
2023-24 (CAYm1)	133	65	0	0	0
2022-23 (CAYm2)	133	92	118	0	0
2021-22 (CAYm3)	133	97	115	107	0
2020-21 (LYG)	128	71	126	122	116
2019-20 (LYGm1)	71	61	71	71	68
2018-19 (LYGm2)	90	54	79	79	79

4.1 Enrolment Ratio (20)

Total Marks 18.00

Institute Marks : 18.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	120	120	100.00
2023-24 (CAYm1)	120	70	58.33
2022-23 (CAYm2)	120	105	87.50

Average [(ER1 + ER2 + ER3) / 3] : 81.94

Assessment : 18.00

4.2 Success Rate in the stipulated period of the program (40)

Total Marks 28.25

4.2.1 Success rate without backlogs in any semester / year of study (25)

Institute Marks : 14.50

Item	Latest Year of Graduation, LYG (2020-21)	Latest Year of Graduation minus 1, LYGm1 (2019-20)	Latest Year of Graduation minus 2 LYGm2 (2018-19)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	128.00	71.00	90.00
Y Number of students who have graduated without backlogs in the stipulated period	66.00	57.00	38.00
Success Index [SI = Y / X]	0.52	0.80	0.42

Average SI [(SI1 + SI2 + SI3) / 3] : 0.58

Assessment [25 * Average SI] : 14.50

4.2.2 Sucess rate in stipulated period (15)

Institute Marks : 13.75

Item	Latest Year of Graduation, LYG (2020-21)	Latest Year of Graduation minus 1, LYGm1 (2019-20)	Latest Year of Graduation minus 2 LYGm2 (2018-19)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	128.00	71.00	90.00
Y Number of students who have graduated in the stipulated period	116.00	68.00	79.00
Success Index [SI = Y / X]	0.91	0.96	0.88

Average SI[(SI1 + SI2 + SI3) / 3]: 0.92

Assessment [15 * Average SI] : 13.75

Note : If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

4.3 Academic Performance in Third Year (15) Total Marks 11.08

Institute Marks : 11.08

Academic Performance	CAYm3 (2021-22)	LYG (2020-21)	LYGm1 (2019-20)
Mean of CGPA or mean percentage of all successful students(X)	7.27	6.67	8.94
Total number of successful students(Y)	107.00	122.00	71.00
Totalnumber of students appeared in the examination(Z)	115.00	126.00	71.00
API [X*(Y/Z)]:	6.76	6.46	8.94

Average API [(AP1 + AP2 + AP3)/3] : 7.39

Assessment [1.5 * AverageAPI] : 11.08

4.4 Academic Performance in Second Year (15) Total Marks 9.71

Institute Marks : 9.71

Academic Performance	CAYm2 (2022-23)	CAYm3 (2021-22)	LYG (2020-21)
Mean of CGPA or mean percentage of all successful students(X)	6.83	5.82	7.75
Total number of successful students (Y)	118.00	115.00	126.00
Total number of students appeared in the examination (Z)	120.00	132.00	128.00
API [X * (Y/Z)]	6.72	5.07	7.63

Average API [(AP1 + AP2 + AP3)/3] : 6.47

Assessment [1.5 * AverageAPI] : 9.71

4.5 Placement, Higher Studies and Entrepreneurship (40) Total Marks 29.73

Institute Marks : 29.73

Item	LYG (2020-21)	LYGm1 (2019-20)	LYGm2 (2018-19)
Total No of Final Year Students(N)	122.00	71.00	79.00
No of students placed in the companies or government sector(X)	55.00	56.00	74.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	2.00	1.00	1.00
No of students turned entrepreneur in engineering/technology (Z)	1.00	0.00	0.00
x + y + z =	58.00	57.00	75.00
Placement Index [(X+Y+Z)/N] :	0.48	0.80	0.95

Average Placement [(P1 + P2 + P3)/3] : 0.74

Assessment [40 * Average Placement] : 29.73

Program Name :

Assessment Year Name : CAYm1

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	SANSKRUTI VINAYKUMAR JOSHI	12021265575	TCS	TCS/Sanskruti Joshi/ 2 December 2024
2	MANSI SUHAS KARADKHEDKAR	12020253959	AMDOCS	Amdocs/Mansi Karadkhedkar/30 July 2024
3	YASHASHRI GIRISH KULKARNI	12020254025	WESTERN UNION	Western Union/Yashashri Kulkarni/ 22 July 2024
4	SANIKA DATTATRYA SALUNKHE	12020254005	AMDOCS	Amdocs /Sanika Salnkhe/17 October 2023
5	HIMANI PRAMODRAO BIRE	12020253954	VOIS	VOIS/Himani Bire/28 August 2024
6	KENDRE NIKITA UDHAVRAO	12020254015	VOIS	VOIS/Nikita Kendre/28 August 2024
7	SAYALI MANOJ KSHIRSAGAR	12021265554	UNO MINDA	Uno Minda/ Sayali Kshirsagar/1 July 2024
8	ZAINAB AJIJ SHAIKH	12020253995	UNO MINDA	Uno Minda/ Zainab Shaikh/1 July 2024
9	MEDHAVI RADHAKRISHNA PURANIK	12020254020	UNO MINDA	Uno Minda/ Medhavi Puranik/1 July 2024
10	SHWETA SHANTARAM SHIVALE	12020254035	UNO MINDA	Uno Minda/ Shweta Shivale/1 July 2024
11	HUBHANGI SHRIMALSING PARDESHI	12020254024	UNO MINDA	Uno Minda/ Shubhangi Pardeshi/1 July 2024
12	YASHSHRI VISHNU NAGARGOJE	12021265569	PUBLICIS SAPIENT	Publicis Sapient/Yashshri Nagargoje/27 February 2025
13	DHANASHREE SANTOSH KADAM	12020254039	IBM	IBM/Dhanashree Kadam/27 May 2024
14	AKANKSHA RAM NARAYAN PRAJAPATI	12020254046	VODAFONE IDEA	Vodafone Idea/Akanksha Prajapati/2 September 2024
15	SHRUTIKA RANGNATH DESHMANE	12020253958	VODAFONE IDEA	Vodafone Idea/Shrutika Deshmane/2 September 2024
16	SANSKRUTI PRAMOD DHAGE	12020253969	NRS AS	NRS AS/Sanskruti Dhage/7 Febuary 2024
17	GAYATRI HIMMAT GHADGE	12020254047	VODAFONE IDEA	Vodafone Idea/Gayatri Ghadge/2 September 2024
18	HRUCHA RAJAN GOHAD	12020253988	VODAFONE IDEA	Vodafone Idea/Hrucha Gohad/2 September 2024
19	ARPITA SANJAY JADHAV	12020254037	VODAFONE IDEA	Vodafone Idea/Arpita Jadhav/18 June 2024
20	KHUSHI PRAMOD MITTAL	12020253974	CAPGEMINI	Capgemini/Khushi Mittal/20 December 2024
21	SAKSHEE BALASAHEB PAWAR	12020254028	VODAFONE IDEA	Vodafone Idea/Sakshee Pawar
22	BHAGYASHRI SUHAS ZENDE	12020253963	VODAFONE IDEA	Vodafone Idea/Bhagyashri Zende
23	ASHWINI KRUSHANDEV MASAL	12021265577	VODAFONE IDEA	Vodafone Idea/Ashwini Masal
24	MAYURI SURESH BAVISKAR	12021265535	VODAFONE IDEA	Vodafone Idea/Mayuri Baviskar
25	SHIVANI NAMDEV HARGE	12021265553	VODAFONE IDEA	Vodafone Idea/Shivani Harge/2 September 2024
26	MRUNAL MORESHWARRAO MASLEKAR	12020253981	VODAFONE IDEA	Vodafone Idea/ Mrunal Maslekar/ 2 September 2024
27	KALYANI ASHOK RALEBHAT	12020253976	VODAFONE IDEA	Vodafone Idea/Kalyani Ralebhat/ 2 September 2024
28	VAIDEHI BHAWANAND PATIL	12020254026	VODAFONE IDEA	Vodafone Idea/Vaidehi Patil/ 2 September 2024
29	GAVALI ANJALI SANJEEV	12021265540	VODAFONE IDEA	Vodafone Idea/Anjali Gavali/ 2 September 2024
30	ARCHANA SADASHIV KANDALKAR	12021265543	VODAFONE IDEA	Vodafone Idea/Archana Kandalkar
31	SAKSHI ANKUSH DALVI	12020254007	ACCENTURE	Accenture/Sakshi Dalvi/9 September 2024
32	VAISHNAVI NITIN JAGADALE	12020253966	VODAFONE IDEA	Vodafone Idea/Vaishnavi Jagadale/ 2 September 2024

33	AARTI RAMRAO BHOSALE	12021265530	WOLOO	WOLOO/Aarti Bhosale/ 10 March 2025
34	SAEE VIJAY KAD	12021265561	IDEAL RESOURCES	IDEAL RESOURCES/Saee Kad/1 June 2024
35	SHRAVANI VENKATESH KODAM	12021265538	VODAFONE IDEA	Vodafone Idea/Shravani Kodam/ 2 September 2024
36	PRAJAKTA RAJENDRA SHINDE	12021265567	R.K.Enterprises	R.K.Enterprises/Prajakta Shinde/11 November 2024
37	PAWAR JYOTI ARJUN	12020254121	ACCENTURE	Accenture/Jyoti Pawar/15 October 2024
38	SHRUTI SINGH	12020253965	CAPGEMINI	CAPGEMINI/Shruti Singh
39	SAKSHI BALASAHEB SHIRKE	12020253985	CAPGEMINI	Capgemini/Sakshi Shirke/10 October 2024
40	ANJALI PANDURANG MESHRAM	12021265550	CAPGEMINI	Capgemini/Anjali Meshram/27 September 2024
41	KOMAL VITTHAL MORE	12020254042	LTIMINDTREE	LTIMindtree/komal More/11 September 2024
42	VAISHNAVI RAKESH PATANGE	12020254013	SPARK MINDA	Spark Minda/Vaishnavi Patange/1 August 2024
43	RAJSHREE KISHOR PATIL	12020253977	SPARK MINDA	Spark Minda/Rajshree Patil/6 November 2024
44	DHANASHRI JAGDISH RATHI	12020254032	SPARK MINDA	Spark Minda/Dhanashree Rathi/1 August 2024
45	DISHA PRASHANT GOSKE	12021265570	SPARK MINDA	Spark Minda/Disha Goske/1 August 2024
46	SHIVANI SHIVKANT MUGALE	12020254038	SPARK MINDA	Spark Minda/Shivani Mugale/1 August 2024
47	VAIBHAVI SURYAKANT JARANDE	12020254033	SPARK MINDA	Spark Minda/Vaibhavi Jarande/1 August 2024
48	PATHAK MANSI RAJENDRA	12021265578	SPARK MINDA	Spark Minda/Mansi Pathak/1 August 2024
49	AVANTIKA SUNIL BHOSALE	12021265571	SPARK MINDA	Spark Minda/Avantika Bhosale/1 August 2024
50	SANJANA ASHOK KHADAKABHAVI	12020254043	SPARK MINDA	Spark Minda/Sanjana Khadakabhavi/1 August 2024
51	ANUJA AMIT KADAM	12021265580	NITOR INFOTECH	Nitor Infotech/Anuja Kadam/29 January 2025
52	KSHIRSAGAR SHWETA CHANDRASHEKHAR	12020253990	SPARK MINDA	Spark Minda/Shweta Kshirsagar/1 August 2024
53	PRITI RAJARAM TARATE	12020253960	SPARK MINDA	Spark Minda/Priti Tarate/1 August 2024
54	AKSHATA HANUMANT SHINDE	12021265528	SPARK MINDA	Spark Minda/Akshata Shinde/1 August 2024
55	VAISHNAVI CHANDRAKANT MANDAVE	12020254030	VOIS	VOIS/Vaishnavi Mandave/3 April 2025

Assessment Year Name : CAYm2

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	SAYALI PATIL	12019097624	VOIS	VOIS/Sayali Patil/5December 2022
2	SHREYA SANJAY JADHAV	12019097667	CAPGEMINI	Capgemini/Shreya Jadhav/18 December 2022
3	ISHIKA ARUN BHIOGADE	12019097618	STRIDLEY SOLUTION	Stridley Solution/Ishika Bhiogade/6 March 2023
4	MADHVI SONONE	12019097668	STRIDLEY SOLUTION	Stridley Solution/Madhvi Sonone/7 March 2023
5	MUSKAN KANDHWAY	12019097673	VODAFONE	Vodafone/Muskan/17 April 2023
6	PATHAN TABBASUM RABBAN	12020254059	INDUS TOWERS	Indus Towers/Tabbasum Pathan/11 September 2023
7	DHARNE RUSHIKA KISHOR	12019097692	SPARK MINDA	Spark Minda/Rushika Dharne/1 August 2023
8	WAGHMODE MITALI ANKUSH	12019097630	SPARK MINDA	Spark Minda/Mitali Waghmode/1 August 2023
9	GEETANJALI DNYANOBA GUTTE	12019097637	TCS	TCS/Geetanjali Gutte/3 October 2022
10	PRANAVI SHASHIKANT KUSHIRE	12019097627	TCS	TCS/Pranavi Kushire/24 September 2022
11	ADYA PATHAK	12019097644	STANDARD CHARTERED GBS	Standard Chartered/Adya Pathak/25 July 2023
12	AARTI SIDDHESHWAR SWAMI	12019097690	AMDOCS	Amdocs/Aarti Swami/28 December 2023
13	BIRADAR VAISHNAVI RAMAKANT	12019097656	AMDOCS	Amdocs/Vaishnavi Biradar/10 October 2022
14	DIYA NITIN JITURI	12019097655	AMDOCS	Amdocs/Diya Jituri/10 March 2023
15	JAHAGIRDAR MRUNAL AJIT	12019097670	AMDOCS	Amdocs/Mrunal Jahagirdar/9 March 2023
16	JAYASMITA SAHA	12019097621	AMDOCS	Amdocs/Jayasmita Saha/10 March 2023
17	KAMTHE DISHA DILIP	12019097662	AMDOCS	Amdocs/Disha Kamthe/28 December 2023
18	POOJA ABHIMAN GOPHANE	12020254048	INDUS TOWERS	Indus Towers/Pooja Gophane/11 September 2023
19	YEOLE PRANALI PRAMOD	12018293221	INDUS TOWERS	Indus Towers/Pranali Yeole/11 September 2023
20	GHOGARE JAYASHREE SHIVAJI	12019097636	PERSISTENT	PERSISTENT/GHOGARE JAYASHREE SHIVAJI
21	BHAGYSHREE TANAJI BARMADE	12020254054	UNO MINDA LIMITED	Uno Minda/Bhagyshree Barmade/3 July 2023
22	JANHVI SHYAM MOREY	12019097693	UNO MINDA LIMITED	Uno Minda/Janhvi Morey/3 July 2023
23	RUCHA SUBHASH BAGAD	12019097633	UNO MINDA LIMITED	Uno Minda/Rucha Bagad/3 July 2023
24	TEJAS KISAN TAKALKAR	12019097695	UNO MINDA LIMITED	Uno Minda/Tejas Takalkar/3 July 2023
25	ADITI JAYKUMAR ROKADE	12019097694	VOIS	VOIS/Aditi Rokade/12 December 2022
26	ISHA LAXMAN RATHOD	12019097615	VOIS	VOIS/Isha Rathod/12 December 2022
27	KANCHAN SURKUTLAWAR	12020254056	VOIS	VOIS/Kanchan Surkutlawar/15 December 2022
28	NIHARIKA NIKOSE	12019097657	VOIS	VOIS/Niharika Nikose/5 December 2022
29	POONAM BALASAHEB PISE	12019097691	VOIS	VOIS/Poonam Pise/5 December 2022
30	PRANJAL RAJARAM KOLI	12019097640	VOIS	VOIS/Prajal Koli/14 December 2022
31	SINGH ESHA NAVEEN KUMAR	12019097648	VOIS	VOIS/Esha Singh/17 December 2022
32	SONALI PRAVIN DHAGE	12019097650	VOIS	VOIS/Sonali Dhage/13 December 2022

33	SRUSHTI VASANT HALGE	12019097682	VOIS	VOIS/Srushti Halge/5 December 2022
34	TANUSHREE SHASHIKANT DESALE	12019097658	VOIS	VOIS/Tanushree Desale/13 December 2022
35	THAKARE PRAJAKTA RADHESHYAM	12019097686	VOIS	VOIS/Prajakta Thakare/5 December 2022
36	VANSHIKA ANIL SABLE	12019097687	VOIS	VOIS/Vanshika Sable/13 December 2022
37	JANHAVI JAYESH JADHAV	12019097664	ACCENTURE	Accenture/Janhavi Jadhav/4 July 2023
38	NEHA RAWAT	12019097652	ACCENTURE	Accenture/Neha Rawat/4 July 2023
39	RUTUJA RAJKUMAR SURYAWANSHI	12019097632	ACCENTURE	Accenture/Rutuja Suryawanshi/4 July 2023
40	SNEHAL SACHIN PAWAR	12019097678	ACCENTURE	Accenture/Snehal Pawar
41	ANISHA CHAGAN GADADE	12019097639	SPARK MINDA	Spark Minda/Anisha Gadade/1 August 2023
42	DIVYANSHI MISHRA	12019097681	VODAFONE	Vodafone/Divyanshi Mishra/17 April 2023
43	HATKAR AISHWARYA SUNIL	12018293223	VODAFONE	Vodafone/Aishwarya Hatkar/4 September 2023
44	KONGE SALONI ANIL	12019097649	SPARK MINDA	Spark Minda/Saloni Konge/1 August 2023
45	RADHIKA MAKARAND DESHPANDE	12019097676	VODAFONE	Vodafone/Radhika Deshpande/17 April 2023
46	SHRUTIKA BHARAT PAWAR	12019097614	SPARK MINDA	Spark Minda/Shrutika Pawar/1 August 2023
47	SNEHAL SANJAY SHITOLE	12020254049	VODAFONE	Vodafone/Snehal Shitole/4 September 2023
48	SURYAWANSHI ASHWINI JAGANNATH	12019097617	VODAFONE	VODAFONE/SURYAWANSHI ASHWINI JAGANNATH
49	VIDHALE SHARYU AVINASH	12019097680	SPARK MINDA	Spark Minda/Sharayu Vidhale/1 August 2023
50	AGRAWAL VIDHI ANIL	12019097674	CAPGEMINI	Capgemini/Vidhi Agrawal/18 December 2022
51	JAISWAL AACHAL SATISH	12019097688	CAPGEMINI	Capgemini/Aachal Jaiswal/2 January 2023
52	JIDNYASA MADHUKAR BHOGE	12019097683	CAPGEMINI	Capgemini/Jidnyasa Bhoge/18 December 2022
53	MUSMADE SFURTI DNYANESHWAR	12020254061	CAPGEMINI	Capgemini/Sfurti Musmade/18 December 2022
54	PRANITA DINANATH PATIL	12019097641	CAPGEMINI	Capgemini/Pranita Patil/18 December 2022
55	RUCHALI VINOD KHARTAD	12019097629	CAPGEMINI	Capgemini/Ruchali Khartad/18 December 2022
56	RUTUJA VARDHAMAN PATIL	12019097620	CAPGEMINI	Capgemini/Rutuja Patil/18 December 2022

Assessment Year Name : CAYm3

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	KHUSHBOO RATHI	12018293276	Capgemini	Capgemini/Khushboo Rathi
2	PRANJALI BHALCHANDRA PATIL	12018293267	ZENSAR	ZENSAR/Pranjali Patil/8January2022
3	KOMAL SUDHAKAR SURYAWANSHI	12018293246	CAPGEMINI	CAPGEMINI/ Komal Sudhakar Suryawanshi/ 29Sept2022
4	KALYANI DILIP GADHAVE	12017027889	RELIANCE JIO	RELIANCE JIO/ Kalyani Gadhave/21 Apr 2022
5	MEGHA DNYANESHWAR ARGADE	12018293227	CAPGEMINI	CAPGEMINI/Megha Argade
6	ISHA PRAVIN SOLAO	12017027888	EURONET	EURONET/Isha Pravin Solao/14 December 2021
7	ANISHA MAHESH PAWAR	12018293213	L&T TECHNOLOGY	L&T TECHNOLOGY/Anisha Pawar/8February 2022
8	ARTHA SANGRAMSINH TAWARE	12017027877	L&T TECHNOLOGY	L&T TECHNOLOGY/Artha Taware/ 8 February 2022
9	GAURI ANIL KADAM	12017027881	L&T TECHNOLOGY	L&T TECHNOLOGY/Gauri Kadam/ 8 February 2022
10	KALPANA BALIRAM SHINDE	12016066938	L&T TECHNOLOGY	L&T TECHNOLOGY/ Kalpana Baliram Shinde/08th February 2022
11	PRIYANKA SURESH SAKPAL	12018293222	L&T TECHNOLOGY	L&T TECHNOLOGY/ Priyanka Sakpal /08th February 2022
12	RENUKA YOGESH KHER	12016066984	L&T TECHNOLOGY	L&T Technology/Renuka Kher/28 June 2023
13	RUCHITA SAHEBRAO GOGAWALE	12019097711	L&T TECHNOLOGY	L&T TECHNOLOGY/RUCHITA SAHEBRAO GOGAWALE/8 February 2022
14	RUSHIKA KISHOR HATWAR	12018293247	L&T TECHNOLOGY	L&T TECHNOLOGY/Rushika Hatwar/8 February 2022
15	SAKSHI KISHOR BHINGARDE	12018293203	L&T TECHNOLOGY	L&T TECHNOLOGY/ Sakshi Bhingarde/ 8 February 2022
16	SHAHISTA SALIM TAMBOLI	12019097716	L&T TECHNOLOGY	L&T TECHNOLOGY/ Shahista Salim Tamboli/08th February 2022
17	SHITAL NAMDEVRAO MAMADGE	12019097723	L&T TECHNOLOGY	L&T TECHNOLOGY/Shital Mamadge/8 February 2022
18	SHREYA SANJAY SUTAR	12018293218	VOIS	VOIS/Shreya Sutar/8 August 2022
19	VAIBHAVI JAYANT MUSALE	12018293263	L&T TECHNOLOGY	L&T TECHNOLOGY/Vaibhavi Jayant Musale/ 08th February 2022
20	VAISHNAVI VITTHAL TONAGE	12018293275	Vodafone India	Vodafone India/Vaishnavi Tonage/1 August 2022
21	YASHASHRI KESHAVRAO KATALE	12019097719	L&T TECHNOLOGY	L&T TECHNOLOGY/Yashashri Katale /08th February 2022
22	SAKSHI LAXMAN KUMBHAR	12018293217	MSYS TECHNOLOGIES	MSYS TECHNOLOGIES/Sakshi Kumbhar/1 Feb 2022
23	MEENAL MAHESH KORE	12018293245	STANDARD CHARTERED GBS	STANDARD CHARTERED GBS (Global Business Services)/Madhura Saurabh Mirikar/6 July 6 2022
24	MADHURA SAURABH MIRIKAR	12018293250	STANDARD CHARTERED GBS (Global Business Services)/Madhura Saurabh Mirikar/6 July 2022	STANDARD CHARTERED GBS
25	NAAZ ABDULHAMID RAMPURE	12019097720	ELNFOCHIPS	ELNFOCHIPS/Naaz Rampure/1 January2022
26	SHUBHDA GANESH GHONE	12018293214	TCS	TCS/Shubhda Ghone/27 September 2022
27	VRUSHALI ARUN SIDANAIK.	12018293232	ELNFOCHIPS	ELNFOCHIPS/Shubhda Ghone/1 January2022
28	ANKAM NISHA SHRINIVAS	12018293264	VODAFONE	VODAFONE/Ankam Nisha Shrinivas/18 Apr 2022
29	POOJA AJAY SHARMA	12016066973	VOIS	VOIS/Pooja Sharma/19 December 2021
30	DEVYANI VILAS THERE	12018293256	PERSISTENT	PERSISTENT/Devyani There/9 september 2021

31	AISHWARYA CHANDRASHEKHAR MOKASHI	12019097713	PERSISTENT	PERSISTENT/Aishwarya Chandrashekhar Mokashi/10 Sep 2021
32	KOMAL SINGH	12018293210	PERSISTENT	PERSISTENT/ Komal Singh/10 Sep 2021
33	PRIYANSHI SINHA	12018293249	PERSISTENT	PERSISTENT/PRIYANSHI SINHA
34	VISHAKHA VIMALCHAND WAGHMARE	12018293266	PERSISTENT	PERSISTENT/Vishakha Waghmare/9 september 2021
35	ANUSUIYA PARIHAR	12018293251	ACCENTURE	ACCENTURE/ Anusuiya Parihar
36	AYUSHI PRAMOD SAVALDEKAR	12018293238	ACCENTURE	ACCENTURE/ Ayushi Pramod Savaldekar
37	DEEPIKA UDDHAV BHUKELE	12017027913	ACCENTURE	ACCENTURE/Deepika Uddhav Bhukele /29 Mar 2022
38	SHRUTIKA SANJAY BHUJBAL	12019097708	ACCENTURE	ACCENTURE/Shrutika Sanjay Bhujbal
39	SHWETA SHIRISHKUMAR PATIL	12018293244	ACCENTURE	ACCENTURE/Shweta Shirishkumar Patil
40	SUJATA SAMBHAJIRAO JADHAV	12018293236	ACCENTURE	ACCENTURE/ Sujata Sambhajirao Jadhav
41	VEDANTI CHINCHMALATPURE	12018293240	ACCENTURE	ACCENTURE/Vedanti Milind Chinchmalatpure
42	DIPTI RAMDAS PIMPARKAR	12018293226	VODAFONE IDEA	Vodafone Idea/Dipti Pimparkar/1 August 2022
43	SIDDHI DILIP JADHAV	12017027852	VODAFONE IDEA INTERNSHIP	VODAFONE IDEA INTERNSHIP/Siddhi Jadhav
44	MONE SWARADA SAMEER	12018293269	CAPGEMINI	CAPGEMINI/Swarada Mone
45	POOJA KAILAS JAIN	12018293204	CAPGEMINI	CAPGEMINI/Pooja Jain
46	ADITI SANTOSH PILANE	12018293219	VODAFONE	VODAFONE/Aditi Santosh Pilane /
47	AISHWARYA RAMESH SAWANT	12018293259	VODAFONE	VODAFONE/Aishwarya Ramesh Sawant
48	KAUSHIKI KISHORE BOPCHE	12017027825	VODAFONE	VODAFONE/Kaushiki Kishore Bopche
49	RUTUJA SURYAKANT NIKAM	12018293233	VODAFONE	VODAFONE/Rutuja Suryakant Nikam
50	SHREYA JYOTINATH SHINDE	12018293215	VODAFONE	VODAFONE/Shreya Jyotinath Shinde
51	ISHIKA SANTOSH BAGDIYA	12018293239	CAPGEMINI	CAPGEMINI/Ishika Bagdiya/
52	NEHA DIPAK WALUNJ	12018293252	CAPGEMINI	CAPGEMINI/ Neha Walunj
53	BHAVYA SHARMA	12018293205	PROGRAMMING PATHSHALA	PROGRAMMING PATHSHALA/Bhavya Sharma/11th July 2022.
54	MRINMAYI BHANUDAS BHOSALE	12018293202	L&T TECHNOLOGY	L&T TECHNOLOGY/Mrinmayi Bhosale /08th February 2022
55	SAMRUDDHI UMESH SHUKLA	12019097724	CAPGEMINI	CAPGEMINI/ Samruddhi Shukla
56	AIMAN AKHLAQUE PATHAN	12017027849	WIPRO	WIPRO/ Aiman Pathan/28 Oct 2021
57	DHANASHRI BASAYYA HIREMATH	12018293272	WIPRO	WIPRO/Dhanashri Hiremath/22 Nov 2021
58	KOKATE NEHA SURESH	12018293248	WIPRO	WIPRO/ NEHA KOKATE /12 October 2021
59	MANSI DILIP KULKARNI	12018293273	WIPRO	WIPRO/MANSI DILIP KULKARNI/ 26 Jamuary 2022
60	PRATIKSHA SANJAY DESHMUKH	12019097698	WIPRO	WIPRO/ Pratiksha Deshmukh/24 January 2022
61	PRATIKSHA SUBHASH GHOLAP	12018293208	WIPRO	WIPRO/ PRATIKSHA SUBHASH GHOLAP/ 21 April 2022
62	PRIYANKA SUSHILKUMAR SAWALE	12018293231	WIPRO	WIPRO/PRIYANKA SUSHILKUMAR

63	SHWETA VILAS VETAL	12018293260	WIPRO	WIPRO/ SHWETA VILAS VETAL
64	SONALI AJAYKUMAR BANSODE	12018293230	WIPRO	WIPRO/Sonali Bansode/ 22 July 2022
65	SURBHI SATISH RAUT	12018293209	WIPRO	WIPRO/SURBHI SATISH RAUT/ 22 November 2021
66	RUTUJA DEVENDRA GATHE	12018293265	INFRABEAT TECHNOLOGIES PVT LTD	INFRABEAT TECHNOLOGIES PVT LTD/ Rutuja Gathe /21 February2022
67	PATIL ANKITA BHARAT	12018293255	TCS	TCS/PATIL ANKITA BHARAT
68	ANUPRIYA KUMARI	12018293271	TCS	TCS/Anupriya Kumari/ 31 October2021
69	APURVA BHARAT PATIL	12018293237	TCS	TCS/APURVA BHARAT PATIL
70	SANIYA BADSHAH NADAF	12019097697	TCS	TCS/SANIYA NADAF
71	NIKITA KALYAN SOLUNKE	12016066995	VODAFONE IDEA INTERNSHIP	VODAFONE IDEA INTERNSHIP/ Nikita Kalyan
72	SUCHETA YASHWANT NAIK	12016066969	CAPGEMINI	CAPGEMINI/Sucheta Naik/8 December 2021
73	PURVA PRAVIN KOMAJPILLEWAR	12017027823	VOIS	VOIS/PURVA KOMAJPILLEWAR
74	VRUSHALI ANIL LOKHANDE	12017027898	VOIS	VOIS/VRUSHALI LOKHANDE

4.6 Professional Activities (20) Total Marks 20.00

4.6.1 Professional socities/ chapters and organizing engineering events (5)

Institute Marks : 5.00

4. 6.1. Professional societies/chapters and organizing engineering events

Our department actively operates student chapters under the aegis of The Institution of Engineers (India) [IEI], The Institution of Electronics and Telecommunication Engineers (IETE), and The Institute of Electrical and Electronics Engineers (IEEE) — the largest multi-disciplinary professional bodies of engineers worldwide.

These chapters' function in alignment with the Charters of their parent institutions, which entrust them with the responsibility of promoting the general advancement of engineering among members and associated individuals.

Vision

To develop comprehensive strategies and implementation plans addressing technology transition management within the country — facilitating the rapid absorption, adaptation, and assimilation of emerging and state-of-the-art technologies.

Objectives

· To facilitate the exchange of information and ideas among members, fostering collaboration and professional networking.

· To inculcate and promote technical curiosity and competence among students by providing a dynamic platform for technical discourse, activities, and proceedings.

· To acquaint students with current and emerging technologies and familiarize them with state-of-the-art innovations.

· To actively promote the general advancement of engineering and its practical applications across multidisciplinary domains.

Table 4.6.1.1 : Professional societies/chapters

Sr. No	Professional societies/chapters	Faculty Coordinators	Student Coordinators	Student Members	Faculty Members associated as a member of Professional Chapter
1	Institution of Engineers (India) (IEI)	Prof. Bhilegaonkar S.M.	Ms Rutuja Apte, , Ms Isha Patil, Ms. Mansha Joshi , Ms. Sarah Shaikh	74	Dr.S.R.Patil, Dr.S.S.Chorage, Dr.V.R.Pawar
2	Institution of E&TC Engineers Student Forum(IETE)	Dr.S.L.Kore	Neha Bhosale, Kanan Agarwal, Disha Kabra , Tanishka Kande, Prachiti desai, Sonal Kulkarni	75	Dr.S.R.Patil, Dr.S.S.Chorage, Dr.V.R.Pawar
3	The Institute of Electrical and Electronics Engineers(IEEE)	Dr.S.S.Salunkhe	Swarali Gosavi	12	Prof.Dr.P.V.Jadhav, Dr.V.R.Pawar

Institution of E&TC Engineers Student Forum(IETE)

The institution of E&TC Engineers Student Forum was established in the year of 2006. ISF coordinator was Executive Committee Member at IETE, Pune Center during the A.Y. 2014-16. In recognition of excellent work of ISF, the IETE Centre Pune awarded E&TC. dept. various awards for consecutive 7 years since its inceptions. Our institute students conduct and participate in the various activities conducted by IETE local Centre Pune. Final year students regularly participate in the project exhibitions and competitions organized by IETE Center, Pune. 3 project groups of final year received awards for best projects till date. The major activities include, National Level Project competition in association with IETE center Pune, visit to Electric Vehicle start up unit, one-day certificate course on battery manufacturing. 3 faculty members have Life Membership of IETE.

Table 4.6.1.2 : Events Conducted under Institution of E&TC Engineers Student Forum

(Program Outcome mapped-PO1,PO9,PO10,PO11,PO12)

A.Y. 2023-24				
Sr. No	**Date**	**Name of Activity**	**Resource Person**	**Class**
1	13/9/2023	Seminar on “Current Technologies used in Electric Vehicles”	Mr.Prakash Malvatkar, EV Expert, Center of Excellence in EV KJCOEMR Pune	SE E&TC DIV –I & II
2	28/11/23	Study Visit to EV Center of excellence	KJCOEMR Pune	SE E&TC DIV –I & II
A.Y. 2022-23				
1	27/4/2023	National Level IETE Project Competition in Association with IETE centre, Pune	Vivek Sawant, MKCL,Pune, Prof. Dr. V. V. Shete, Chairman, IETE Centre ,Pune, Prof. Dr. Somani S.B.	SE E&TC DIV –I & II

The Institution of Engineers (India) — IEI

The Institution of Engineers (India), commonly known as IEI, is the premier multidisciplinary professional body for engineers in India. It serves as a platform for engineers from various disciplines to come together, exchange ideas, develop professionally, and contribute to nation-building.

Objectives of The Institution of Engineers (India) (IEI)

- Advancement of Engineering and Technology
- Professional Development of Engineers
- Promotion of Ethical Standards
- Recognition of Engineering Qualifications
- Bridging Academia and Industry
- Promotion of Research and Innovation
- Nation Building through Engineering Expertise
- International Collaboration

Table 4.6.1.3 : Events Conducted under Institution of Engineers (India) student chapter

(Program Outcome mapped-PO1,PO9,PO10,PO11,PO12)

A.Y. 2023-24				
Sr. No	**Date**	**Name of Activity**	**Resource Person**	**Student Participation**
1	11/9/2023 to 25/9/2023	Sessions on Electromagnetic Applications	Prof. S.M. Bhilegaonkar	150

2	21/8/2023 to 22/8/2023	Workshop on “Awareness of MATLAB”	Mr Ankit Kumar	T.E.(E&TC) I&II
3	21/02/2024	Workshop on demonstration and hands-on session on Klystron based Microwave test benches by TECHNILAB INSTRUMENT	Mr. J. Ravi Kumar, the Chief Executive of the TECHNILAB INSTRUMENT	T.E.(E&TC) I&II
A.Y. 2022-23				
1	09/05/23 to 11/05/23.	Expert lecture series on Control Systems	Prof. Ashwini Navghane, VIIT, Pune	S.E.(E&TC) I&II
2	11/02/2023	Webinar on Internship opportunities on VLSI, IOT, and RF	Abhiyantha training division of Entuple Technologies	T.E.(E&TC) I&II

Student’s Clubs

Electronics and Telecommunication Student Association (ETSA)

Electronics and Telecommunication Student Association (ETSA) is a dynamic student body within the department aimed at enhancing both the academic and co-curricular experience of students.

Objectives:

- Foster a spirit of technical curiosity and innovation.
- Encourage collaborative learning and knowledge sharing.
- Bridge the gap between industry trends and academic learning.
- Provide a platform for student leadership and event management.

Key Activities:

1. Technical Workshops & Seminars
   - Hands-on sessions on topics like IoT, Embedded Systems, AI, and 5G technologies.
   - Expert talks by industry professionals and alumni.
2. Hackathons & Project Competitions

   Encouraging participant to enculcate problem-solving skills through competitive coding and project expos.
3. Industrial Visits

   Organized visits to telecom companies, electronics manufacturing units, and research centers.
4. Annual Technical Fest

   A flagship event featuring paper presentations, circuit debugging contests, tech quizzes, and robotics competitions.
5. Soft Skills and Career Guidance Sessions

   Workshops on resume building, interview preparation, and communication skills.

Impact of Organizing Engineering Events:

- Enhances students technical competencies and practical exposure.
- Improves leadership, teamwork, and event management skills.
- Builds confidence and professional ethics through collaborative initiatives.
- Increases student engagement and promotes departmental unity and pride.
- Prepares students for future academic and professional challenges.

Table 4.6.1.4 : Events Conducted under Electronics and Telecommunication Student Association (ETSA)

(Program Outcome mapped-PO1,PO6, PO9,PO10,PO11,PO12)

ETSA Activity List Academic Year-2024-25						
Sr No	**Date**	**Name of the Event**	**Name of The Speaker**	**Designation & company address**	**Class**	**No.of students**
1	10/07/2024	Session on Adavanced Data Structure	Mr.Nagesh Mhetre	Click In Computer,Pune	SE	76
2	9/07/2024	Training Demo session on Aptitude,Technical	Mr.Vedant Krishna	Inlustro, Pune	BE	45
3	10/07/2024	Training Demo session on Aptitude,Technical	Ms.Vaishali valve, Tejal Sathe , Ajinkya Gaikwad	Six phrases, Pune	BE	22
4	12/07/2024	Training Demo session on Aptitude,Technical	Mr. Dular, Mr. Sachin	Edutech System VIT Pune	BE	31
5	19/07/2024	Training Demo session on Aptitude,Technical	Mr.Musharaf	Campus Credential, Pune	BE	45
6	27/09/2024	Session on Happy Thoughts Dhyan	Mr.Dhanjay Kulkarni Mr.Prashant Gaikwad	Happy Thoughts,Pune	TE	83
7	30/01/2025	Session on Career Opportunities in Biomedical Engineering Field	Mrs. Vaishnavi Banke	Medi facts inc,Pune	BE	50
8	20/03/2025	Bridging microcontrollers and the cloud: A hands-on one day workshop on IoT,Automation,and AI	Mr. Santosh Yadav	CADD CAREER, Pune	TE	36
ETSA Activity List Academic Year-2023-24						
1	22/08/2023	Session on Adavanced Data Structure	Mr.Nagesh Mhetre	Click In Computer,Pune	SE	104
2	25/08/23	Session on Discovery day AWS cloud workshop	Mr.Amey Vaidya Mr.Pranav Phadke	Brainfloss,Pune	TE	95

3	1/9/2023	Session on Improving Analytical Ability	Mr.Raghunath Nanivadekar	Rtd. Professor,Pune	SE	60
4	13/09/2023	Session on Current Technologies used in Electric Vehicles	Mr.Prakash Malvatkar	KJCOEMR,Pune	SE	43
5	5/10/23	Session on IoT	Prof.S.A.Itkarkar	BVCOEW,Pune	TE	82
6	6/10/23	Session on IoT Protocols	Dr.R.R.Itkarkar	AISSMSCOE,Pune	BE	130
7	19/10/23	Session on Cloud Computing Applications, Job Market and Business Opportunities	Mr.Mubeen Shaikh	Principal Consultant in Ansira,Mentor for startup names Ironalytics Pvt Ltd	BE	134
8	10/01/2024	Session onPlacement Assistance for 2024 batch	Mr.Aditya Wakodkar	SevenSence,Pune	BE	70
9	1/02/2024	Session on Career Opportunities in Biomedical Engineering Field	Mrs. Vaishnavi Banke	Medi facts inc,Pune	BE	77
10	9/02/2024	Session onCyber Security	Mr. MANISH SINGH	Inflow Technologies Pvt.Ltd,Pune	SE	106
11	9/02/2024	Session on Cyber Security	Mr. MANISH SINGH	Inflow Technologies Pvt.Ltd,Pune	TE	65
12	13/03/2024	Session on Semiconductor Technology	Prof. Dr. R. B. Ghongade	BVDUCOE,Pune	BE	85
13	28/03/2024	Session on Job opportunities in VLSI/Semiconductor industry	Mr.Laxmi Narsimha	Takshila VLSI Institute,Banglore	TE, BE	60

ETSA Activity List

Academic Year-2022-23

Sr, No.	**Date**	**Name of the Event**	**Name of The Speaker**	**Designation & company address**	**Class**	
1	07/09/2022	Webinar on "Your study abroad Journey	Mr. Anand Bannatkar	ASAP Foreign Language Institute,Pune	SE	75
2	15/09/2022	Webinar on "Data Sturetures & Algorithms "	Mr. Nagesh Mhatre	Click In Computer,Pune	SE	75
3	28 to 30/09/2022	Session on Zest Fiesta Event	Institute Level	Institute Level	SE,TE,BE	120
4	11/10/2022 to 15/10/2022	Workshop on IOT	Mr.Chittranjan Mahajan	Dolphin Lab,Pune	BE	70
5	25/3/2023	Training Demo session on Apttude, Technical	Mr. Aditya Wakodkar	Seven Sense Talent Solution,Pune	TE	72

6	09/03/2023	Training Demo session on Apttude, Technical	Mr. Aditya Wakodkar	Seven Sense Talent Solution,Pune	BE, SE	110
7	11/03/2023	Training Demo session on Apttude, Technical	Mr. Avinash	Carpe Diem Boot Camp,Pune	TE	60
8	21/03/2023	Training Demo session on Apttude, Technical	Mr. Vishal	EDU PLUS,Pune	TE	70
9	25/03/2023	Webinar on Coding Supper power	Ms. Bhakti	BrightSea Technology Pvt Ltd.Pune	SE	65
10	11/04/2023 & 13/04/2023	Session on Placement Assessment Test	Mr. Dipendra Wagh	Campus Credentials,Pune	SE & TE	115
11	12/04/2023	Workshop on PCB designing	Mr.Chittranjan Mahajan	Dolphin Lab,Pune	SE	60

Skill Enhancement Club

Different Coding Clubs like Coding, Aptitude and HR are conducted by students, observed and corrective actions are suggested by the Training Coordinator. One of the students gives a task daily and other students solve it by end of the day which enhance their thinking power and also receive constructive solutions from other students. These clubs are helpful to broaden the knowledge of students in terms of Placement.

HIGHLIGHTS OF THE ACTIVITIES HELD:

1. **Capacity Building Programme for SE:** These sessions focuses on different VAK learning styles, Knowing yourself, Life values, How to do self and peer diagnosis and SWOC analysis. Many fun activities are also conducted in the process to cheer up the students and help them boost confidence. Every student is able to self-analyze their own Strengths, Weaknesses, Opportunities and Challenges. At the end, this does help the students in their placement recruitment process and to achieve a great future.

2. **Capacity Building Programme of Students by Students (Peer to Peer Training Programme)**: In this training programme, BE students who are placed in various MNC companies deliver the seminars to SE and TE students on various topics such as Aptitude test, Coding, Technical, HR interviews and Company Specific Training. The entire programme covers all the aspects of placement procedures, professional future post and completing graduation. It eases and prepares the students for their future journey.

3. **HR Group [Group Discussion Programme]:** This activity is conducted for all the students from SE to BE of all departments and it engages students in developing their communication skills and making themselves more comfortable for HR rounds in placement. During these sessions' students get a brief review about different current affairs, expected topics in GD round and learning styles.

4. **Coding and Aptitude skill Enhancement Clubs**: To enhance Coding and Aptitude skills of students, these enhancement clubs are started for SE, TE and BE students of all branches. It eradicates the fear of coding and increases their computational thinking. It helps them to acquire the requisite skill set to think "Out of the box" and develop a rational approach towards Problem-solving. It prepare students to solve questions in aptitude and coding tests conducted during placement drives and in competitive exams.

5. **Activities conducted in Coding group**: The questions are posted related to coding in these groups. These are either Mcqs or problems statements type Special focus is on problem statements which are repeatedly asked in company campus drives. Students co-ordinator also share YouTube videos which are beneficial for learning concepts. This makes the students, especially weak ones, comfortable with different coding questions and helps to eradicate the fear of coding.

6. **Activities conducted in Aptitude group:** The student co-ordinators posts questions on aptitude group. These are divided into Arithmetic, Verbal and Current Affair section. Also 5 new words are posted along with their meanings, synonym and their use in sentence to increase vocabulary. Every night the solutions are sent for students to refer. The main focus is on questions which are asked in competitive exams and campus drives. This helps the students to practice and get familiar with aptitude and increase their knowledge on the same.

7. **Test Series Club:** The main objective of this club is to prepare the students for the different competitive stages in campus drives like the aptitude test, coding test, English (verbal ability) test. These tests help the students to understand the pattern of various placement drives tests and gives them a real time experience. The technical tests are conducted on Hacker rank platform .This way the students became well versed with online compilers and it helps in increasing their confidence too. They also get an opportunity to work on their weak points.

4.6.2 Publication of technical magazines, newsletters, etc. (5)

Institute Marks : 5.00

4.6.2. Publication of Technical magazines, Newsletters, etc.

College Newsletter

The College Newsletter is a bi-annual publication that provides a comprehensive overview of the latest happenings, achievements, and milestones within our institution. It serves as an essential communication bridge connecting students, faculty, staff, alumni, and other stakeholders, fostering a strong sense of community and celebrating the dynamic spirit of our college.

Through thoughtfully curated content, the newsletter aims to keep everyone informed, engaged, and inspired by showcasing the progress, events, and stories that shape our academic environment.

Our college newsletter typically includes the following information:

1. Campus News
Updates on recent campus developments, inaugurations, infrastructure enhancements, and institution-wide initiatives designed to enrich the college experience.

2. Academic Updates
Highlights of academic program enhancements, faculty achievements, ongoing research projects, and notable changes in curriculum or educational practices.

3. Student Life
Coverage of vibrant student activities, clubs, and organizations, along with profiles of outstanding students. Includes details about upcoming events and celebrations.

4. Alumni News
Success stories of our alumni, updates on alumni association activities, reunions, and professional achievements, strengthening the bond with our former students.

5. Faculty and Staff Highlights
Showcasing the contributions, achievements, and inspiring stories of our dedicated faculty, administrative staff, and academic leaders.

6. Campus Culture
Features on cultural festivals, art exhibitions, theatre performances, musical shows, and other cultural expressions enriching our campus life.

7. Placement Highlights
Insights into placement drives, notable recruiters, placement statistics, and success stories of students securing opportunities in reputed organizations.

4.6.2.1 List of students involved in publications of journal, magazine and newsletter, organized by institute

A. Magazine

Table 4.6.2.1 : Magazine Information

(Program Outcome mapped-PO6, PO8,PO9,PO10,PO12)

Sr.No	Name of Journal, magazine	Name of editor	Name of student	No. of issues	Hard copy
A.Y. 2024-25					
1	Avyanna Oyster'24	Prof. P.R. Yawle	Annanya Wagh	Yearly	Yes
A.Y. 2023-24					
1	Abhiyanta Oyster'23	Prof. P.R. Yawle	Sakshi Shirke	Yearly	Yes
A.Y. 2022-23					
1	Anitya Oyster'22	Prof. Y.R. Dhumal	Pranita Patil	Yearly	Yes

B. Newsletter: e_newsletter

Table 4.6.2.2 : e_newsletter Information

(Program Outcome mapped-PO6, PO8,PO9,PO10,PO12)

Sr.No	Name of Newsletter	Newsletter Coordinator	Editorial Board	Name of issues	Hard copy/soft copy
A.Y. 2024-25					
1	e-newsletter	Prof. Dr. D. A. Godse	Prof. S. M. Thorat Sakshi Seth, Arya Deshmukhe, Sakshi Ghute, Siddeshri Kunnure, Gayatri Thorat, Shravani Tayade	e-newsletter, Dept. of E&TC Engg., Vol.7, Issue 1, 2024-25	Softcopy
A.Y. 2023-24					
1	e-newsletter	Prof. Dr. D. A. Godse	Prof. S. M. Thorat Sakshi Seth, Arya Deshmukhe, Deepshika Sharma Siddeshri Kunnure, Gayatri Thorat, Shravani Tayade	e-newsletter, Dept. of E&TC Engg., Vol.6, Issue 1, 2023-24	Softcopy
2	e-newsletter	Prof. Dr. D. A. Godse	Prof. S. M. Thorat Sakshi Seth, Arya Deshmukhe, Deepshika Sharma Siddeshri Kunnure, Gayatri Thorat, Shravani Tayade	e-newsletter, Dept. of E&TC Engg., Vol.6, Issue 2, 2023-24	Softcopy
A.Y. 2022-23					
1	e-newsletter	Prof. Dr. D. A. Godse	Prof. V. S. Karambelkar Prof. S. M. Thorat Tanushree Desale, Nikita Kendre, Sakshi Seth, Niharika Nikose, Khushi Mittal, Siddeshri Kunnure	e-newsletter, Dept. of E&TC Engg., Vol. 5, Issue 1, 2022-23	Softcopy
2	e-newsletter	Prof. Dr. D. A. Godse	Prof. V. S. Karambelkar Prof. S. M. Thorat Tanushree Desale, Nikita Kendre, Sakshi Seth, Niharika Nikose, Khushi Mittal, Siddeshri Kunnure	e-newsletter, Dept. of E&TC Engg., Vol. 5, Issue 2, 2022-23	Softcopy

4.6.3 Participationininter-institute events by students of the program of study (10)

Institute Marks : 10.00

4.6.3 Participation in inter-institute events by students of program of study

A. **Events Within State**

Table 4.6.3.1 : Participation in Inter-Institute Events-Within State

A.Y. 2024-25 Participation in inter-institute events:Project Competition (Program Outcome mapped-PO1,PO2,PO3,PO4,PO5,PO6, PO7,PO8,PO9,PO10,PO11,PO12)				
Sr.No.	**Name of students**	**Date**	**Event Name**	**Organised by**
1	Tanishka Gite,Ruchika Gosavi,Bhagyashri Janwade	3-6/04/2025	Project competition - DIPEX- 2025	College Of Engineering, Pune Technical University
2	Rutuja Diwakar,Aishwarya Ghore,sonal Kulkarni	04-04-2025	Project competition - Technophilia25	MIT Academy Of Engineering &IEEE, Pune
3	Snehal Shinde,Nikita Wadghule,Ananya Wagh	07-03-2025	Project competition - DIPEX 2025	Pimpri Chinchwad College Of Engineering & Research, Ravet
4	Snehal Shinde,Nikita Wadghule,Ananya Wagh	3-04-2025 to 6-04-2025	Project competition - DIPEX 2025	College Of Engineering, Pune Technical University
5	Siddeshri kunnure,Rutuja Mane,Priyanka Pandekar,Mohini Mane,Saniya Mulla,Niharika Naik	07-03-2025	Project competition - DIPEX 2025	Pimpri Chinchwad College Of Engineering & Research, Ravet
6	Isha Patil ,Chaitanya Raje,Sarah shaikh	03-04-2025	Project competition - Technophilia25	MIT Academy Of Engineering &IEEE, Pune
7	Yogeshwari Narkhede,kaveri sonwane,Pridil Sonje,Gayatri Patve,Sayali shinde	04-03-2025	Project competition - NLCP-2025	IETE & Pimpri Chinchwad College Of Engineering & Research, Ravet
8	Mansi Ramteke	01-04-2025	Project competition - NLCP-2025	IETE & Sinhgad College Of Engineering (SCOE), Pune
9	Sakshi sheth,Janhvi sarode	01-09- 2024	Project competition - AAKRUTI Global	AAKRUTI Global
10	Sakshi Talekar,Tanushree Velapure,Gayatri Yeole	02-04-2025	Project competition - NLCP-2025	IETE & Modern Education Societys Wadia College Of Engineering , Pune

11	Sonali Biradar,sonawane sakshi shivaji,sonawane sakshi suresh	05-04-2025	Project competition - NLCP-2025	IETE & College Of Engineering, Pune Technical University
12	Sanskruti thakare,Vrashali chavan,Shrushti Wakchaware	07-03-2025	Project competition - DIPEX-2025	Pimpri Chinchwad College Of Engineering & Research, Ravet
13	Anushka Mohite,Pratiksha suryawanshi,Ketaki todkar	05-04-2025	Project competition - NLCP-2025	IETE & College Of Engineering, Pune Technical University

A.Y. 2023-24

Participation in inter-institute events:Project Competition

(Program Outcome mapped- PO1,PO2,PO3,PO4,PO5,PO6, PO7,PO8,PO9,PO10,PO11,PO12)

Sr. No.	Name Of Student	Date	Event Name	Organized by
1	Munale Shruti Dilip,Pandharipande Shreya Ajay,Salunkhe Sanika Dattatrya	2024	Project Presentation Competition	Jspm narhe technical campus narhe pune-41
2	Rutuja Kharache,Saee Kad,Vaibhavi Jarande,Vaishali Deshmukh	27-10-2023	Zonal Level Research Project Competition	AISSMS,COE pune
3	Komal Jadhav,Prajakta,Shivani Harge,Shamal,Vaishnav,Sejal Chetan Bharambe,Shravani Pravin Deshmukh,Sanskruti Pramod Dhage,Vaishnavi Chandrakant Mandave,Mrunal Moreshwarrao Maslekar	14-02-2024 to 16-02-2024	Sinhagad Techtonic-2024(a National Level Techfest)	Sinhagad institutes
4	Kalshetty Ashwini,Ashtekar Harshada Nitin,Bhosale Priti Bhanudas	15-04-2024	State Level Project Competition	Institution of engineers (india) at AISSMS,COE , pune
5	Vanshika Thote,Zainab Shaikh,Vaidehi Patil	2024	Project Presentation Competition	Jspm narhe technical campus narhe pune-41
6	Vaishnavi Chandrakant Mandave,Mrunal Moreshwarrao Maslekar	2024	Impetus & Concepts 2024 International Level Technical Event	Pune institute of computer technology
7	Chaudhari Minal,Deshmukh Tejaswini,Dipashree Akkalwar,Akanksha Prajapati,Krutika Bhankhede,Samita Ganveer,Himani Bire,Rutuja Deshmukh,	2024	Project Presentation Competition	Jspm narhe technical campus narhe pune-41
8	Totawar Namrata Baburao,Shruti Singh,Uttekar Ruchita Sanjay,Shreeya Kumbhar,Tejaswini Kumbhar,Khushi Shetty,Kadam Srushti,Adhav Aparna,Ahire Tapasya	15-04-2024	State Level Project Competition	Institution Of Engineers (india) at AISSMS,COE , pune

9	Archana Sadashiv Kandalkar,Dhavale Rutuja Gorakh,Kadam Reshma, Rajendra,Srushti,Alka,Vaishnavi	14-02-2024 to 16-02-2024	Sinhagad Techtonic-2024(a National Level Techfest)	Sinhagad Institutes
10	Vaibhavi Vishvas Danawale,Vaishnavi Rajkumar Chalwa,Mittal Khushi Pramod,More Komal,Dhage Pragati Raosaheb,Sandhya Namadev Jadhav,Aarti Ramrao Bhosale,Sanjana Pawar,Vaishnavi Patange,Kalyani Ralebhat,Patil Prajakta	2024	Impetus & Concepts 2024 International Level Technical Event	Pune Institute Of Computer Technology

A.Y. 2022-23

Participation in inter-institute events:Project Competition

(Program Outcome mapped-PO1,PO2,PO3,PO4,PO5,PO6, PO7,PO8,PO9,PO10,PO11,PO12)

Sr.No	Name Of Student	Date	Organised By	Event Name
1	Sharyu Vidhale,Isha Rathod,Amita Pudhale	2023	AISSMS IOIT-ALACRITY 2023	Project Competition
2	Bhagyashree Barmade,Snehal Shitole,Kanchan Surkutlawar	27-04-2023 to 28 -04-2023	CESA,Sandip Institute of engineering and Management, Nashik.	Project Competition
3	Ashwini Suryawanshi	1-02-2023 to 2-03- 2023	J D college of engineering & management	Project Competition,Festa Tech23
4	Jayasmita Saha,Jayasmita Saha	2023	Kpit technologies ltd	9th Edition Of Kpit Sparkle,Emerging Innovator

5	Sayali Patil,Mitali Ankush Waghmode,Shrutika Pawar,Jayasmita Saha,Shreya Sanjay Jadhav,Janhavi Jadhav,Aachal Jaiswal,Rutuja Suryawanshi,Pranita Dinanath Patil,Revati Gajbhar,Aishwarya Hatkar,Rushika Dharne,Pragati Ghorpade,Jayashree Ghogare,Tanushree Desale,Radhika Deshpande, Disha Kamthe,Jayasmita Saha,Shreya Jadhav,Janhavi Jadhav,Pooja Mule,Vaishnavi Khulpe,Radha Kure,Amruta Bakare,Neha Chorghe,Ankita Beldare,Shweta Sudhakar Kamble,Pranavi Kushire,Srushti Halge,Radhika Ajalu,Srushti Burhadi,Vaishnavi Biradar,Vidhi Agrwal,Rhuta Kalgahure,Muskan Kandhway,Akshata Chavan,Pranjal Koli,Saloni Konge,Komal Dattatray Todkari,Aakanksha Dattatray Tawale,Ishika Arun Bhiogade,Diya Jituri,Gauri Kishor Jadhao,Tejas Takalkar,Pawar Snehal Sachin,Rutuja Guruling Waghmare,Rutika Pawar,Rutuja Patil,Pooja Gophane,Rajnandini Kathare,Adya Pathak,Prajakta Thakare,Poonam Pise,Niharika Nikose,Aarti Siddheshwar Swami,Shruti Sarode,Janhvi Shyam Morey,Sfurti Dnyaneshwar Musmade,Vaibhavi Daghmode,Tabassum r Pathan,Jidnyasa Bhoge,Anisha Gadade,Poonam Dolare,Arati Ramchandra Pachavadekar,Mitali Waghmode,Vanshika Sable,Madhvi Sonone,Snehal Sachin Pawar,Shrutika Pawar,Esha Singh	2023	Pune Institute Of Computer Technology	Impetus & Concepts 23
6	Komal Dattatray Todkari,Aakanksha Dattatray Tawale,Rutika Pawar,Rajnandini Kathare,Rutuja Vardhman Patil,Pooja Gophane	24-03-2023	School Of Electrical Eng,MITAOE In Association With ISA Pune Section	Project Competition In Techno Philia
7	Ruchali Vinod Khartad,Bhargavi Wadkar,Neha Rauat,Preeti Vishwakarma	28-04-2023	Smt.Kashibai Navale College Of Engineering,Vadgaon Bk,Pune	9th National Level Project Competition-Cum-Exhibition Convene 2023
8	Ashwini Suryawanshi	9-03-2023 to 10-03- 2023	Zeal institutes	Project Competition,Iodump23

Participation In Inter-Institute Events : **Workshop**

(Program Outcome mapped-PO1,PO2,PO5,PO9,PO10,PO12)

Sr. No	Name Of Student	Event Name	Organised By	Date

1	Esha Singh	Internship	ELON POWER,PUNE	05/01/22 TO 07/02/2022
2	Esha Singh	Front end development-html	GREAT LEARNING ACADEMY	01-08-2022
3	Esha Singh	Java programming	GREAT LEARNING ACADEMY	01-01-2022
4	Shrutika Pawar	Sql(basic)	HACKERRANK	11-02-23
5	Mitali Waghmode	Sql(basic)	HACKERRANK	13-12-2022
6	Esha Singh	INTERNET OF THINGS e-WEBINAR	SURYODAYA COLLEGE OF ENG &TECH,NAGPUR	19-07-20

B .Outside State participation

Table 4.6.3.2 : Participation in Inter-Institute Events-Outside State

A.Y. 2024-25 **Participation in inter-institute events : Project Competition** **(Program Outcome mapped-PO1,PO2,PO3,PO4,PO5,PO6, PO7,PO8,PO9,PO10,PO11,PO12)**				
Sr.No.	**Name of students**	**Event Name**	**Organised by**	
1	Nita Sonawane,Isha Vetal,Priyanka Ambekar,Rutuja Apte,Apurva Dandgavhal	Project Competition - NLCP-2025	IIETE & Marathwada Mitra Mandale's College of Engineering, Pune	National

2	Sharvari Inamdar,Manasi Kaple,Prachi Kale,Sneha Chavan,Gunjan Deshmukh,Swara Deshpande,Sanika Badale,Anuja Bhalerao,Pratiksha Bhise, Dnyaneshwari Ekhande,Sanika Firke,Harshada Garad,Kanan Agrawal,Mansha Joshi,Disha Kabra,Aishwarya Barabe,Janhavi Balsaraf,Shraddha Batwal,Kajal Karad,Mansi Khapekar,Jyoti Jagtap,Neha Jamdade, Sakshi Jamdar,Siddhi Kadus,Sushma Kakade,Aditi Kulkarni,Nishigandha Gobade,Rutuja Jagtap,Sayali Jagtap,Tanishka Gite,Ruchika Gosavi,Bhagyashri Janwade,Rutuja Diwakar,Aishwarya Ghore,Sonal Kulkarni,Pranoti Kakade,Neha Kale,Pratiksha Kanthe,Sayali Gurav,Vedanti Kakade,Rucha Kewat,Shweta Kadam,Sanika Kadam,Sneha Dalavi,Snehal Shinde	Project Competition - NLCP-2025	IETE & Sinhgad College Of Engineering (SCOE), Pune	National
3	Tanishka Dande,Pranali Chavan,Riddhi Baldwa,	Project Competition - NLCP-2025	IIETE & Modern Education Societys Wadia College Of Engineering , Pune	National
4	Rutuja Diwakar,Aishwarya Ghore,Sonal Kulkarni	Project Competition - Technophilia25	MIT Academy Of Engineering &IEEE, Pune	National
5	Blayna Fernandes,Muskan Gujar,Vaishnavi Ingle,	Project competition - NLCP-2025	IETE & KJCOEMR, Pune	National
6	Nikita Wadghule,Ananya Wagh,Sagal Langde,Shruti Nage,Shraddha Mohalkar,Muskan Mirza,Harshda Motipwar,Sakshi Pardeshi,Sanji Pardeshi,Vishaka Wanare,Shivani Pawar,Amruta Pol,Rajshree Rajage,Mansi Ramteke,Rita Landge,Diksha Rokade,Janhvi Sarode,Shweta Patil,Vaishnavi A Patil,Sanika Purwat,Laxmi Salekar,Vaishanavi Wavare,Priyanka Valkunde,Madhura Lad,Prachi Salve,Shravani Shinde,Saloni Londhe,Rutika Kakurle,Sanchita Sagar,Sakshi Sheth	Project Competition - NLCP-2025	IETE & Sinhgad College Of Engineering (SCOE), Pune	National
7	Pooja Survase,Tanushree Shende,Arpita Takalkar,	Project Competition - NLCP-2025	IETE & College Of Engineering, Pune Technical University	National

Participation In Inter-Institute Events : Paper Presentation

(Program Outcome mapped-PO1,PO2,PO3,PO4,PO5,PO8,PO9,PO10,PO12)

Sr. No.	Name Of Students	Journal/Conference Name	Event Name	Level
1	Neha Bhosale,Shreya Bodake,Rutuja Bande	International Journal of Advanced Research in Computer and Communication Engineering	Paper Publication	International
2	Nishigandha Gobade,Rutuja Jagtap,Sayali Jagtap	Innovative Research in Science, Engineering and Technology (IJIRSET)	Paper Publication	International
3	Mansi Ramteke,Rita Landge,Diksha Rokade	The Institution of Electronics & Telecommunication Engineers (IETE) National Technical Paper Contest -2025 NTPC-2025 (Hybrid Mode) Theme: Futuristic Technology Transformation Organized by IETE Pune Centre	Paper Publication	International
4	Shweta Patil,Vaishnavi A Patil,Sanika Purwat	ICRAES, Bharati Vidyapeeth Lavale, Pune	Paper Publication	International
5	Vaishnavi R. Patil,Vaishnavi S. Patil,Prachiti Desai,Akanksha Galande,Pratiksha Dhembare,Shruti Chaudhari	12th International Conference on Computing for sustainable global Developement IndiaCom 25 Bharati Vidyapeeths Institute of Computer Application and management (BVICAM),New Delhi (INDIA)	Paper Publication	International
6	Muskan Mirz,Harshda Motipwa,Sakshi Pardeshi,Pridil Sonje,Gayatri Patve	6 th International Conference of Emerging Technology (INCET 2025) during 22-05- 2025 to 24-05-2025	Paper Publication	International

A.Y. 2023-24

Participation In Inter-Institute Events : Project Competition(Smart India Hackathon 23)

(Program Outcome mapped-PO1,PO2,PO3,PO4,PO5,PO6, PO7,PO8,PO9,PO10,PO11,PO12)

Sr.No.	Group Members	Event Name	Organized By	Level
1	Vaishnavi Bobade,Alka Bongane,Srushti Galande,Komal More,Khushi Mittal,Prajakta Patil,Sakshi Burrewar,Minal Chaudhari,Tejaswini Deshmukh,Vaishnavi Dhekane,Shruti Gaikwad,Anjali Gavali,Rutuja Dhavale,Archana Kandalkar,Reshma Kadam,Dhanashree Kadam,Mansi Karadkedkar,Sanjana Khadakabhavi,Nikita Kendre,Rutuja Kharche,Saee Kad,Shravani Deshmukh,Sanskruti Dhage,Sejal Bharambe,Shweta Kshirsagar,Sayali Kshirsagar,Saloni More,Akanksha Aware,Chetana Dusane,Arpita Jadhav	Project Competition: SMART INDIA HACKATHON 23	Ministry of Educations Innovation Cell	National

A.Y. 2022-23

Participation in inter-institute events : Paper Publications

(Program Outcome mapped-PO1,PO2,PO3,PO4,PO5,PO6,PO8,PO9,PO10,PO12)

Sr.No	Name of student	Journal/Conference Name	Event Name	Level
1	Pooja Mule,Vaishnavi Khulpe,Radha Kure,Tejas Takalkar,Mitali Ankush Waghmode	Journal for basic sciences	Paper Publication	International
2	Bhavana Khaire,Vaishnavi Harne,Geetanjali Dnyanoba Gutte	Institute of Electrical and Electronics Engineers	Paper Publication	International
3	Komal Dattatray Todkari,Aakanksha Dattatray Tawale,Rutika Pawar	International Research Journal of Modernization in Engineering Technology & Science	Paper Publication	International
4	Mitali Ankush Waghmode,Shrutika Bharat Pawar,Sayali Ramesh Patil	**Journal of Emerging Technologies and Innovative Research**	Paper Publication	International
5	Sfurti Dnyaneshwar Musmade,Snehal Sachin Pawar,Tejas Kisan Takalkar	International Conference on Advances and Creations in Mechanical Engineering 2022	Paper Publication	International

6	Janhavi j Jadhav,Snehal Pawar,Shrutika Bharat Pawar,Amita Pudhale,Isha Rathod,Jayasmita Saha,Sonali Dhage,Sharyu Vidhale,Shreya Sanjay Jadhav,Mrunal Jahagirdar,Janhavi Jadhav,Ruchali Vinod Khartad,Pooja Gophane,Rutuja Patil,Rajnandini Kathare,Sayali Ramesh Patil,Rucha Bagad,Shreya Sanjay Jadhav	Journal for basic sciences	Paper Publication	International

Participation In Inter-Institute Events :Project Competition

(Program Outcome mapped-PO1,PO2,PO3,PO4,PO5,PO6, PO7,PO8,PO9,PO10,PO11,PO12)

Sr.No	Name Of Student	Event Name	Organised By	Level
1	Rutuja Suryawanshi,Pranita Patil,Ruchali Vinod Khartad,Tanushree Shashikant Desale,Radhika Makarand Deshpande,Disha Kamthe,Amruta Bakare,Neha Chorghe,Ankita Beldare,Akshata Chavan,Pranjal Koli,Saloni Konge,Ishika Arun Bhiogade,Diya Jituri,Divyanshi Mishra,Rutuja Waghmare,Adya Pathak,Prajakta Thakare,Poonam Pise,Aditi.j.Rokade,Niharika Nikose,Madhvi Sonone,Bhargavi Wadkar,Aarti Siddheshwar Swami,Shruti Sarode,Janhvi Shyam Morey,Mitali Ankush Waghmode,Sayali Patil,Vaibhavi Daghmode,Tabassum r Pathan,Shrutika Bharat Pawar,Neha Rauat,Preeti Vishwakarma,Jidnyasa Bhoge,Anisha Gadade,Poonam Dolare,Arati Ramchandra Pachavadekar	National level project competition	Institution of E&TC Engineers Student Forum(IETE)pune centre	Natonal

C. Prizes and Awards

Table 4.6.3.3 : Prizes and Awards won by Students

Academic Year-2024-25				
Sr. No.	**Name**	**Event Name**	**Recognition /Award**	**Organized By**
1	Manisha Jadhav	Paper Presentation	Best Paper Award	KJs TCOER, Pune
2	Gayatri Yeole	Project Competition	Ist Prize	IETE Cometition at MES Wadia College of Engineering. Pune
3	Tanushree Velapure			
4	Sakshi Talekar			

5	Ananya Wagh	Project Competition	Ist Prize	DIPEX-2025, at College of Engineering, Pune
6	Nikita Wadhule			
7	Snehal Shinde			
8	Vedika Rajmane	Selected for National Republic Day parade at New Delhi		

A.Y. 2022-23

Sr. No.	Name	Event Name	Recognition /Award	Organized By
1	Tanishka Dande	Bharatnatyam Dance competition	2nd prize	KJs TCOER, Pune
2	Dhanashree Kadam	Chasing Bits competition,	2nd prize	GeeksForGeeks-BVUCOEP and ECSA On 12-10- 2022.
3	Sayli Patil, Mitali Waghmode Shrutika Pawar	concept Level International Level Project Competition cum exhibition	Ist Prize	PICT, Pune

5 FACULTY INFORMATION AND CONTRIBUTIONS (200)

Total Marks 178.38

Institute Marks :

Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining	Association Type	At present working with the Institution(Yes/No)	In case of NO, Date of Leaving	IS HOD?
Prof.Dr. Patil Sandip Raosaheb	ABSPP8840N	Ph.D	24/03/2012	Image Processing	03	06	03	Professor	03/02/2005	03/02/2005	Regular	Yes		Yes
Prof.Dr. Chorage Suvarna Sandip[	AIGPP0563K	Ph.D	17/11/2012	Optical Communication	12	07	03	Professor	07/12/2012	07/12/2012	Regular	Yes		No
Prof. Dr. Rajbhoj Sushilkumar Mahadeo	ACCPR5787M	Ph.D	31/03/2016	Pattern Recognition	02	00	00	Associate Professor	01/12/2010	29/12/2003	Regular	Yes		No
Prof.Dr. Kore Sharada Laxman	AHOPK9891N	Ph.D	29/05/2017	Pattern Recognition	14	02	00	Associate Professor	01/12/2010	18/07/2003	Regular	Yes		No
Prof. Dr. Dhole Sampada Abhijit	AHIPD9869P	Ph.D	19/09/2017	Pattern Recognition	12	0	00	Assistant Professor		14/07/2003	Regular	Yes		No
Prof.Dr. Sumati Manoj Jagdale	AFMPJ3531N	Ph.D	12/05/2022	Signal Processing, VLSI	05	0	0	Assistant Professor		15/12/2003	Regular	Yes		No
Prof. Dr. Salunkhe Shweta Sadanand	AMBPG1260F	Ph.D	03/12/2022	Image Processing	11	0	0	Assistant Professor		02/07/2007	Regular	Yes		No
Prof. Mr. Kasar Mahavir Shantinath	AXLPK9199A	M.E/M.Tech	22/01/2014	VLSI & Embedded system	05	0	0	Assistant Professor		05/08/2008	Regular	Yes		No
Prof. Ms. Karambelkar Varsha Shashikant	AVVPK3899H	M.E/M.Tech	03/07/2013	VLSI & Embedded system	0	0	0	Assistant Professor		08/08/2008	Regular	Yes		No
Prof. Mr. Mulik Vinod Prakash	AWPPM6565M	M.E/M.Tech	20/09/2014	Electronics	06	0	0	Assistant Professor		09/08/2008	Regular	Yes		No
Prof. Ms. Jain Roma Rakesh	AKWPJ6459Q	M.E/M.Tech	14/05/2008	Electronics & Instrumentation	08	0	0	Assistant Professor		27/08/2008	Regular	Yes		No
Prof. Ms. Dhumal Yashomati Ram	ATBPD8336J	M.E/M.Tech	13/02/2014	Electronics	04	0	0	Assistant Professor		29/09/2008	Regular	Yes		No

Prof. Ms. Sapkal Roshnadevi Jaising	CBUPS3057E	M.E/M.Tech	31/10/2013	VLSI & Embedded system	06	0	0	Assistant Professor		31/07/2009	Regular	Yes		No
Prof. Ms. Shelke Sheetal Venkat	BWLPS3586D	M.E/M.Tech	26/10/2016	Electronics	06	0	0	Assistant Professor		31/07/2009	Regular	Yes		No
Prof. Mr. Vitekar Atul Bapuso	ADWPV8474A	M.E/M.Tech	28/11/2015	VLSI & Embedded System	07	0	0	Assistant Professor		04/08/2009	Regular	Yes		No
Prof.Mrs.Thorat Swati Mandar	AJRPT6829Q	M.E/M.Tech	14/07/2015	Electronics	07	0	0	Assistant Professor		22/08/2009	Regular	Yes		No
Prof. Mrs. Gaikawad Varsha Vijay	AVWPG5028M	M.E/M.Tech	04/04/2017	Electronics	0	0	0	Assistant Professor		28/06/2010	Regular	Yes		No
Prof.Dr. Rameez Muneer Shamalik	CPXPS6863K	Ph.D	01/03/2024	AI/ML	06	0	0	Assistant Professor		02/08/2010	Regular	Yes		No
Prof.Mr.Yadav Amol Pandurang	AFZPY3179C	M.E/M.Tech	25/09/2013	ELECTRONICS	05	0	0	Assistant Professor		24/09/2010	Regular	Yes		No
Prof. Ms. Patil Sonal Mohanrao	CYZPP1515Q	M.E/M.Tech	22/06/2018	Electronics	10	0	0	Assistant Professor		18/08/2015	Regular	Yes		No
Prof. Dr. Sanjay M. Bhilegaonkar	APWPB7597N	Ph.D	01/07/2024	Microwave Engineering	02	0	0	Assistant Professor		02/11/2007	Regular	No	11/10/2024	No
Prof. Dr. Vijaya Rahul Pawar	AMYPK4335L	Ph.D	09/12/2015	Pattern Recognition	18	05	02	Associate Professor	01/12/2010	01/08/2002	Regular	Yes		No
Prof. Mrs Itkarkar Savita Atul	AABPI5982L	M.E.	01/05/2000	Microwave Engineering	09	0	0	Associate Professor	01/07/2013	03/01/2007	Regular	Yes		No
Prof. Mrs. Chaudhari Kalyani Ramesh	AICPC9000C	M.E.	07/06/2011	Microwave Engineering	04	0	0	Assistant Professor		17/08/2006	Regular	Yes		No
Prof. Mrs. Yawale Pranali Rajesh	BEJPK9095R	M.E.	01/05/2012	Electronics	07	0	0	Assistant Professor		05/08/2008	Regular	Yes		No
Prof. Sucheta T. Khot	ACDPK4938Q	M.E.	23/12/1999	Image processing	0	0	0	Professor	01/09/2006	23/07/2002	Regular	No	31/10/2024	No

5.1 Student-Faculty Ratio (20) Total Marks 18.00

Institute Marks : 18.00

UG

No. of UG Programs in the Department 1

Electronics and Telecommunication Engineering						
Year of Study	**CAY**		**CAYm1**		**CAYm2**	
	(2024-25)		**(2023-24)**		**(2022-23)**	
	Sanction Intake	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**
2nd Year	120	12	120	12	120	12
3rd Year	120	12	120	12	120	12
4th Year	120	12	120	12	120	12
Sub-Total	**360**	**36**	**360**	**36**	**360**	**36**
Total	**396**		**396**		**396**	

Grand Total	396	396	396

PG

No. of PG Programs in the Department 1

Electronics and Telecommunication Engineering			
Year of Study	**CAY(2024-25)**	**CAYm1(2023-24)**	**CAYm2 (2022-23)**
	Sanction Intake	**Sanction Intake**	**Sanction Intake**
1st Year	9	9	9
2nd Year	9	9	18
Total	**18**	**18**	**27**

Grand Total	18	18	27

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 1

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
Total No. of Students in the Department(S)	414 **Sum total of all (UG+PG) students**	414 **Sum total of all (UG+PG) students**	423 **Sum total of all (UG+PG) students**
No. of Faculty in the Department(F)	24 **F1**	26 **F2**	26 **F3**
Student Faculty Ratio(SFR)	17.25 **SFR1=S1/F1**	15.92 **SFR2=S2/F2**	16.27 **SFR3=S3/F3**
Average SFR	16.48 **SFR=(SFR1+SFR2+SFR3)/3**		
F=Total Number of Faculty Members in the Department (excluding first year faculty)			

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY(2024-25)	24	0
CAYm1(2023-24)	26	0
CAYm2(2022-23)	26	0

Average SFR for three assessment years : 16.48

Assessment SFR : 18

5.2 Faculty Cadre Proportion (25) Total Marks 25.00

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2024-25)	2.00	2.00	4.00	3.00	13.00	19.00
CAYm1(2023-24)	2.00	2.00	4.00	3.00	13.00	21.00
CAYm2(2022-23)	2.00	2.00	4.00	3.00	14.00	21.00
Average Numbers	2.00	2.00	4.00	3.00	13.33	20.33

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5 : 25.00

5.3 Faculty Qualification (25)

Total Marks 18.38

Institute Marks : 18.38

	X	Y	F	FQ = 2.5 x [(10X + 4Y) / F)]
2024-25(CAY)	9	15	20.00	18.75
2023-24(CAYm1)	8	18	20.00	19.00
2022-23(CAYm2)	7	19	21.00	17.38

Average Assessment : 18.38

5.4 Faculty Retention (25)

Total Marks 25.00

Institute Marks : 25.00

Description	2023-24	2024-25
No of Faculty Retained	26	24
Total No of Faculty	21	21
% of Faculty Retained	124	114

Average : 119.00

Assessment Marks : 25.00

5.5 Innovations by the Faculty in Teaching and Learning (20)

Total Marks 19.00

Institute Marks : 19.00

Table 5.5.1 List of the Innovative methods used by the faculties in the Department.

Sr.No	Name of Faculty	Innovative methods used	Goal	Significance
1	Prof. Dr.S.S.Chorage	Think Pair Share	• Encourage Students to solve the problems with discussion.	• A group of student discuss and find the solution for the given problem. • Problem Solving Skills are enhanced
2	Prof Dr V.R.Pawar	Flipped classroom	• Encouraging students to engage with content before class, allowing more time for application-based learning during class.	• Participatory Learning Skills are enhanced
3	All Faculty Members	Blended learning	• Integrate Online and Offline Learning: Combine the strengths of traditional classroom teaching with e-learning tools for a holistic approach. • A YouTube video explaining future need and existing scenario of the related topic is shared to the students.They find it satisfactory.	• Students show better understanding and retention of concepts due to repeated access to materials. • Keep students interested and active in learning.
4	All Faculty	Project based learning	• Enhancing students' technical, analytical, and problem-solving abilities by engaging them in real-world, interdisciplinary projects that integrate theoretical knowledge with practical application, thereby preparing them for industry, research, and innovation.	• Students gain hands-on experience in applying theoretical engineering concepts.

5	All faculty	Experiential learning	• Bridge the Gap between Theory and Practice: Provide real-world learning experiences to reinforce academic concepts.	• Students gain hands-on experience in applying theoretical knowledge.
6	All faculty	Collaborative learning	• To encourage students to work together on complex engineering problems, simulating real-world industry scenarios.	• Enhanced Teamwork and Leadership Skills: Students demonstrate ability to work effectively in teams, fulfilling NBAs graduate attributes
7	Dr. S.A. Itkarkar, Y. R. Dhumal, Dr. S.M. Jagdale	Peer to Peer Learning	• To allow students to reinforce and deepen their understanding by teaching their peers.	• Improved Academic Performance: Both student-teachers and learners gain better understanding through teaching and discussion. • Enhanced Confidence and Communication Skills: Students gain public speaking, articulation, and interpersonal communication skills.
8	Prof Dr S.S.Chorage	Gamification:	• Promote friendly competition that drives students to improve their academic performance.	• Higher Participation and Attendance: Gamified environments lead to increased student involvement and motivation. • Improve interaction, leadership, and collaboration.
9	Dr. S.L. Kore, Dr. K. R. Choudhari,	Student Chapter in Engineering	• Professional Development • Help students understand real-world engineering practices and encourage interaction with industry professionals through seminars, webinars, and guest lectures. .	• Offer students opportunities to lead and manage events, becoming more confident and organized. • Foster teamwork through committee roles, project groups, and cross-department initiatives.

10	V. P. Mulik	Industrial visit/training/Internship	• To bridge a gap between academia and industry.	• To learn the working culture of corporate field. • To know how the problems are solved by using modern tools & techniques.
11	Y.R.Dhumal	Role Play	• Enhance Student Engagement • Promote Teamwork and Collaboration • Develop Communication Skills	• Active participation aids long-term retention of knowledge compared to passive learning. • Improved Conceptual Understanding: • Learners become more enthusiastic and interested due to the interactive nature of role play.

In blended learning, YouTube links play a vital role as an innovative teaching-learning tool. They provide easy access to a vast repository of visual and interactive content that enhances conceptual understanding beyond traditional classroom instruction. YouTube videos cater to diverse learning styles by offering demonstrations, animations, and real-life applications, making complex topics more engaging and easier to comprehend.

Following is the list of YouTube Links used by the faculties of the department.

Table 5.5.2 List of YouTube Links used by the faculties of the department.

Sr. No	Name Of The faculty	Subject And Topic	YouTube Channel Link
1	Prof. Dr. Chorage Suvarna Sandip	FOC Optical Sources	https://www.youtube.com/watch?v=xlPI9neZ7fo (https://www.youtube.com/watch?v=xlPI9neZ7fo)
		FOC Numerical Aperture Calculation	https://www.youtube.com/watch?v=pTwSFMbYaAE (https://www.youtube.com/watch?v=pTwSFMbYaAE)
		FOC Submarine Optical Networks	•https://www.youtube.com/watch?v=d0gs497KApU&t=277s (https://www.youtube.com/watch?v=d0gs497KApU&t=277s)

2	Dr. Pawar Vijaya Rahul	Embedded System Design- Design Challenges	https://www.youtube.com/watch?v=m7-rKy42Nck (https://www.youtube.com/watch?v=m7-rKy42Nck)
		DFT - Fast Fourier Transform	https://www.youtube.com/watch?v=UrdtpEE4EXs (https://www.youtube.com/watch?v=UrdtpEE4EXs)

4	Dr. Itkarkar Savita Atul	Basic Electronics _ Diode As A Switch	https://youtu.be/kyP4O6l51q0?si=WFE5A6jg2sgNVeOD (https://youtu.be/kyP4O6l51q0?si=WFE5A6jg2sgNVeOD)
		Basic Electronics _ BJT As A Switch	https://youtu.be/l4osxnfj3pc?si=0KY6X8z0utHOcJ03 (https://youtu.be/l4osxnfj3pc?si=0KY6X8z0utHOcJ03)
		VLSI - CMOS As A Switch	https://youtu.be/8z091zvHpZk?si=8I8LC1G94yoWedsx (https://youtu.be/8z091zvHpZk?si=8I8LC1G94yoWedsx)
		Digital Electronics - Basic Logic Gates	https://youtu.be/v6n6Cx2Pug0?si=cL-POcvC0sJ46Rcn (https://youtu.be/v6n6Cx2Pug0?si=cL-POcvC0sJ46Rcn)
		Digital Electronics - Derived Logic Gates	https://youtu.be/2mJD1oAqblE?si=IBzzsXnejHlSPTMq (https://youtu.be/2mJD1oAqblE?si=IBzzsXnejHlSPTMq)
		Applications Of CMOS In Digital Circuits	https://youtu.be/xyGpkK_lWi4?si=TvUCQtu7d3II0KPO (https://youtu.be/xyGpkK_lWi4?si=TvUCQtu7d3II0KPO)
		Satellite Communication - Practical Set-Up	https://youtu.be/hMmXehdr4nI?si=CfDZQJ9WY5hXT-v5 (https://youtu.be/hMmXehdr4nI?si=CfDZQJ9WY5hXT-v5)
		Satellite Communication - Active Link Set-Up And Link Fail Operation	https://youtu.be/U5Ylmy4i-kA?si=K1x1XhSTjhdVNgv4 (https://youtu.be/U5Ylmy4i-kA?si=K1x1XhSTjhdVNgv4)
		Satellite Communication - Voice Transmission Using Satellite Link	https://youtu.be/KGWyNwts3rA?si=cZ8JzmIc27RXVA1u (https://youtu.be/KGWyNwts3rA?si=cZ8JzmIc27RXVA1u)
		Satellite Communication - Direct Communication Between Tx & Rx	https://youtu.be/SHkQDsZEmJs?si=wpT7zDJPIUEOEyo8 (https://youtu.be/SHkQDsZEmJs?si=wpT7zDJPIUEOEyo8)
		Satellite Communication - Audio Video Communication	https://youtu.be/C5WqmfoVGUg?si=7fA9cq1KpZshlk-2 (https://youtu.be/C5WqmfoVGUg?si=7fA9cq1KpZshlk-2)

		NSS Social Service - Community Connect	https://youtu.be/xLd5Ctr3TAs?si=ZiEr5h8wtvghe3_x (https://youtu.be/xLd5Ctr3TAs?si=ZiEr5h8wtvghe3_x)
5	Dr. Jagdale Sumati Manoj	VLSI Design And Technology- IC Fabrication Process	VLSI - Lecture 2b: The Manufacturing Process - Detailed Process Flow (https://www.youtube.com/watch?v=btFk7jkk5e4)
6	Mr. Kasar Mahavir Shantinath	Digital Communication Practical Experiment	https://youtube.com/@mahavirkasar3663?feature=shared (https://youtube.com/@mahavirkasar3663?feature=shared)
7	Mrs.Yawle Pranali Rajesh	Digital Circuit Practical Experiment,	https://youtu.be/KatUzcP-Dpo?si=LnXqW1nM6jZhQAX2 (https://youtu.be/KatUzcP-Dpo?si=LnXqW1nM6jZhQAX2) , https://youtu.be/n2whLmyvDCM?si=zpe-xMOng0bsKndI (https://youtu.be/n2whLmyvDCM?si=zpe-xMOng0bsKndI),
		Cloud Computing	https://www.youtube.com/watch?v=CZS0Hr_2voA (https://www.youtube.com/watch?v=CZS0Hr_2voA)
8	Mr. Mulik Vinod Prakash	Microcontroller- ADC Interfacing , PWM Generation, ,CCP Module Of PIC 18	http://www.youtube.com/@tejaswifoundation (http://www.youtube.com/@tejaswifoundation)
9	Mrs. Jain Roma Rakesh	Microcontroller Practical's	https://youtube.com/@romajain30?si=g9Dhb9POouwnI_pJ (https://youtube.com/@romajain30?si=g9Dhb9POouwnI_pJ)
10	Mrs. Sapkal Roshnadevi Jaising	Mechatronics Practical Experiments	https://www.youtube.com/@RoshnaSapkal (https://www.youtube.com/@RoshnaSapkal)
11	Mrs. S.M. Thorat	Digital Circuit Practical Experiment	https://youtu.be/WxE7Vf7daB0?si=WVBZLoMIc8Za9Ao5 (https://youtu.be/WxE7Vf7daB0?si=WVBZLoMIc8Za9Ao5)
12	Mr.Yadav Amol Pandurang	Digital Communication	(6) digital com - YouTube (https://www.youtube.com/@digitalcom9382)

- The innovative methods used by the faculties are uploaded on the institute website- https://coewpune.bharatividyapeeth.edu/

By making the work publically available through the institute website helps achieve the following objectives:

- To demonstrate faculty commitment to quality teaching.
- To promote transparency and replicability of good practices.
- To support student-centered learning environment.

- The work is available for peer review and critique.

This ensures that the work is open to peer review, critique, and validation, thereby promoting academic transparency, continuous improvement and sharing of best practices within and beyond the institution.

This fosters the following:

- Supports Quality Assurance – Feedback from peers encourages refinement of teaching practices and research quality.
- Encourages Knowledge Sharing – Publishing innovative efforts allows other educators and institutions to adopt and adapt successful practices.
- Promotes Professional Growth – Public review nurtures a culture of reflection, constructive critique, and continuous learning among faculty.

- The work must be reproducible and developed further by other scholars .

It is essential that the work produced by faculty is not only documented but also reproducible and extendable by other scholars. The faculty members of the Electronics and Telecommunication (E&TC) Department actively contribute to the Faculty Orientation Workshops organized by Savitribai Phule Pune University (SPPU). They not only deliver expert sessions on their respective subjects but also ensure that their teaching materials, presentations and reference resources are made publicly available to all faculty members across SPPU who are teaching the same subjects.

This initiative promotes:

- Standardization and quality in curriculum delivery
- Knowledge sharing among faculty across affiliated colleges
- Academic collaboration and continuous professional development

By making their resources accessible, E&TC faculty supports the university's vision of enhancing teaching-learning practices and maintaining academic excellence across the affiliated institutions.

5.6 Faculty as participants in Faculty development/training activities/STTPs (15) Total Marks 15.00

Institute Marks : 15.00

Name of the faculty	Max 5 Per Faculty		
	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
Prof.Dr.S.R.Patil	0.00	3.00	3.00
Prof.S.T,Khot	5.00	0.00	3.00
Prof.Dr.S.S.Chorage	5.00	3.00	5.00
Prof.Dr.V.R.Pawar	5.00	3.00	5.00
Prof.Dr.S.M.Rajbhoj	5.00	3.00	3.00
Prof.S.A.Itkakar	5.00	3.00	3.00
Prof.Dr.S.L.Kore	0.00	3.00	3.00
Prof.Dr.S.A.Dhole	0.00	3.00	3.00
Prof.Dr.S.M.Jagdale	5.00	3.00	5.00
Prof.K.R.Chaudhari	3.00	3.00	3.00
Prof.Dr.S.S.Salunkhe	5.00	3.00	3.00
Prof.S.M.Bhilegaonkar	0.00	3.00	3.00
Prof.M.S.Kasar	3.00	5.00	5.00
Prof.P.R.Yawale	3.00	3.00	3.00
Prof.V.S.Karambelar	0.00	3.00	3.00
Prof.V.P.Mulik	3.00	3.00	5.00
Prof.R.R.Jain	0.00	3.00	3.00
Prof.Y.R.Dhumal	0.00	3.00	3.00
Prof.R.J.Sapkal	0.00	0.00	3.00
Prof.S.V.Shelke	3.00	3.00	3.00
Prof.S.M.Thorat	3.00	3.00	3.00
Prof.V.V.Gaikwad	0.00	0.00	3.00

Prof.Dr.R.M.Shamalik	3.00	5.00	3.00
Prof.A.P.Yadav	3.00	3.00	5.00
Prof.S.M.Patil	5.00	3.00	0.00
Prof.A.B.Vitekar	3.00	3.00	5.00
Sum	67.00	73.00	89.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratioas per 5.1	20.70	20.70	21.15
Assessment [3*(Sum / 0.5RF)]	19.42	21.16	25.25

Average assessment over 3 years: 21.94

5.7 Research and Development (30) Total Marks 20.00

5.7.1 Academic Research (10)

Institute Marks : 9.00

A. Number of quality publications in refereed/ SCI Journals, Citations, Books/ Book Chapters etc.

Table 5.7.1.1 Number of quality publications in refereed/ SCI Journals

Sr. No.	Name of the Faculty	CAY (24-25)	CAYm1 (23-24)	CAYm2 (22-23)
1	Prof. Dr. S. R. Patil	1	-	1
2	Prof. S. T. Khot	-	-	-
3	Prof. Dr. S. S. Chorage	6	1	3
4	Dr. V. R. Pawar	3	5	5
5	Dr. S. M. Rajbhoj	-	2	-
6	Dr. S. A. Itkarkar	1	1	6
7	Dr. S. L. Kore	1	2	7
8	Dr. S. A. Dhole	1	1	5
9	Dr. S. M. Jagdale	1	1	2
10	Mrs. K. R. Chaudhari	-	3	1
11	Dr. S. S. Salunkhe	4	2	3
12	Dr. S. M. Bhilegaonkar	-	2	-
13	Mr. M. S. Kasar	1	2	2
14	Mrs. P. R. Yawle	1	1	4
15	Mrs. V. S. Karambelkar	-	-	-
16	Mr. V. P. Mulik	1	1	3
17	Mrs. R. R. Jain	-	3	4
18	Ms. Y. R. Dhumal	2	1	-
19	Mrs. R. J. Sapkal	1	-	4
20	Mrs. S. V. Shelke	1	1	4
21	Mr. A. B. Vitekar	1	1	5
22	Mrs. S. M. Thorat	1	1	4
23	Mrs. V. V. Gaikwad	-	-	-
24	Dr. R. M. Shamalik	1	-	2
25	Mr. A. P. Yadav	1	1	2
26	Ms. S.M.Patil	1	1	7

Table 5.7.1.2 Number of quality publications: Conference /Books/Book Chapters

Sr. No.	Name of the Faculty	CAY (24-25)	CAYm1 (23-24)	CAYm2 (22-23)
1	Prof. Dr. S. R. Patil	-	1(C)	-
2	Prof. Dr. S. S. Chorage	-	1(C)	1(C)
3	Dr. V. R. Pawar	1(B)	1(BC)4(C)	-
4	Dr. S. A. Itkarkar	-	-	1(C)
5	Dr. S. L. Kore	1(C)	2(BC)	1(C)
6	Dr. S. A. Dhole	1(B)	2(BC)1(C)	1(C)
7	Dr. S. M. Jagdale	-	-	1(C)
8	Mrs. K. R. Chaudhari	-	-	2(C)
9	Dr. S. S. Salunkhe	1(B)		-
10	Mr. V. P. Mulik	-	1(C)	-
11	Ms. Y. R. Dhumal	-	-	1(C)
12	Mrs. R. J. Sapkal	-	-	1(C)
13	Dr. R. M. Shamalik	-		1 (C)
14	Mr. A. P. Yadav	-	1(C)	-
15	Ms. S.M.Patil	1(C)	-	-

Table 5.7.1.3 Citation Details

Sr.No.	Name of the aculty	SCOPUS	GS
1	Prof. Dr. S. R. Patil	57	149
2	Prof. S. T. Khot	34	111
3	Prof. Dr. S. S. Chorage	94	145
4	Dr. V. R. Pawar	350	596
5	Dr. S. M. Rajbhoj	80	175
6	Dr. S. A. Itkarkar	6	7
7	Dr. S. L. Kore	15	54
8	Dr. S. A. Dhole	35	97
9	Dr. S. M. Jagdale	108	230
10	Mrs. K. R. Chaudhari	6	17
11	Dr. S. S. Salunkhe	6	54
12	Dr. S. M. Bhilegaonkar	14	19
13	Mr. M. S. Kasar	0	39

14	Mrs. P. R. Yawle	0	2
15	Mrs. V. S. Karambelkar	0	5
16	Mr. V. P. Mulik	3	12
17	Mrs. R. R. Jain	0	18
18	Ms. Y. R. Dhumal	0	56
19	Mrs. R. J. Sapkal	0	89
20	Mrs. S. V. Shelke	0	2
21	Mr. A. B. Vitekar	0	22
22	Mrs. S. M. Thorat	0	164
23	Mrs. V. V. Gaikwad	0	5
24	Dr. R. M. Shamalik	21	49
25	Mr. A. P. Yadav	0	19
26	Ms. S.M.Patil	0	8

5.7.1.4 Details of Journal Publications: A.Y.24-25

Sr. No.	Month and Year of Publication	Author Name	Title of the Journal/ Conference	Title of Publication	Volume/ Issue	ISSN No.
1	Feb, 2025	Prof. Dr.S.R. Patil	Journal Name:-MethodsX ISSN:-2215-0161 https://doi.org/10.1016/j.mex.2025.103207	Optimizing sEMG Gesture Recognition with Stacked Autoencoder Neural Network for Bionic Hand	Vol-14	2215-0161
2	July, 2024	Prof. Dr. S. S. Chorage	International Research Journal on Advanced Engineering and Management (IRJAEM)	Face Sketch Creation and Recognition	Vol-26 Issue-7	2584-2854
3	Oct, 2024	Prof. Dr.S.S. Chorage	Journal of Frontiers in Health Informatics	A Robust Autism Brain MRI Classification with GLCM Features and Machine Learning	Vol-13(2 71)	10.52783/fhi.9
4	Nov, 2024	Prof. Dr. S.S. Chorage	Advances in Nonlinear Vibrational Inequalities	Design, Simulation and Mathematical Modeling of Slotted Micro strip Patch Reconfigurable Antenna Array for Future Wireless Communication	Vol-27 Issue-2	10.52783/anvi.v27.1347

5	Aug, 2024	Prof. Dr.S.S. Chorage	Biomedical Engineering - Applications, Basis and Communications	Motor Imagery Signal Classification for Brain-Computer Interface Using RideNN with Holo-Entropy Features.	Vol-36 Issue-4	10.4015/S1016237224500194
6	Oct, 2024	Prof. Dr. S.S. Chorage	SSRG International Journal of Electronics and Communication Engineering	Multifunctional Frequency Reconfigurable Antenna Array for Future Wireless Communication	Vol-11 Issue-10	10.14445/23488549/IJECE-V11I10P117
7	Sept, 2024	Prof. Dr. S.S. Chorage	Nigerian Journal of Technological Development	Impact of Design Dimension Optimization on Capacitive Sensor Performance for Particulate Matter Detection and Measurement	Vol-21 Issue-3	10.4314/njtd.v21i3.2260
8	July, 2024	Dr. V.R. Pawar	SSRG, International Journal of Electrical and Electronics Engineering	Facial Expression Recognition for Low Resolution Images using Local and Global Features with SVM Classifier	Vol-10 Issue-7	2348-8379
9	July, 2024	Dr. V. R. Pawar	SSRG, International Journal of Electrical and Electronics Engineering	Deep Learning Based Depression Analysis using EEG and ECG Signals	Vol-10 Issue-7	2348-8379
10	July, 2024	Dr. V. R. Pawar	Journal of Integrated Science and Technology.	Machine learning based approach for lesion segmentation and severity level classification of diabetic retinopathy	Vol-11 Issue-4	2321-4635
11	July, 2024	Dr. S. L. Kore	International Research Journal on Advanced Engineering Hub(IRJAEH)	Offline Signature Verification System using CNN	Vol-2 Issue-7	2584-2137
12	Jan, 2025	Dr. S. M. Jagdale, Dr. S.A. Dhole, Dr. S.A. Itkarkar	Journal of Information Systems Engineering and Management	Security Key generation using RSA Algorithm	Vol-10 Issue -13(s)	2468-4376
13	June, 2024	Dr. S. S. Salunkhe	International Journal of Intelligent Systems and Applications in Engineering	Utilizing Generative Adversarial Networks for Enhancing Cyber security in Image Transmission	Vol-12, Issue-22s	2147-6799
14	July, 2024	Dr. S. S. Salunkhe	African Journal of Biological Sciences	Environmental Impact Assessment of Agricultural Practices and Biological Scaling Using Fuzzy Logic and Mathematical Modeling	Vol-6, Issue-13	2663-2187
15	Aug, 2024	Dr. S. S. Salunkhe	Journal of Pharmacology and Pharmaco therapeutics	ML-powered Internet of Medical Things (MLIoMT) Structure for Heart Disease Prediction	Vol-16, Issue-1	0976-5018

16	Aug, 2024	Dr. S. S. Salunkhe P. R. Yawle	African Journal of Biomedical Research	Iot Based Health Monitoring System for Human	Vol-27	1119-5096
17	Mar, 2025	A.P. Yadav, V.P.Mulik,M. S. Kasar, A.B.Vitekar, S. V. Shelke, S. M. Patil	Ecological Engineering and Environmental Technology	Carbon credits and environmental impact tracking: the role of block chain in supporting efficient and secure carbon credit markets	Vol-26 Issue-4	2719-7050
18	Feb, 2025	R.J.Sapkal Y. R. Dhumal	Indonesian Journal of Electrical Engineering and Computer Science	Automatic Handwriting Analysis and Personality Attribute discernment using self- attention multi resolution analysis .	Vol-38	2502-4752.
19	July, 2024	Y. R. Dhumal	The International Research Journal on Advanced Engineering Hub (IRJAEH)	Beyond Reflection: Smart Mirrors in The Internet of Things Era	Vol-3, Issue 5	2584-2137
20	April, 2025	Dr. R.M. Shamalik.S.M. Thorat	SSRG International Journal of Electronics and Communication Engineering	Dynamic Hand Gesture Detection using CNN-based Key point Estimation	Vol-12 Issue-4,	2348-8549
A.Y.2023-24						
1	June, 2023	Dr. S.L.Kore	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	Real time face mask detection system	Vol-23 Issue- 6	1006-8341
2	June, 2023	Dr. S.L.Kore	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	Fake currency detection using recurrent neural network	Vol-23 Issue-6	1006-8341
3	Aug, 2023	S. M. Bhilegaonkar	Electromagnetic Journal, Taylor & Francis	Dual Plane Monopulse Comparator Network System using Substrate Integrated Waveguide Hybrid Coupler	Vol-43 Issue-5	ISSN/ISBN: 0272-6343/1532-527X
4	June, 2023	Dr.S.M. Rajbhoj	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	Melonoma Skin cancer Detection using deep Learning	Vol-23 Issue-6	1006-8341

5	Jun, 2023	Prof. Dr. Chorage, S.S.	International journal of Engineering and Technology Innovation,	Design Optimization of a Capacitive Sensor for Mass Measurement of Nanometer-Sized Exhaust Carbon Particles	Vol-24	ISSN:2413-7146E-ISSN:2518-833X
6	Jun, 2023	Prof.M.S. Kasar	Journal For Basic Sciences	Modern Loan Approval Prediction System Based on Machine Learning	Vol-23, Issue-6	365-373
7	Aug, 2023	S.M. Bhilegaonkar	International Journal on Recent and Innovation Trends in Computing and Communication	Design and Performance Evaluation of Cavity-Backed SIW Antenna for Monopulse Applications	Vol-11 Issue-10	2321-8169
8	Sept, 2023	S.M.Patil	International Journal on Recent and Innovation Trends in Computing and Communication	Medical estimating PF Machine Leraning and IoT in Melancholy among Diabetic Patients	Vol-11 Issue-10	2321-8169
9	Feb, 2024	V.P.Mulik M.S. Kasar, A.P. Yadav, Dr.S.M. Rajbhoj, S.A. Itkarkar	Ecological Engineering and Environmental Technology	Enhancing Environmental Monitoring – A LoRa-Based Wireless Sensor Network Approach	Vol-25 Issue-4	2719-7050
10	Mar, 2024	S. M. Thorat, S.V. Shelke, .P.R. Yawle	Journal of Electrical System	Web-Based Application for Plant Leaf Disease Detection	Vol-20 Issue-1	1112-5209
11	Mar, 2024	Dr.S.A. Dhole, Dr.S.M. Jagdale, R.R. Jain	International Journal of Intelligent Systems and Applications in Engineering	Dorsal Vein Recognition System Using Texture Features	Vol-12 Issue-20	2147-6799
12	Mar, 2024	Dr.S. S. Salunkhe	NATURALISTA CAMPANO	Solar Mount Design Using High-Density Polyethylene	Vol-28 Issue-1	1827-7160
13	Jun, 2023	Dr.S. S. Salunkhe	Journal For Basic Sciences	Iot Based Child Tracking And Safety System	Vol-23 Issue-6	26-32
14	Jan, 2024	Dr.V.R. Pawar	Journal of Integrated Science and Technology.	Human Anomalous Activity detection with CNN-LSTM approach	Vol-12 Issue-1	2321-4635
15	Jun, 2023	Dr.V.R. Pawar	International Journal of Engineering	Real Time Emotion Recognition with AD8232 ECG Sensor for Classwise Performance Evaluation of Machine Learning Methods	Vol-36 Issue-6	24237167

16	Oct. 2023	Dr.V.R. Pawar	Journal of Integrated Science and Technology.	Role of visual examination and microstructure examination in development of Al-Si Alloy Foam	Vol-12 Issue-1	2321-4635
17	Jul, 2023	Prof. Dr.V.R. Pawar	SSRG, International Journal of Electrical and Electronics Engineering	Facial Expression Recognition for Low Resolution Images using Local and Global Features with SVM Classifier	Vol-10 Issue-7	2348-8379
18	Jul, 2023	Prof. Dr.V.R. Pawar	SSRG, International Journal of Electrical and Electronics Engineering	Deep Learning Based Depression Analysis using EEG and ECG Signals	Vol-10 Issue-7	2348-8379
19	Jul, 2023	Prof. Dr.V.R. Pawar	Journal of Integrated Science and Technology.	Machine learning based approach for lesion segmentation and severity level classification of diabetic retinopathy	Vol-10 Issue-7	2321-4635
20	Jul, 2023	R.R.Jain	Journal For Basic Sciences	Ultrasonic Vibrator And Audio Glove Third Eye For Blind Peoples	Vol-23 Issue-7	1006-8341
21	June, 2023	R.R.Jain	ADALYA JOURNAL	Smart Glasses For The Visually Impaired People	Vol-12, Issue-6	1301-2746
22	June, 2023	Y. R. Dhumal	Journal For Basic Sciences	Personality trait detection using deep learning based on handwriting	Vol-23 Issue-6	1006-8341
23	April, 2024	K.R. Chaudhari	Journal of Pharmacology and Pharmaco-therapeutics	Measurement of Nuchal Translucency Thickness in First Trimester Ultrasound Foetal Images Using Markov Random Field	Vol-15 Issue-1	0976-5018
24	April, 2024	K. R. Chaudhari	Journal of Applied Pharmaceutical Research	Clinical investigations to calculate nuchal translucency using f-lnet	Vol-12 Issue-1	2348-0335
25	Mar, 2024	K.R. Chaudhari	Taru Publications	Low Rank Sparse Coefficient Based Nuchal Translucency Image Denoising	Vol-45 Issue-2	0252-2667
A.Y. 2022-23						
Sr. No.	**Month and Year of Publication**	**Author Name**	**Title of the Journal/ Conference**	**Title of Publication**	**Volume/ Issue**	**ISSN No.**
1	Sept, 2022	Prof. Dr. S.R. Patil	Multimedia Tools and Applications	Detection and Localization of Abnormalies in Video Surveillance using Novel Optimization based Deep Convolutional Neural Network	Vol-82	1380-7501

2	May, 2023	Prof. Dr. S. S. Chorage	Journal for Basic Sciences	Design and Implement Smart Traffic Control System using Image Processing	Vol-23 Issue-5	2582-5208
3	Sept, 2022	Prof. Dr. S. S. Chorage	International Journal of Image and Graphics	Optimized Neural Network with Refined Features for Categorization of Motor Imaginary Signals	Vol-23 Issue-6	0219-4678
4	April, 2023	Prof. Dr. S. S. Chorage	International Research Journal of Modernization in Engineering Technology and Science	GSM Based Wireless E-Notice Board	Vol-5 Issue-3	2582-5208
5	June, 2023	Dr. V. R. Pawar	International Journal of Engineering TRANSACTIONS C: Aspects	Real Time Emotion Recognition with AD8232 ECG Sensor for Classwise Performance Evaluation of Machine Learning Method	Vol-36 Issue-6	24237167
6	April, 2023	Dr. V. R. Pawar	Journal of Electrical Systems and Information Technology	From face detection to emotion recognition on the framework of Raspberry pi and galvanic skin response sensor for visual and physiological biosignals	Vol-10 Issue-24	2314-7172
7	May, 2023	Dr. V. R. Pawar	Journalof Basic Sciences	Texture Based Rnfl Atrophy Detection In Retinal Fundus Images	Vol-23 Issue-5	1006-8341
8	June, 2023	Dr. V. R. Pawar	Journalof Basic Sciences	Arduino Uno Based Automatic Power Theft Detection	Vol-23 Issue-6	1006-8341
9	July, 2022	Dr. V. R. Pawar	SSRG International Journal of Electronics and Communication Engineering	Deep Learning Based Depression Analysis using EEG and ECG Signals	Vol-10 Issue-7	23488549
10	March, 2023	Dr. S. M. Rajbhoj, P V. P. Mulik, A. B. Vitekar	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	Zigbee-based Detection of Person with High Temperature and Patient Monitoring	Vol-23 Issue-3	1006-8341
11	March, 2023	Dr. S. M. Rajbhoj, V. P. Mulik, A. B. Vitekar	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	Intelligent Framework to Detect Diabetic Mellitus (DM) Using Supervised Learning	Vol -23	1006-8341
12	Sept, 2022	S. A. Itkarkar	Journal for Basic Science	IOT Based Air and Sound Pollution Monitoring and Rainfall Detection System	Vol.23 Issue-6	1006-8341
13	Sept, 2022	S. A. Itkarkar	IJ of Computer Engineering and Applications	IOT based walking stick for Visually Impaired usin Raspberry Pi	Vol-17 , Isssue-3	2321-3469

14	Sept, 2022	Dr.S.L. Kore, S. A. Itkarkar, R. R. Jain, R. J. Sapkal, S. M. Patil	International Journal of Innovative Research in Technology	IoT Based Automated Vehicular System for Human Safety	Vol-9 Issue-4	2349-6002
15	Sept, 2022	Dr.S.L. Kore, S. A. Itkarkar, R. R. Jain, R. J. Sapkal, S. M. Patil	International Journal of Engineering Research and Applications	Floor Cleaning Smart Robot	Vol-12, Issue-9	2248-9622
16	Sept, 2022	Dr.S.L.Kore, S. A. Itkarkar, R. R. Jain, R. J. Sapkal, S. M. Patil	Int. Journal of Engineering Research and Application(JEREA),	Detection and classification of brain tumor using machine learning(PP.13-17)	Vol-12, Issue-9	2248-9622(online)
17	Sept, 2022	Dr.S.L.Kore, S. A. Itkarkar, R. R. Jain, R. J. Sapkal, S. M. Patil	International Journal of multidisciplinary educational research(IJMER)	Recognition using palm vein detection	Vol-11, Issue-9(1)	2277-7881
18	Feb, 2023	Dr. S.L. Kore	TIJER- International research Journal	A survey on face mask detection system	Vol-10, Issue-2	2349-9249
19	Sept, 2022	Dr.S.L. Kore, S.M. Patil	International Journal of Engineering Inventions (IJEI)	Temperature based automatic door control systems	Vol-11, Issue-9	2278-7461(online
20	Aug, 2022	Dr. S.L. Kore, S.M. Patil	International Journal of Innovative Research in Technology	Library Automation System using RFID	Vol-9, Issue-9	2349-6002
21	May, 2023	Dr. S.A. Dhole	Journal for Basic Science	Attendance System Design Using Android based Face recognition	Vol-23, Issue-5	1006-8341
22	May, 2023	Dr. S.A. Dhole	Journal for Basic Science	Sign Boards Signal Detection and Speed Control Vehicle using image processing with Rasberry PI	Vol.23 , Issue 5	1006-8341
23	Jan, 2023	Dr. S.A. Dhole, Prof. Dr. S. M. Jagdale	SSRG International Journal of Electrical and Electronics Engineering.	Multimodal Biometric Identification System using Random Selection of Biometrics.	Vol-10, Issue-2	ISSN:2348-8379
24	May, 2023	Dr. S. M. Jagdale	Journal of Basic Sciences	Student Marks Display using Fingerprint Module with Authorize Search in Cloud Computing	Vol.23, Issue-5	1006-8341
25	May, 2023	K. R. Chaudhari	Journal For Basic Sciences	Kidney stone prediction using neural network	Vol.23, Issue-5	1832-1842

26	July, 2022	Dr. S.S. Salunkhe	Advanced Engineering Science	Deep learning based hybrid-mppt for maximum power tracking under partial condition	Vol.54	ISSN 2096-3246
27	May, 2023	Dr. S.S. Salunkhe	Journal for Basic Science	Iot Based Child Tracking And Safety System	Vol-23 , Isssue-6	1006-8341
28	Aug, 2022	M. S. Kasar, P. R. Yawale, A. B. Vitekar, S. M. Thorat, S. V. Shelke	International Journal of Innovative Research in Technology	Traffic monitoring system using image processing	Vol-9 ,Issue-3	2349-6002
29	Sept, 2022	M. S. Kasar, P. R. Yawale, A. B. Vitekar, S. M. Thorat, S. V. Shelke	International Journal of Engineering Research and Applications	Arduino Based Covid'19 Disinfection Box	Vol-12, Issue -9	2248-9622
30	May, 2023	M. S. Kasar, S. V. Shelke	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	A System for early Flood Detection and Alarming using Machine Learning Techniques	Vol-23 ,Issue-5	1006-8341
31	July, 2022	P. R. Yawale	Advanced Engineering Science	Deep learning based hybrid-mppt for maximum power tracking under partial condition	Vol-54	2096-3246
32	June, 2023	P. R. Yawale	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	Real time eye blinking for password authentication	Vol-23, Issue -5	1006-8341
33	April, 2023	V.P. Mulik	BioGecko	A Comparative analysis on Fuzzy systems-based Management Models	Vol-12, Issue -2	2230-5807
34	April, 2023	A.P. Yadav V.P. Mulik	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	Overview of WiMAX	Vol-23, Issue-4	1006-8341
35	May, 2023	S.V. Shelke, S. M. Thorat	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	ISM Band Regtangular Microstrip Patch Antenna for 2.4GHz	Vol-23, Issue -5	1006-8341
36	May, 2023	S. M. Thorat	Journal For Basic Sciences/Fangzhi Gaoxiao Jichukexue Xuebao	XY plotter robo using MXY Board	Vol-23, Issue -5	1006-8341
37	Nov, 2022	R.M. Shamalik	Saadhana	DeepHands: Dynamic hand gesture detection with depth estimation and 3D reconstruction from monocular RGB data	Vol-47, Issue-4	2562499
38	Nov, 2022	R.M. Shamalik	Multimedia Tools and Applications,	Effective and efficient approach for gesture detection in video through monocular RGB frames	Vol-82	13807501

39	Nov, 2022	A.P. Yadav	The Ciência & Engenharia -Science & Engineering Journal	A Review on Unmanned Ground Vehicle for Surveillance and Security	Vol-10, Issue-1	0103-944X
40	Sept, 2022	Sonal Mohanrao Patil	Neuro Quantology	NCPR Reducing Path-Discovery overload in Mobile Adhoc Networks (MANET's)	Vol-20, Issue-11	1303-5150

Table 5.7.1.5 Details of Conference, Book , Book Chapter Publications

A.Y.2024-25						
Sr. no.	**Month and Year of Publication**	**Author Name**	**Title of Journal/Conference**	**Title of Publication**	**Volume/ Issue**	**ISBN No.**
1	July, 2024	S. L. Kore, S. M. Patil	ICRTSTM	Offline Signature verification system using CNN	-	978-81-97182-8-1
2	July, 2024 (2024-25)	Dr. V.R. Pawar	International Conference on Recent Trends in Science, Technology and Management-2024	Book Title: Abstract book Proceedings of International Conference on Recent Trends in Science, Technology and Management(ICRTSTM)-2024- Organized by Bharati Vidyapeeths College of Engineering for Women, Pune, Maharashtra, India		978-81-971821-8-1
3	2025	Dr. S.A. Dhole	CRC press-Talors and Francies group	Multimodal biometric identification system: Case study of real-time implementation	BOOK 1-142	978-1032660585
4	2025	Dr. S. S. Salunkhe	Scientific international publishing house	Iotand its applications a hands-on approach	BOOK	978-93-6674-348-6
A.Y. 2023-24						
Sr. no.	**Month and Year of Publication**	**Author Name**	**Title of Journal/Conference**	**Title of Publication**	**Volume/ Issue**	**ISBN No.**

1	March, 2025	Prof. Dr. S. S. Chorage	2024 International Conference on Emerging Smart Computing and Informatics (ESCI)	Investigation of methods to improve the performance of frequency reconfigurable antenna for future wireless communication	-	DOI: 10.1109/ESCI59607.2024.10497328
2	Aug, 2023	Dr. Sharada Kore	Springer eBook Series: lecture notes in networks and systems 720, IOT With Smart Systems	The current state of Art-Indian Unleavened Flat Bread Cooking	Vol 2	ISBN 978-981-99-3761-5 (eBook) ISSN 2367-3389 (electronic)
3	July, 2023	Dr. Sharada Kore	Springer eBook Series: Proceedings of third International Conference On Computational Intelligence (ICCI22), part of book series Algorithms for Intelligent Systems.	Disease Detection On Grapes: A Review	Vol 2	978-981-99-2854-5
4	Aug, 2023	Prof. Vinod Mulik	International Conference on Computing, Communication, Control and Automation (PCCOE)	Wireless Visual Sensor Network Application in Monitoringand Detection of Agricultural crop Disease: Review	-	979-8-3503-0426-8/23
5	May, 2024	Prof. Dr. V.R. Pawar	Book Title : Affective Computing Applications using Artificial Intelligence in Healthcare: Methods, approaches and challenges in system design	Converging emotion recognition with AI and IoT (Book Chapter), The prestigious, Institute of Engineers, U.K.	-	978-93-80544-51-10
6	May, 2024	Dr. V.R. Pawar	Proceedings of the 18th INDIAcom; 2024 11th International Conference on Computing for Sustainable Global Development, INDIACom 2024, 2024, pp. 904–910	Anomalous Human Action Recognition with Deep Learning Technique	-	978-93-80544-51-10

7	May, 2024	Dr. V. R. Pawar	Proceedings of the 18th INDIAcom; 2024 11th International Conference on Computing for Sustainable Global Development, INDIACom 2024, 2024, pp. 904–910	A Systematic Approach to Detect Insider Attacks and Exploitation in Cyber Physical System	-	978-93-80544-51-10
8	May, 2024	Dr. V. R. Pawar	Proceedings of the 18th INDIA com; 2024 11th International Conference on Computing for Sustainable Global Development, INDIA Com 2024, 2024, pp. 904–910	Deep Learning-based Automated System for Identification and Gradation of Severity Levels in Diabetic Retinopathy	-	979-8-3503-0661-3
9	June, 2024	Dr. V. R. Pawar	2024 International Conference on Emerging Smart Computing and Informatics, ESCI 2024, 2024	Unusual Human Behavior Analysis Using the Deep Learning	-	DOI: 10.1109/ESCI59607.2024.10497328
10	Dec, 2023	Dr. S. A. Dhole	Machine Learning Applications: From Computer Vision to Robotics	Comparative Study for Applicability of Color Histograms for CBIR Used for Crop Leaf Disease Detection	Edition-1	9781394173327
11	April, 2024	Dr. S. A. Dhole	Applying Machine Learning Techniques to Bioinformatics: Few-Shot and Zero-Shot Methods	Advancing zero-shot learning with fully connected weighted bipartite graphs in machine learning	-	9.79837E+12
12	June, 2023	Dr. S. A. Dhole	Detection of Lung Cancer from CT Scan Images using GLCM Features	14th International Conference on Advances in Computing, Control, and Telecommunication Technologies, ACT 2023	-	9781713877141
13	April 2024	Amol P Yadav Dr S.R.Patil	2024 International conference on emerging smart computing and informatics(ESCI)	Exploring Hand Gesture Recognition Techniques for Enhanced Control of Bionic hand	-	979-8-3503-0661-3
A.Y. 2022-23						

1	Aug, 2022	Dr. S. S. Chorage	IEEE 2nd Asian Conference on Innovation in Technology (ASAINCON 2022)	Spectrally Efficient Multiple Input Multiple Output (MIMO) Non-Orthogonal Multiple Access (NOMA) technique for future wireless communication	--	978-166546851-0
2	Nov, 2022	Dr.S.L.Kore	International conf. of multidisciplinary Research (ICMR'22). Organized by Sharnbasava University, Kalaburgi,Krnataka, Inida in association with IETESub-centre,Kalaburagi, and sponsored byISTE, New Delhi and IEEE Women in Engineering.	Disease detection on pomegranate: a review	--	--
3	Nov, 2022	Dr.S. A. Dhole	International Conference on Recent trends in Machine Learning and image Processing	detection of lung cancer from CT scan image using GLCM features	--	--
4	Nov, 2022	Dr. S. M. Jagdale	International Conf. on Applied Data Science and Smart Systems-22	Deep learning Method for Early Alzheimer Disease Diagnosis Based on EEG Signal	--	9781032748146
5	Oct, 2022	R. M. Shamalik	Proceedings of 4th International Conference on Cybernetics, Cognition and Machine Learning Applications, ICCCMLA 2022	Real Time Gesture Detection using Convolutional Neural Network	--	978-93-80544-51-10

6	May, 2023	K. R. Choudhary, S. A. Itkarkar, Y. R. Dhumal, R. J. Sapkal	Proceedings of the 17th INDIA Com; 2023 10th International Conference on Computing for Sustainable Global Development, INDIACom 2023, 2023, pp. 348–354	Automatic Handwriting Analysis and Personality Trait Detection using Multi-Task Learning Technique	-	978-93-80544-47-2
7	May, 2023	K. R. Choudhary, Y. R. Dhumal,	Proceedings of the 17th INDIA Com; 2023 10th International Conference on Computing for Sustainable Global Development, INDIA Com 2023, 2023, pp. 311–315	The Automated Screening of Ultrasound Images for Nuchal Translucency using Auxiliary U-Net for Semantic Segmentation	-	978-93-80544-47-2

Table 5.7.1.6 Details of Patent Record:

A.Y. 2024-25						
Sr. No.	**Name of the Faculty**	**Title**	**Application No.**	**Filed on date**	**Published on date**	**Granted on date**
1	Dr. S. L. Kore	A Novel Multiclass Multistage Writer Verification Using Hybrid Approach in Spatial and Transform Domain	201721016687	12/05/2017	26/05/2017	562076 07/03/2025
2	P. R. Yawle	Scanner for data processing	6410798	13/12/2024	--	6410798 15/1/2025
3	Dr. S.A. Itkarkar	AI-Powered Predictive Analytics System for Early Detection of Alzheimer Disease	6405786	19/11/2024	02/12/2024	6405786 02/12/2024
4	Dr. S.M. Jagdale, Dr. S.A. Itkarkar, Dr. S.A. Dhole	Solar-Powered Medicinal Plant Extractor	6417339	15/01/2025	20/01/2025	6417339 20/01/2025
5	Dr. S.M. Jagdale	Vehicle to everything (v2x) communication using IOT	202421046505	17/06/2024	23/08/2024	--

6	Dr. R.M. Shamalik	DeFaB: A System for Gesture Detection using Foreground Background Separation with Depth Estimation	202121049257	28/10/2021	24/04//2022	511565 16/02/2024
A.Y. 2023-24						
1	Dr. S.L.Kore	Model for improving the taste and quality of chapatti	202421037725	14/05/ 2024	14/6/2024	--
2	Dr. S.S. Chorage	Sensing and simulation system and method for exhaust air particulates exhausting from a device	202221027698	13/05/2022	29/7/2022	483975 18/12/2023
3	Dr. V.R. Pawar	System, Method and Device for Non-invasively Identifying Chronic Kidney Diseases From Saliva of a User	2023/04407	29/11/2023	29/11/2023	2023/04407
4	Dr. S. A. Dhole	Smart biosensor device to detect lung cancer	6322973 (Registration of Design)	31/10/2023	9/11/2023	63229739/11/2023
A.Y. 2022-23						
1	V.P. Mulik	An FPGA based Automated Crop Control System and a Method Thereof	3521/MUM/2011	14/12/2011	23/12/2013	427914 31/03/2023
2	Dr. S.A. Dhole	Smart Desk to Identify Learning Disabilities.	380135-001 (Registration of Design)	25/2/2023	23/5/2023	380135-001 23/5/2023
3	M. S. Kasar	Artificial Intelligence Techniques and Big data Analytics based Digital Document Fraud Detection System using IOT Enabled machine Learning Things in Finance and Economic Industry	202241067467	23/11/2022	2/12/2022	--
4	M.S. Kasar	A System for Evaluating Impact of Integration of banks and Crypto-currency in a Demonetized world.	202211067774	24/11/2022	2/12/2022	--

5	A.P. Yadav	Artificial Intelligence Techniques and Big data Analytics based Digital Document Fraud Detection System using IOT Enabled machine Learning Things in Finance and Economic Industry	202241067467	23/11/2022	2/12/2022	--
6	A.P. Yadav	Artificial Intelligence Integrated Human Paradigm through Organizational Agility and Sustainable Performance.	202241047392	19/8/2022	16/9/2022	--
7	Prof. V. P. Mulik	The Heart Disease Prediction using Technique of Classification in ML using the Concept of data Mining	202211073508	19/12/2022	30/12/2022	--
8	V.P. Mulik	A System for Evaluating Impact of Integration of banks and Crypto-currency in a Demonetized world.	202211067774	24/11/2022	2/12/2022	--
Details of Copyright Publications						
1	Dr. V.R. Pawar	Machine Learning based Framework for Analysis and detection of Dipression using EEG and ECG signals	L-124935/2023	12/06/2023 Copyright		
2	Dr. V.R. Pawar	Automatic Diabetic Retinopathy Detection and Classification using Machine Learning and texture Features	L-153506/2024	11/09/2024 Copyright		
3	Dr. V. R. Pawar, A.B. Vitekar	Implementation and Analysis of Security Box for Insider Attacks for Cyber Physical Systems.	L-123088/2023	02/06/2023 Copyright		
4	Dr. S.M. Jagdale	FPGA Implementation of optimized RSA Algorithm for Security Key Generation	L-151937/2024	25/05/2024		Copyright
5	Dr. S. A. Dhole	Soybean Healthy Leaf Image Database	18643/2022-CO/A	06/09/2022 Copyright		

Table 5.7.1.7 Summary

Patents	**18**
Copyrights	**05**
Total	**23**

B. Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute

Table 5.7.1.8 Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute

Sr.No.	Name of The Faculty	Name of the Research Scholar	Title of The Thesis	Year of Registration	Registered University /Institute	Status
1	Prof.Dr.S.R. Patil	Rane Charushila Vijay	Performance Evaluation and Optimization of Data Embeddable Texture Synthesis	4/5/2016	SPPU-RSCOE PUNE	Ph.D.Degree Awarded (15/2/2022)
2		Gujarathi priyanka Vishwas	Speech Synthesis Algorithm for Gujrati Language to Improve Naturalness	4/5/2016	SPPU-RSCOE PUNE	Ph.D.Degree Awarded (14/12/2021)
3		Baliram Gayal	Abnormal Event of Detection and Localization for Smart Surveilliance	1/6/2018	SPPU-RSCOE PUNE	Ph.D.Degree Awarded (19/4/2024)
4		Ajit B. Patil	An Intelligent Approach for Optomization of Energy management in Smart Microgrid.	1/6/2018	SPPU-RSCOE PUNE	Pursuing
5		Dhanwantari Thenge	An Intelligent video survillance system	12/8/2022	SPPU-AISSMIOIT-PUNE	Pursuing
6		Amol P. Yadav	An Intelligent Bionic hand	19/4/2022	SPPU-AISSMIOIT-PUNE	Pursuing

1		Manisha Dhondiram Mali	Efficient Cluster based MIMO NOMA network for improving Spectral efficiency	11/7/2018	AISSMSIOIT	Pursuing
2		Mamata Vishvanath Lohar	Automatic Classification of Autism Spectrum Disorder from Brain Images using Image Fusion and Machine Learning Techniques	8/8/2018	AISSMSIOIT	Pursuing
3		Deo Sunita Ramchandra	FPGA Based Adaptive Computational Algorithm For Efficient Big Data Analysis Using MCMC Methods	2/9/2018	AISSMSIOIT	Pursuing
4		Megha Mahesh Wankhade	Interpretation of Electroencephalography signals for efficient classification of Motor tasks in Brain Computer Interface.	8/8/2018	AISSMSIOIT	Ph.D.Degree Awarded (5/1/2024)
5		Vaishali Sanjay Kulkarni	Sensor Development for Diesel Particulate Filter Clogging detection using post treatment parametrs	8/18/2018	AISSMSIOIT	Ph.D.Degree Awarded (26/7/2024)
6		Vinaya Yogesh Deshmukh	Parametric analysis of multifunctional reconfigurable antenna array for future wireless communication	3/7/2018	AISSMSIOIT	Pursuing
7	Prof. Dr. S.S.Chorage	Ms Vidya Vijay Deshmukh	Investigation of Microwave Sensor for Non invasive Determination of Blood Glucose Concentration	7/3/2013	AISSMSIOIT	Ph.D.Degree Awarded (17/3/2023)

1	Prof. Dr Vijaya Rahul Pawar	Varsha Kiran Patil	Developement of Emotion Recognition Techniques using Facial expression method and sensor based method	7/7/2019	AISSMSIOIT	Ph.D.Degree Awarded (2/7/2025)
2		Sanchita Madhukar Pange	Machine Learning based Framework for Analysis and Detection of Depressionusing EEG and ECG signals	7/7/2019	AISSMSIOIT	Pursuing
3		Atul B. Vitekar	Implementation & Analysis of Security Box for Insider Attacks on Cyber-PhysicalSystems.	4/5/2022	AISSMSIOIT	Pursuing
4		Priti Deshmukh	Automatic Diabetic RetinopathyDetection &Classification Using Machine Learning and Texture Features	15/04/2022	AISSMSIOIT	Ph.D.Degree Awarded (25/4/2025)
5		Megha Pallewar	Anomalous Activity Detection Using Distributed Deep Learning Model for Intelligent Video Surveillance System	15/04/2022	AISSMSIOIT	Ph.D.Degree Awarded (24/4/2025)
1	Prof. Dr. S.L.Kore	Kale Sharada Dattatray	To Design and assess artificial intelligent algorithm for improving the taste and quality of chapatti for any type of wheat.	14/02/2022	VIIT	Pursuing
2		Priya Sandeep Deshpande		14/02/2022	VIIT	Pursuing

Table 5.7.1.9 Ph.D. Awarded

Name of the Faculty	Designation	Title of Thesis	Ph.D. Awarding University
Dr. S. A. Itkarkar	Associate Professor	Evaluation of the current wavelength converter design framework and improve its capabilities for use in WDM network deployment.	Shridhar University, Pilani Rajsthan. 2024-25
Dr. R.M. Shamlik	Assistant Professor	Design and Development of Real Time System for Human Gesture Detection with Depth Estimation	SPPU, Pune 2024-25

Dr. S.M. Bhilegaonkar	Assistant Professor	Performance Evaluation of Compact High Efficiency Circularly Polarized Cavity Backed Substrate integrated waveguide Monopole tracking Antenna	SPPU, Pune 2024-25
Dr. S. S. Salunkhe	Assistant Professor	Content based image Retrieval: A Hybrid Model approach	Bharati Vidyapeeth (deemed to be University), Pune 2022-23

5.7.2 Sponsored Research (5)

Institute Marks : 2.00

2023-24 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Nil	0	0	0.00
			Total Amount(X): 0.00

2022-23 (CAYm2)

Project Title	Duration	Funding Agency	Amount
Nil	0	0	0.00
			Total Amount(Y): 0.00

2021-22 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Performance Evaluation of Compact High Efficiency Circularly Polarized Cavity Backed Substrate integrated waveguide Monopole Tracking Antenna	3 Yrs.	AICTE	973500.00
			Total Amount(Z): 973500.00

Cumulative Amount(X + Y + Z) = 973500.00

5.7.3 Development Activities (10)

Institute Marks : 9.00

A. **Product Development**

As a part of our commitment to product development, we actively encourage innovation and practical application through mini projects and final year projects. These projects serve as a platform for students to apply their theoretical knowledge to real-world challenges, fostering creativity, problem-solving, and technical proficiency. The attached list of mini and final year projects reflect a diverse range of topics, each aiming to address specific industrial or societal needs. This hands-on approach to learning not only enhances students technical skills but also prepares them for professional roles in research, development, and entrepreneurship.

Table 5.7.3.1 Details of Product:

Product Name-1	Accident-Avoidance System
College Name	Bharati Vidyapeeth's College of Engineering for Women, Pune 43.
Team & Department Name	Prof. Dr. Sandip R. Patil (Contributor), Student Team – Snehal Siddanath Shinde, Nikita Shivaji Wadghule, Ananya Anand Wagh
Product Specification	**Hardware:** • **Microcontroller:** ESP32 / Raspberry Pi / Jetson Nano • **Alcohol Sensor:** MQ-3 (analog output, high sensitivity) • **Drowsiness Sensor:** IR Eye Blink or Camera with AI detection • **Crash/Tilt Sensor:** MPU6050 (Accelerometer + Gyroscope) • **GPS Module:** Neo-6M or u-blox M8 for real-time location • **GSM Module:** SIM800L / SIM7600 (SMS Alerting) • **Vibration Sensor:** SW-420 (shock/crash detection) • **Display:** 0.96" OLED or 2.8" TFT • **Audio Alert:** Buzzer or mini speaker • **Power Supply:** 5V via car charger or battery pack • **Relay Module (optional):** For ignition control on alcohol detection • **Enclosure:** Compact, dashboard-mounted ABS/3D printed case **Software:** • Real-time alcohol & drowsiness detection logic • Crash & tilt detection thresholds • Auto-SMS with GPS coordinates on event trigger • Local display and audio alerts • Optional: cloud sync, mobile app, WhatsApp alerts
Product Application & Deployment	**Applications:** • Fits in **any car** – personal, taxi, bus, truck • Adds **Volvo/Tesla-like safety** to budget vehicles • Ideal for **fleet tracking, women's safety, driver monitoring** • Useful in **schools, driving institutes, and public transport** **Deployment:** • **Plug-and-play** – no car modifications • Tested on **dashboard or mirror of CAR**

Product Package Includes	**Smart Control Unit** (with all sensors integrated) **IR Camera / Eye Blink Sensor** (for drowsiness detection) **Alcohol Sensor (MQ-3 Module)** **Crash & Tilt Detection Module (MPU6050 + Vibration Sensor)** **GSM + GPS Module** (for SOS alerts with live location) **OLED / TFT Display** (for driver alerts) **Speaker / Buzzer** (for audio warnings) **Relay Module** (optional, for ignition cut-off) **Wiring Kit + Power Cable** (for USB/Car charger) **Compact Enclosure Box** (dashboard mountable) **User Manual + Setup Guide** **QR Code for Mobile App / Dashboard Access** *(if app connected)*
Product Number	6410798
Product Name-2	Scanner for data processing
College Name	Bharati Vidyapeeth's College of Engineering for Women, Pune 43.
Team & Department Name	Prof. P.R. Yawle (Contributor), Dr. R.B. Ghongade
Product Specification	**Hardware:** • LED • NIR LED wavelengths of 850 nm. • TP4056 • MT3608 • LM317 • 2000mAh Li-ion Rechargeable Laptop Battery
Product Application & Deployment	**Applications:** • Used to capture fingertip videos for data collection. • The system helps to analyzes variations in light intensity reflected from the fingertip. • Produces clearest and most accurate PPG (Photoplethysmography) signal. **Deployment:** • NIR LEDs emit light at specific wavelengths suitable for detecting blood volume changes in living tissues. • An external NIR light source is used to provide uniform and sufficient illumination over the finger. • Reflected light intensity, varies with changes in blood volume during systolic and diastolic cycles.

Product Package Includes	• LED • NIR LED wavelengths of 850 nm. • TP4056 • MT3608 • LM317 • 2000mAh Li-ion Rechargeable Laptop Battery

- As part of the academic curriculum, final year engineering students undertake major projects that involve the application of theoretical knowledge to real-world problems , these projects are evaluated not only on academic merit but also on their potential for **product development and innovation**.
- A significant number of final-year projects in the department are **hardware-based**, incorporating components such as sensors, microcontrollers, embedded systems, mechanical structures, and electrical circuits.

Outcome and Impact

- Several hardware projects have been recognized at intercollegiate and national competitions. Some can be further developed into **entrepreneurial ventures** or **research prototypes**. The initiative promotes **practical problem-solving skills**, **creativity**, and **product-oriented thinking** among students.

Table 5.7.3.2 Final Year Project List

A.Y. 2024-25			
Sr. No.	**Names of the Students**	**Title of the Project**	**Name of the Guide**
1	Neha Bhosale Shreya Bodake Rutuja Bande	Cattle Health Monitoring System Using Smart Shelter	Prof. R.J.Sapkal
2	Tanishka Dande Pranali Chavan Riddhi Baldwa	Autonomous Vehicle	Prof. P.R.Yawle
3	Mansi Khapekar	To Design A IOT Based Wire & Wireless Sensor And Actuator Network Using A Raspberry Pi	Prof.A.B. Vitekar
4	Siddhi Kadus Sushma Kakade Aditi Kulkarni	IOT Based Smart Inventory Management System For Kitchen.	Prof. S.A.Itkarkar
5	Pranoti Kakade Neha Kale Pratiksha Kanthe	Multipurpose Farming Robot Using Iot	Prof.Dr. S.M.Jagdale
6	Shweta Kadam Sanika Kadam Sneha Dalavi	Design And Development Of Microwave Radar System	Prof. Dr.S.M. Bhilegaokar

7	Mohini Mane Saniya Mulla Niharika Naik	EMG Controlled Prosthetic Arm	Prof.A.P. Yadav
8	Yogeshwari Narkhede Kaveri Sonwane	IOT Based Smart Aquapro	Prof.Dr.S.S. Salunkhe
9	Pooja Survase Tanushree Shende Arpita Takalkar	Microwave Sensing Of Water Quality	Prof.Dr.S.S. Chorage
10	Sonali Biradar Sonawane Sakshi Shivaji Sonawane Sakshi Suresh	Solar Vacuum Cleaner And Floor Cleaner Robot	Prof.S.M.Patil
11	Sanskruti Thakare Vrashali Chavan Shrushti Wakchaware	Development Of Flexible Sharing And Booking A Car Using MERN Stack	Prof.Dr. S.M.Jagdale
A.Y. 2023-24			
Sr.No.	**Names Of the Students**	**Title of the Project**	**Name of the Guide**
1	Vaishnavi Jagadale Gayatri Ghadge Disha Goske	Student Attendance System Using 3D Face Recognition	Prof. Dr. S.A.Dhole
2	Bhosale Aarti Dhage Pragati Jadhav Sandhya	An Intrusion Detection Mechanism For Wireless Sensor Networks	Prof. S.A.Itkarkar
3	Rutuja Dhavale Archana Kandalkar Reshma Kadam	Iot-Based Temperature And Light Control System Using Raspberry-Pi Pi.	Prof.A.B.Vitekar
4	Ghopane Prajakta Harge Shivani Jadhav Komal	Ethical Hacking And Penetration Testing Using Raspberry Pi	Prof.A.B.Vitekar
5	Bhosale Avantika Sunil Baviskar Mayuri Suresh Bansode Smita Satyawan	Raspberry Pi Calibration System Using Object Detection	Prof. Shamalik R.
6	Roshni Borse Gayatri Chavan	WSN-Based Smart Agricultural System Using Lora Technology	Prof. P. R. Yawle

7	Anushka Jondhale Sanskriti Joshi	Smart Mirror Using Raspberry Pi	Prof. R. J. Sapkal
8	Dhanashri Rathi Nadiya Shaikh Akshata Shinde	Raspberry Pi As Wireless Sensor Network Nodes In Precision Agriculture	Prof. K. D. Mahajan
9	Khushi Shetty Tejaswini Kumbhar Shreeya Kumbhar	Water Quality Monitoring System Using Wireless Sensor Network.	Prof. S. M. Patil
10	Mansi Pathak Shubhangi Pardeshi	Voice Based Notice Board Using Android	Prof. K.D.Mahajan
A.Y. 2022-23			
Sr. No.	**Names of the students**	**Title of the Project**	**Name of the Guide**
1	Akshata Chavan Pranjal Koli	Smart Glasses For Visually Impaired People	Prof. R. R. Jain
2	Rucha Subhash Bagad Sonali Pravin Dhage Mrunal Jahagirdar	Sign Boards Signal Detection And Speed Control Vehicle Using Image Processing With A Raspberry Pi	Prof. Dr. S.A.Dhole
3	Amruta Bakare Ankita Beldare Neha Chorghe	Smart Voice Controlled Door Locking And LPG Leakage Detector	Prof. S. M. Patil
4	Jidnyasa Bhoge Poonam Dolare Anisha Gadade	Smart Traffic Control System	Prof.Dr.S.S.Chorage
5	Rushika Dharne Jayashree Ghogare Pragati Ghorpade	Pipe Inspection Robot With Live Video Streaming And Cleaning Mechanism	Prof. Khot S.T.
6	Gajbhar Revati Satish Aishwarya Sunil Hatkar Gauri Kishor Jadhao	Iot-Based Walking Stick For The Visually Impaired	Prof. S. A. Itkarkar

7	Janhavi Jadhav Shreya Jadhav Jayasmita Saha	Smart Power Theft Detection	Dr.Prof.V.R.Pawar
8	Vaishnavi Khulpe Radha Kure Pooja Mule	Iot-Based Home Management System	Prof.A.B.Vitekar
9	Pooja Gophane Rajnandini Kathare Rutuja Patil	Iot-Based Floor Cleaning Robot	Prof.V.P.Mulik
10	Madhvi Sonone Pranali Yeole	Smart Hand Glove For Specially Abled People	Prof.S.V.Shelke
11	Neha Rawat Preeti Vishwakarma Bhargavi Wadkar	XY Plotter Robo Using Mxy Board	Prof.K.D.Mahajan
12	Sayali Patil Shrutika Pawar	Iot-Based Child Tracking And Safety System	Prof.S.S.Salunkhe
13	Supriya Pawar Prajakta Sawale Ashwini Suryawanshi	Broadband Monopole Antenna	Prof.S.M.Bhilegaokar
14	Shruti Sarode Esha Singh Aarti Swami	IOT Based Air And Sound Pollution Monitoring System And Rainfall Detection	Prof.S.A.Itkarkar
15	Aakanksha Tawale Komal Todkari	Wireless Notice Board	Prof.Dr.S.S.Chorage

Table 5.7.3.3 List of Projects Participated in Competitions

Sr.No.	Names of the Students	Title of the Project	Name of the Guide
1	Saee Kad Rutuja Kharache Nikita Kendre	BP Measurement using Machine Learning (AVISHKAR-23-24)	Prof.P.R.Yawale
2	Rutuja Dhavale Archana Kandalkar Reshma Kadam	IOT Based Temperature and light control system using Raspberry-pi.(AVISHKAR-23-24)	Prof.A.B.Vitekar

3	Rucha Bagad Sonali Dhage Mrunal Jahagirdar	Sign Board Signal detection and speed control vehicle using Image Processing.(AVISHKAR-22-23)	Dr.S.R.Patil
4	Dipali Tanaji Gavali Pratiksha Subhash Gholap Sujata Sambhajirao Jadhav	"IOT Based Smart Street Light And Irrigation System With Air Quality Detection" (HACKATHON-22-23)	Dr.S.M.Jagdale
5	Aishwarya Somvanshi Priyanka Sakpal Priyanka Sawale	Electricity Generation using Piezoelectric Crystal (HACKATHON-22-23)	Prof.V.S.Karambelkar

B. **Research Laboratory – Electronics & Telecommunication Engineering Department**

Objective:

The Research Lab in the Electronics & Telecommunication Engineering Department is established to foster curiosity, creativity, and innovation among students. It serves as a dynamic environment where students are encouraged to explore ideas, work on research-based projects, and develop both mini and major projects either individually or in teams.

Overview:

This lab is thoughtfully designed to support advanced research and development work. It is equipped with computers, essential software tools, and reliable internet connectivity through both LAN and Wi-Fi. The facility provides everything students need to dive deep into core areas of E&TC, such as embedded systems, communication technologies, signal processing, and more. Day-to-day operations are managed by a dedicated Lab Assistant under the guidance of the Lab In-Charge.

Facilities:

- PCs with high end configuration suitable for simulation and design
- Similarity check software is available in the Laboratory.
- Wi-Fi and high-speed internet for research and collaboration
- Access to the latest licensed software for EDA, MATLAB, LABVIEW and communication systems
- Xilinx ISE Tool, Spartan Kits, Spartan VI Kits,3G Mobile Trainer,GSM Application Trainer, PSTN T/S/T Switch Trainer.
- VLSI Kits- VIRTEX 5, ARM9, NI myRIO Kits, DSP Kits, Vector Network Analyzer MS2024BF(Freq. 500KHz to4GHz) 89E51RD
- Safe and secure workspace with extended access hours
- Mentorship and technical support from experienced faculty and lab staff

Benefits to Students:

The Research Lab offers a hands-on learning experience that complements classroom teaching. It helps students build vital skills in research, analysis, and practical problem-solving. Through this lab, students learn how to:

- Approach complex engineering problems with confidence
- Apply theoretical knowledge in real-world scenarios
- Develop innovative solutions using modern tools and techniques
- Collaborate effectively in research and development teams

C. **Instructional materials:**

The Department of Electronics and Telecommunication Engineering places strong emphasis on the development and continuous improvement of instructional material to ensure effective delivery of curriculum, promote independent learning, and facilitate outcome-based education.

Types of Instructional Material Developed and Utilized:

- Teaching Plans: - Well-structured lesson plans are prepared for each subject in alignment with Cos and POs

- Lecture Notes: - Faculty-prepared detailed notes are shared via LMS platforms such as Google Classroom.
- Lab Manuals: - Lab manuals are prepared for practical courses, detailing objectives, theory, procedures, Conclusion and viva questions.
- PPTs and E-Content: - PowerPoint presentations and short video lectures are prepared to explain complex topics with clarity.
- Question Banks: - Subject-wise question banks are prepared.
- Assignments: - Topic-wise problem-solving assignments are designed to promote analytical and design skills.

D. **Working models/charts/monograms etc.**

In our laboratories, we have many materials that are useful in technical education. A variety of working models, informative flow charts are used to represent the scientific concepts and processes in an illustrative and visual manner suitable for the curriculum. Each lab has a chart prominently displayed that presents biographical information of well-known scientists, their experiences, and what they have contributed to the specific discipline. Educational materials will enhance the instructional environment and inspire students, and images represents what they have learned theoretically.

Table 5.7.3.4 Laboratory Chart Details

Sr. No.	Course Name	Title of the Chart	Name of the Faculty	Learning Outcome
1	Electronic Circuits (EXC)	Block Diagram of CRO	S.V. Shelke	Analyze and explain CRO functional blocks and their interconnections. (**Experiential)**
2	VLSI Design & Technology	VLSI Design Flow	Dr. S.M. Jagdale	Describe and simulate each step of the VLSI design process using tools. **(Cognitive)**
3	Digital Electronics Laboratory	Combinational & Sequential Circuits	S.M. Thorat	Design and verify logic circuits through lab-based experiments. (**Experiential)**
4	Computing Facility Center	Functional Block Diagram of TMS320C6713 DSK	A.B. Vitekar	Explore processor architecture by performing hardware-based demonstrations. (**Cognitive)**
5	VLSI Design & Technology	VIRTEX Architecture & ARM9 Development Cycle	Dr. S.M. Bhilegaonkar	Understand FPGA and ARM9 internal architecture and features. (**Cognitive)**
6	Microcontroller	PIC18F4550 with Temperature Sensor	Dr. R.M. Shamalik	Interface sensors with microcontrollers and test outputs through group mini-projects. (**Collaborative)**

7	Digital Communication	Electromagnetic Spectrum	M.S. Kasar	Classify various regions of the electromagnetic (EM) spectrum based on wavelength and frequency. (**Cognitive)**
8	Mechatronics	Components of Hydraulic System	R.J. Sapkal	Identify the major physical components of a hydraulic system such as pumps, actuators, valves, reservoirs, filters, and pipelines. (**Experiential)**
9	Project Based Learning	PCB Design & Electronics Manufacturing	V.P. Mulik	Apply the steps involved in designing a PCB, from circuit schematic creation to final layout generation. (**Collaborative)**

5.7.4 Consultancy(from Industry) (5)

Institute Marks : 0.00

2023-24 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Nil	0	0	0.00
			Total Amount(X): 0.00

2022-23 (CAYm2)

Project Title	Duration	Funding Agency	Amount
Nil	0	0	0.00
			Total Amount(Y): 0.00

2021-22 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Nil	0	0	0.00
			Total Amount(Z): 0.00

Cumulative Amount(X + Y + Z) = 0.00

5.8 Faculty Performance Appraisal and Development System (FPADS) (30) Total Marks 28.00

Institute Marks : 28.00

Institute has Performance Appraisal System for Teaching Faculty

Performance appraisal provides a periodic review and evaluation of individual staff performance. Performance appraisal is a systematics procedure to achieve the individual and institute goals. Performance appraisal helps to measure expected competency level set by the institute. The appraisal forms are filled and submitted in the administrative office once in a year by offline and online mode.

Appraisal Procedure:

Appraisal provides a common and unified measure of performance, so that all staff are evaluated in the uniform manner.

Appraisal Framework:

Appraisal of staff performance is carried out within a framework:

1. Self-Appraisal 2. Performance Appraisal 3. Confidential Report

Self Appraisal:

Self Appraisal provides teaching engagement, teaching methodology, innovative ideas. It provides contribution in research area, contribution for college, community and corporate. It also measures special achievements, difficulties faced and suggestions for improvement.

Self appraisal helps staff member to be more alert and competent. Self appraisal helps to improve the quality of work performance.

It is verified at the department level by Head of the department (HOD).

Performance Appraisal:

Performance appraisal gives us a complete information in the form of records. It provides actual conduction of practical and lectures. It provides Evaluation of individual staff by the Head of Department in planning, control, working methodology, actively contribution for college in different activities. Performance standards are measures by rating ‘excellent, good, average and poor’. Performance appraisal helps HOD to analyse staff and to implement policies for the department.

Confidential Report:

Confidential Report provides ability of team work, teaching and participation in extracurricular activities. It is a overall evaluation of staff by Head of the department. Head of the department forwards confidential report with his/her remark for the further verification and approval of Principal and management.

Action Taken:

As part of the **Faculty Performance Appraisal and Development System (FPADS)**, the department takes this opportunity to formally acknowledge and appreciate the commendable contributions of faculty members across the core performance parameters: **Teaching-Learning, Research & Innovation, and Professional Engagement**. These recognitions are integral to fostering a culture of continuous growth, excellence, and accountability.

1. Teaching-Learning and Evaluation (Academic Excellence) (Department Level)

In alignment with FPADS parameters under **Academic Results and Student Outcomes**, the department appreciates the following faculty members for exemplary teaching performance reflected through student results with the criteria as follows.

- **Second Year (SE):** If Course pass percentage is above 85%
- **Third Year (TE):** If Course pass percentage is above 90%
- **Final Year (BE):** If Course pass percentage is above 95%

Such results demonstrate effective curriculum delivery, outcome-based teaching methodologies, and consistent student engagement.

2. Research, Publications, and Doctoral Contributions (Institute Level)

Under the **Research and Academic Advancement** category of FPADS, the following achievements are specially recognized:

- Faculty members who **successfully completed their Ph.D. degrees** during the academic year. (Appreciated by the Institute)
- Faculty members who have served as **Ph.D. research guides**, with scholars awarded their doctoral degrees under their supervision.
- Faculty contribution in publications in recognised journals and conferences. (Appreciated by the Institute)

These accomplishments contribute significantly to the department’s research output and academic reputation.

3. Professional Development and Academic Leadership (Special Achievements) (Department Level)

In the area of **Professional and Institutional Contribution**, the department appreciates faculty members who have actively engaged in knowledge dissemination beyond the institute by:

- Serving as **invited speakers**, **resource persons**, or **experts** at national-level conferences, workshops, FDPs, academic panels etc.

Such activities reflect faculty leadership, subject expertise, and a commitment to contributing to the wider academic and professional community.

These acknowledgments form an integral part of the Faculty Appraisal and Development cycle. The department congratulates all recognized faculty for their dedication and impactful contributions.

Incentive Policy of the Institute:

The Institute has implemented the incentive policy as per the framework established by the management. The Faculty members of the institute are encouraged and rewarded with incentives for publishing articles in reputed journals, presenting at conferences, and contributing to books and book chapters

Table 5.8.1 Incentive Scheme

Quartile	Amount (Rs.)
Scopus-Q1	10,000/-
Scopus-Q2	7,500/-
Scopus-Q3	5,000/-
Scopus-Q4	2,500/-
PubMed	7,500/-
Web of Science	7,500/-
Conference paper indexed in IEEE, Springer, Elsevier and listed in Scopus, WoS, PubMed*.	5,000/-
Books and Book chapters published in Springer, Wiley, Elsevier, Oxford University Press and Listed in Scopus, WoS, PubMed*.	5,000/-

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10) Total Marks 10.00

Institute Marks : 10.00

Mrs. S. K. Shanku was appointed as a visiting faculty for the academic year 2023-24.

Table 5.9.1 Details of Visiting Faculty

Sr. No.	Visiting Faculty	Subject Taught	Academic Year	Duration
1	Mrs. S. K. Shanku	VLSI Design and Technology	2023-24	52 Hrs.

6 FACILITIES AND TECHNICAL SUPPORT (80)

Total Marks 72.00

6.1 Adequate and well equipped laboratories, and technical manpower (30)

Total Marks 28.00

Institute Marks : 28.00

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Communication Engineering Laboratory(301)	20	Vector Network Analyser, OTDR	Radiation and Microwave techniques, Digital Communication, Princples of Communication systems	Mr. G.R. Kumbhar	Laboratory assistant	B.A.
2	VLSI Laboratory (302)	20	Spartan 6 boards,sDSP Boards,	Computer Networks and Very Large Scale Integration	Mr. G.R. Kumbhar	Laboratory assistant	B.A.
3	Digital Electronics Laboratory (303)	20	Function Generator,Power Supply,Power oscilloscope, Digital Trainer boards/kits,Autotransformer, IC Tester	Basic Electronics Engineering, Digital Circuits, Power Devices and Circuits	Mrs. S. V. Atre	Technical Laboratory Assistant	Diploma in Industrial Electronics
4	Research Laboratory (304 A)	20	High End Personal Computer (I 5)/ Uninterrupted Power Supply(UPS)	Digital Signal Processing, Cloud Computing, Data Analytics, Biomedical Signal Processing	Mrs. S. V. Atre	Technical Laboratory Assistant	Diploma in Industrial Electronics
5	Computing Facility Centre (304 B)	20	High End Personal Computer (I 5)/ Uninterrupted Power Supply(UPS)	Data Structures, Digital Image Processing, Cloud Computing, Object Oriented Programming,Project Based Learning	Mrs. S. V. Atre	Technical Laboratory Assistant	Diploma in Industrial Electronics
6	Electronics Measurement and Mechatronics Laboratory (310A)	20	Pneumatic and Hydrolic Trainer kit, Data Acquasition system	System automation , Project Based Learning, Electronic Circuits, Data Base Management	Mr.C.D.Pawar	Lab Assistant	H.S.C
7	Project Laboratory (310B)	20	Computer	Mini Project and Project	Mr. C.D.Pawar	Lab Assistant	H.S.C
8	Electronic Devices and Circuits Laboratory (311	20	Personal Computer(I3)	Electronics Skill Development, Mini Project	Mr. C.D.Pawar	Lab Assistant	H.S.C.

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25)

Total Marks 23.00

Institute Marks : 23.00

Sr. No	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	Vector Network Analyzer For Antenna Testing (301)	Additional facility for testing of Antenna	Advanced learning in the domain of Antenna and radiations	The facilty is utilized for the advanced learners for experimentation and testing for antenna and other radiation equipments.	Antenna Design and testing	PO3, PO4, PO5, PSO1, PSO2, PSO4
2	Antenna Trainer (301)	Additional facility for Different types of antenna study	Advanced learning in the domain of Antenna and radiations	The facilty is utilized for the advanced learners for experimentation and testing for antenna and other radiation equipments.	Different types of antenna and their radiation patterns	PO1, PO2, PO3, PO5, PSO2
3	PCB Soldering Facility and PCB making(303)	Additional Facility for PCB making	For PCB assembling and testing	The facility is utilise for building electronics circuits Design Implementation	Building Electronics kits for experiments	PO1, PSO1, PSO2
4	Vitual Lab, Simulation Softwares (304 A & B)	Additional facility for simulation of Laboratory Experiment and Projects	For Program and Algorithm verification and result analysis	The facilty is utilized for the advanced learners for experimentation, testing and simulation for projects	In Design and Simulation of mini and major projects	PO1, PO2,PO3,PO4,PO5 PSO1, PSO2
5	Pneumatic and Hydrolic Trainer kit, Data Acquasition system (310A)	Additional Facility for multidisciplinary training for interdisciplinary approach	Advance Learning for multi disciplinary approach	The facilty is utilized for the learners doing multidisciplinary experiments for experimentation and testing	Mechatronics	PO1,PO2,PO3, PO4,
6	GPU	Virtual GPU	To support GPU virtualization for AI/ML programs and project , cloud computing, and multi-user simulation platforms	Used in cloud-based VDI labs, AI model deployment practice, and remote GPU access	Cloud computing, GPU virtualization, deep learning deployment, infrastructure simulation	PO1, PO5, PO12, PSO2,PSO3

6.3 Laboratories: Maintenance and overall ambiance (10)

Total Marks 8.00

Institute Marks : 8.00

Laboratory Maintenance

- All the laboratories are well equipped and Periodic maintenance is done for the experimental setup and laboratory equipment.This is according to the annual maintainance policy,
- Maintenance of the instruments are carried out on a regular basis and also when necessary
- A dead stock register is maintained for all the laboratories.
- The old and outdated equipment get write-off by the standard procedure.
- The care of the repairs and maintenance of all computers is taken by the system administrator of the institute.AMC are in place for this

Overall Ambiance

- Every laboratory is properly ventilated.
- Windows are provided for excellent air circulation, which is supported by several ceiling fans.
- All laboratories offer proper seating arrangements for students.
- The laboratories are always kept neat and clean.
- A housekeeping time table is provided to the attendant and is maintained.
- Conventional black boards, soft boards and white board are available in laboratory

6.4 Project laboratories (5)

Total Marks 3.00

Institute Marks : 3.00

Facilities &Utilization

- The Project Lab is an open lab where all students have ready access to basic electronic test equipment and instrumentation.
- The primary purpose of the lab is to provide the space and resources needed by students to complete their Design and general Projects.
- The lab is also available for students who need to complete projects and assignments from their other E&Tc courses and laboratories or for E&Tc graduate students working on projects related to their thesis research.
- The lab also serves as a meeting location for groups of students working on team projects.
- Many students also use this lab to work on supplemental learning projects to enhance their understanding of class and lab assignments.
- The Project Lab is open Monday through Friday and is monitored by student & lab assistant. Presently one large study desk for student use in this lab.
- In addition array of test equipment is provided at the work benches in the Project Lab,
- Additional instrumentation, cabling, and prototyping materials are also available for student laboratory and project use in this Lab.
- Plagiarism checker iThenticate software is available.

6.5 Safety measures in laboratories (10)

Total Marks 10.00

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	Communication Engineering Laboratory(301)	All power supply lines are properly insulated and covered. Circuit breaker is available. First-aid kit is available. Fire extinguisher and fire extruder is available. Lab assistant maintain equipment and keep them in safe operating condition. Equipment's are provided with fuses to safeguard the Equipment's from power fluctuations. COVID SAFETY: Mask were mandatory for all. Hand sanitizer before entering the Laboratory spitting could be dangerous safety measure instruction are displayed and SOP are in place
2	VLSI Laboratory (302)	All power supply lines are properly insulated and covered. Circuit breaker is available. First-aid kit is available. Fire extinguisher is available. Lab assistant maintain equipment and keep them in safe operating condition. Equipment's are provided with fuses to safeguard the Equipment's from power fluctuations. COVID SAFETY: Mask were mandatory for all. Hand sanitizer before entering the Laboratory spitting could be dangerous safety measure instruction are displayed and SOP are in place UPS is provided
3	Digital Electronics Laboratory (303)	All power supply lines are properly insulated and covered. Circuit breaker is available. First-aid kit is available. Fire extinguisher is available. Lab assistant maintain equipment and keep them in safe operating condition. Equipment's are provided with fuses to safeguard the Equipment's from power fluctuations. COVID SAFETY: Mask were mandatory for all. Hand sanitizer before entering the Laboratory spitting could be dangerous safety measure instruction are displayed and SOP are in place
4	Research Laboratory (304 A)	All power supply lines are properly insulated and covered. Circuit breaker is available. First-aid kit is available. Fire extinguisher is available. Lab assistant maintain equipment and keep them in safe operating condition. Equipment's are provided with fuses to safeguard the Equipment's from power fluctuations. COVID SAFETY: Mask were mandatory for all. Hand sanitizer before entering the Laboratory spitting could be dangerous safety measure instruction are displayed and SOP are in place UPS is provided
5	Computing Facility Centre (304 B)	All power supply lines are properly insulated and covered. Circuit breaker is available. First-aid kit is available. Fire extinguisher is available. Lab assistant maintain equipment and keep them in safe operating condition. Equipment's are provided with fuses to safeguard the Equipment's from power fluctuations. COVID SAFETY: Mask were mandatory for all. Hand sanitizer before entering the Laboratory spitting could be dangerous safety measure instruction are displayed and SOP are in place UPS is provided

6	Electronics Measurement and Mechatronix Laboratory (310A)	All power supply lines are properly insulated and covered. Circuit breaker is available. First-aid kit is available. Fire extinguisher is available. Proper isolation is provided for three phase connection Lab assistant maintain equipment and keep them in safe operating condition. Equipment's are provided with fuses to safeguard the Equipment's from power fluctuations. COVID SAFETY: Mask were mandatory for all. Hand sanitizer before entering the Laboratory spitting could be dangerous safety measure instruction are displayed and SOP are in place UPS is provided
7	Project Laboratory (310B)	All power supply lines are properly insulated and covered. Circuit breaker is available. First-aid kit is available. Fire extinguisher is available. Lab assistant maintain equipment and keep them in safe operating condition. Equipment's are provided with fuses to safeguard the Equipment's from power fluctuations. COVID SAFETY: Mask were mandatory for all. Hand sanitizer before entering the Laboratory spitting could be dangerous safety measure instruction are displayed and SOP are in place UPS is provided
8	Electronic Devices and Circuits Laboratory (311)	All power supply lines are properly insulated and covered. Circuit breaker is available. First-aid kit is available. Fire extinguisher is available. Lab assistant maintain equipment and keep them in safe operating condition. Equipment's are provided with fuses to safeguard the Equipment's from power fluctuations. COVID SAFETY: Mask were mandatory for all. Hand sanitizer before entering the Laboratory spitting could be dangerous safety measure instruction are displayed and SOP are in place UPS is provided

7 CONTINUOUS IMPROVEMENT (50)

Total Marks 44.00

7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (20)

Total Marks 18.00

Institute Marks : 18.00

POs Attainment Levels and Actions for Improvement- (2023-24)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	1.5	2.19	1. Target achieved; Attainment exceeds the target by 0.69. 2. Engineering fundamentals are well-understood and consistently demonstrated in course outcomes.
Action 1: Conduct extra lectures and practical sessions focused on strengthening the numerical and analytical foundation in core mathematical and engineering subjects such as Engineering Mathematics-III (EM-III), Signals & Systems (S&S), Electromagnetic Field Theory (EFT), and Digital Signal Processing (DSP). Action 2: Provide additional academic support for lateral entry students through bridge courses, extra lectures and remedial classes aimed at reinforcing their understanding of fundamental engineering principles. Action 3: Assign additional problem-solving exercises and simulations in subjects like DSP,PDC and EFT to enhance conceptual clarity and promote deep learning beyond the syllabus.			
PO 2 : Problem Analysis			
PO 2	1.5	1.91	1. Target achieved; Attainment exceeds the target by 0.41. 2. Students show strong analytical thinking, capable of decomposing and solving complex problems using first principles.
Action 1: Conduct hands-on sessions on circuit building and PCB design in the Digital Circuits (DC) course to strengthen students' understanding of practical problem components and system behavior. Action 2: Identifying and analyzing real-world engineering problems through literature surveys and technical research in mini\major Projects. Action 3: Encourage students to participate in technical events and analytical competitions to enhance their problem formulation and analytical reasoning skills. Action 4: Enhance the Database Management Systems (DBMS) course by emphasizing Database Design and Query Formulation, developing structured thinking and problem-solving capabilities using first principles.			
PO 3 : Design/development of Solutions			
PO 3	1.5	1.81	1. Target achieved; Attainment exceeds the target by 0.31. 2. Students can design systems/components considering public health, safety, and environmental needs.
Action 1: Prioritize project themes that address public health, safety, cultural, societal, and environmental issues, ensuring that students apply design principles in socially relevant contexts. Action 2: Organize seminars and workshops under the SDO on topics such as women's health and NSS-led community engagements, promoting awareness-driven design thinking. Action 3: Encourage participation in national-level competitions like Avishkar, DIPEX, NES, IETE, and Smart India Hackathon (SIH) to stimulate innovative system design in multidisciplinary areas. Action 4: Engage Students in Optical link design and test systems for its viability in optical communication systems. Action 5: Integrate ML/DL-based system development in the Deep Learning course, guiding students to design intelligent solutions for complex, real-world problems.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	1.5	1.69	1. Target achieved; Attainment exceeds the target by 0.19. 2. Students effectively use research methods and interpret experimental data to derive valid conclusions.
Action 1: Encourage students to publish research findings based on their investigations—covering experiment design, data analysis, and conclusion synthesis—in conferences and peer-reviewed journals. Action 2: Promote student participation in recognized project competitions and poster presentations, enabling them to present data-driven solutions to complex engineering problems. Action 3: Conduct experiments on Virtual Laboratory for courses like Digital Signal Processing (DSP), Digital image Processing (DIP) to support learning through simulation-based analysis. Action 4: Train students in structured data interpretation techniques through Mini/Major Projects, guiding them to investigate and derive valid conclusions from experimental setups and real-time case studies.			
PO 5 : Modern Tool Usage			
PO 5	1.5	1.76	1. Target achieved; Attainment exceeds the target by 0.26. 2. Students proficiently apply simulation tools and engineering software in various lab and project work.
Action 1: Facilitate student learning of modern engineering and IT tools through technical certification courses, including topics such as Electric Vehicle Converter Design, Grid Power Quality Analysis, and VLSI–SoC Design using Verilog HDL. Action 2: Encourage students to apply modern tools during internships, promoting real-world exposure to simulation platforms, hardware design tools, and software automation environments. Action 3: Integrate the use of advanced software tools in laboratory courses, including Multisim, ExpressPCB, Xilinx, Optiwave, Keil, TinkerCAD, MPLAB, MATLAB, and 8051 Assembly Language Software, to enhance technical proficiency. Action 4: Promote use of specialized tools and platforms like the Vector Network Analyzer in RMT practicals and Python-based simulation environments for project implementation and system modeling. Action 5: Hardware design tools such as Spartan FPGA kits, MIOT (Modular IoT) kits, and the FOC Microwave Testbench are commonly used for developing and testing embedded systems, IoT applications, and RF/microwave technologies.			
PO 6 : The Engineer and Society			

PO 6	1.5	1.54	1. Target achieved; Attainment exceeds the target by 0.04. 2. Students exhibit contextual understanding of health, legal, and cultural responsibilities, with room for deeper application.
Action 1: Guide students to undertake projects addressing public health, safety, cultural, and societal concerns, integrating responsible engineering solutions into real-life contexts. Action 2: Maintain active collaboration with professional bodies such as IEEE, IETE, and IEI, organizing events and awareness sessions on professional engineering practices and social responsibilities. Action 3: Facilitate industrial and societal visits through platforms like NSS, Student Development Cell, and Art Circle, allowing students to explore safety regulations and social impact firsthand. Action 4: Encourage effective use of free slots for reading newspapers and magazines focused on health and societal issues, followed by group discussions to promote informed awareness among peers. Action 5: Organize guest lectures to deepen student understanding of ethical and socially impactful engineering. Action 6: Integrate practical learning through Sensor Automation labs, involving flow/humidity sensor experiments with direct applications in environmental monitoring.			
PO 7 : Environment and Sustainability			
PO 7	1.5	1.34	1. Target not achieved. Attainment falls short of the target by 0.16, indicating low attainment; needs improvement. 2. Limited integration of sustainability and environmental concerns in projects and activities.
Action 1: Plan an Expert Session on Electric Vehicles (EV) under the professional societies IETE/IEI to increase student awareness about green transportation technologies and their role in reducing environmental pollution. Action 2: Organize a Hands-on Training Session on Battery Manufacturing , enabling students to explore eco-friendly energy storage systems as part of sustainable engineering practices. Action 3: Encourage students to design and implement mini-projects that directly address environmental issues, such as renewable energy, pollution control, and smart green infrastructure. Action 4: Promote participation in competitions and exhibitions (like Avishkar, DIPEX) that focus on sustainable and green technology innovations. Action 5: Recommend NPTEL or equivalent audit courses (e.g., "Ecology and Environment") to help students build a strong theoretical base in environmental sustainability.			
PO 8 : Ethics			
PO 8	1.5	1.56	1. Target achieved; Attainment exceeds the target by 0.06. 2. Basic awareness of ethics is present but requires deeper reinforcement through case studies and discussions.
Action 1: Implement the use of plagiarism detection software (iThenticate) to ensure academic honesty and adherence to research ethics in student reports, project work, and publications. Action 2: Organize Entrepreneurship and Innovation sessions that embed themes of professional ethics, social responsibility, and ethical challenges in engineering practices. Action 3: Display the code of conduct and professional ethical guidelines on dedicated notice boards and communicate them during orientation, mentoring, and major project planning phases.			
PO 9 : Individual and Team Work			
PO 9	1.5	1.71	1. Target achieved; Attainment exceeds the target by 0.21. 2. Students demonstrate effective collaboration and emerging leadership in multidisciplinary settings
Action 1: Encourage students to undertake sponsored or industry-linked projects, fostering teamwork, task delegation, and real-world collaboration with professionals. Action 2: Promote student participation in technical, cultural, and sports events at the inter/intra-college, state, and national levels to develop leadership, cooperation, and team spirit. Action 3: Incorporate mock interviews, technical presentations, and individual project evaluations to assess both independent performance and communication skills. Action 4: Mandate that Mini/Major Projects and PBL activities be executed in teams of at least three students, ensuring balanced workload sharing and effective team functioning.			
PO 10 : Communication			
PO 10	1.5	1.68	1. Target achieved; Attainment exceeds the target by 0.18. 2. Students communicate well in presentations and documentation; structured writing needs more focus.
Action 1: Emphasize communication skill development through courses like Employability Skill Development (ESD) and capacity-building programs, including activities such as group discussions, report writing, and oral presentations. Action 2: Encourage students to participate in sponsored projects and internships to improve industry communication skills, especially interaction with mentors, sponsors, and team members. Action 3: Promote participation in technical fests, paper/poster presentations, and project expos to enhance public speaking, design documentation, and technical articulation. Action 4: Provide structured guidance on writing and presenting research papers at conferences and journals to develop formal academic communication proficiency. Action 5: Use courses like Digital Marketing to simulate real-world business communication scenarios, helping students practice targeted messaging and presentation techniques.			
PO 11 : Project Management and Finance			
PO 11	1.5	1.99	1. Target achieved; Attainment exceeds the target by 0.49. 2. Students apply scheduling, budgeting, and planning in mini and final projects, showing management capability

Action 1: Integrate Cloud Computing projects aligned with AWS Academy certification, emphasizing project management principles such as cloud budgeting, scheduling, and resource planning. Action 2: Ensure that Mini Projects and Final Year Projects follow structured planning and execution timelines, including defined milestones, task allocation, and progress tracking. Action 3: Encourage students to perform cost estimation and budgeting for their projects through market surveys and real-time price analysis of components and services. Action 4: Organize presentations and seminars on business management principles, covering topics like resource utilization, and financial decision-making in engineering contexts. Action 5: Maintain a repository of past project reports in the departmental library, enabling students to review project planning documentation and learn from previous work.			
PO 12 : Life-long Learning			
PO 12	1.5	1.57	1. Target achieved; Attainment exceeds the target by 0.07. 2. Students engage with learning platforms but need consistent motivation toward self-driven skill development.
Action 1: Encourage students to pursue online certification courses (e.g., NPTEL, Oracle Academy, AWS Academy) as part of the regular curriculum to promote continuous upskilling in emerging technologies. Action 2: Organize expert sessions and workshops on the latest advancements in fields such as IoT, Cloud Computing, AI/ML to expose students to evolving industry trends. Action 3: Conduct career guidance and mentorship programs focused on higher education, entrepreneurship, and self-directed learning paths to foster a long-term learning mindset.			

PSOs Attainment Levels and Actions for Improvement- (2023-24)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Give techniques and solutions by using acquired knowledge and skills.			
PSO 1	1.5	2.12	1. Target achieved; Attainment exceeds the target by 0.62. 2. Students effectively apply core domain knowledge (e.g., signal processing, circuits) in real-time projects and problem-solving
Action 1: Encourage student participation in digital circuit design competitions and related hands-on events to strengthen practical skills in digital electronics and real-time logic design. Action 2: Facilitate industrial training and internships for third-year students at core electronics and embedded system companies such as Ergen, Dolphin Lab, and Aashay Electronics, to bridge the gap between academic learning and industry application in circuit and system design. Action 3: Promote active student involvement in technical competitions (e.g., Hackathon, Avishkar, DIPEX) and paper presentations, to foster innovation, design thinking, and research orientation in core electronics and communication domains.			
PSO 2 : Design and develop Electronics and Telecommunication-based systems.			
PSO 2	1.5	1.76	1. Target achieved; Attainment exceeds the target by 0.26. 2. Students showcase competency in developing embedded, IoT, and VLSI-based solutions aligned with industry trends.
Action 1: Conduct PCB Design and Circuit Layout workshops to enhance students' proficiency in hardware design, enabling them to create functional prototypes for embedded and communication systems. Action 2: Promote Project-Based Learning (PBL) by organizing Design Thinking workshops, fostering structured innovation and engineering problem-solving in core electronics and IoT projects. Action 3: Implement mini projects using microcontrollers (e.g., Arduino UNO, ATmega) to strengthen embedded system development skills through hands-on applications in automation and control. Action 4: Organize IoT-focused hands-on training sessions to equip students with practical skills in emerging technologies, including sensor integration, cloud connectivity, and real-time monitoring solutions.			
PSO 3 : Create, select and adapt techniques, resources and tools with understanding of associated limitations.			
PSO 3	1.5	1.76	1. Target achieved; Attainment exceeds the target by 0.26. 2. Effective usage of modern tools like MATLAB, Python, and Xilinx is evident; some inconsistency across groups remains.
Action 1: Encourage students to consistently use modern engineering tools and simulation platforms during practical sessions, mini projects, and internships to develop industry-relevant competencies. Action 2: Promote industry-recognized certification programs, such as those offered by Oracle Academy, AWS, MATLAB, and similar platforms, to enhance proficiency in software-based design and data processing tools. Action 3: Motivate students to take up sponsored projects and internships, providing real-world exposure to tools and technologies commonly used in core and emerging domains. Action 4: Integrate tool-based learning into coursework through technical workshops, virtual labs, and certification-aligned assignments, strengthening students' ability to analyze and simulate engineering systems.			
PSO 4 : Identify and address their own needs in the changing world through lifelong learning.			
PSO 4	1.5	1.48	1. Target not achieved. Attainment falls short of the target by 0.02, indicating marginal shortfall; needs improvement. 2. While basic awareness exists, students need more structured support to engage in innovation, entrepreneurship, and professional development.
Action 1: Motivate students to enroll in courses on emerging technologies and trending domains (e.g., AI/ML, IoT) to encourage independent and continuous learning. Action 2: Organize career counseling sessions, goal-setting workshops, and mentoring programs to help students identify academic and professional growth paths. Action 3: Promote lifelong learning through certifications, online platforms (NPTEL, Oracle Academy), and peer-led knowledge sharing activities. Action 4: Conduct workshops and sessions on application design and development, fostering innovation, entrepreneurship, and solution-oriented thinking. Action 5: Encourage participation in co-curricular and extracurricular activities, including sports, cultural events, and inter-collegiate competitions, to support holistic personality development and leadership.			

7.2 Academic Audit and actions taken thereof during the period of Assessment (10) Total Marks 10.00

Institute Marks : 10.00

An academic audit systematically evaluates the departmental processes and strategies to ensure quality assurance and foster continuous improvement. To support the ongoing development of students, faculty, and the department as a whole, focused efforts are undertaken to strengthen the effectiveness of teaching and learning practices.

Objectives of the Academic Audit:

1. To evaluate the quality of teaching and learning practices within the institution.
2. To identify strengths and areas for improvement in academic programs.
3. To ensure academic standards are being met and suggest steps for continuous improvement.

The academic audit is carried out through two practices:

I. The Internal Audit
II. The External Audit

The academic audit is conducted as per the guidelines by Internal Quality Assurance Cell (IQAC).

I. **Internal Audit**

The Internal Academic Audit is conducted through a structured approach involving various key components that collectively support quality assurance and improvement. Specific audit criteria are formed for different functional units, ensuring a comprehensive evaluation of academic and administrative practices. The assessment criteria, along with mechanism and frequency of conduction are systematically presented in Table 7.2.1

Table 7.2.1: Internal Academic Audit Assessment criteria, mechanism and frequency of conduction

Assessment Criteria of Audit	Conduct Mechanism	Responsible Authority	Frequency of Audit
Academic Calendar audit	• Review of Department Academic Calendar Compliance • Report on Planned and Actual Event Dates	HOD and IQAC	Twice in a semester (start and Mid of semester)
Course File Audit	• Verification of contents of course file with respect to contents mentioned in the course file index • Report will be prepared by the auditor for compliance and enhancement	Audit Coordinator, HOD and IQAC	End of semester
Syllabus Completion Audit	• Monitoring the progress of curriculum delivery • Ensuring compliance with the teaching plan • The Guardian faculty member (GFM) prepares the syllabus completion report through subject teachers of respective class at the end of every month	GFM, HOD and IQAC Coordinator	Monthly
Internal Examination Audit	• Assessment of Question Paper Quality • Verification of Questions According to Course Outcomes (CO) and Bloom's Taxonomy (BT) • Acceptance/rejection of paper Based on CO mapping, BT Levels, marking scheme and question paper format.	Internal Evaluation Committee	For every internal Examination (UT1 and UT2)

Laboratory Audit	• Monitoring of Conduction of practical sessions • Practical Completion Report filled in Academic Record Book • Monitoring of Rubrics based/Continuous Assessment of practical work evaluation through ARB and ERP • Checking of Lab attendance register, Lab Manual, Notice boards and sample files	HOD and IQAC Coordinator	Monthly
Event and Course wise Activity Audit	• Report preparation for all activities conducted for students • Event audit like Capacity Building, ETSA activities, Student chapter activities, industrial visit etc.	Event coordinator, HOD and IQAC Coordinator	End of semester
Attendance Monitoring	• The GFM prepares the monthly attendance report. • Submission of all attendance reports to Academic Coordinator. • Preparation of defaulter list and Communicates to the parent regarding the progress of students.	GFM, HOD and IQAC Coordinator and Principal	Monthly
Student Performance	• Performance Analysis of students in the internal examination e.g. Unit Tests • Student Progress report of Unit test submitted to Unit Test In charge • Identification of slow and advanced learner • Activities conducted for slow and advanced learner progress	Course Teacher and Internal Evaluation Committee	After conduction of Unit Test
Faculty mentoring	• Conduction of Faculty Mentoring activity • Recording the mentoring report by mentor	Mentor, HOD and IQAC Coordinator	Three times in a semester
Student mentoring	• Conduction of the student mentoring activity by student mentor • Monitoring the student mentoring activity	Mentor, HOD and IQAC Coordinator	Three times in a semester
Feedback Analysis	• End semester feedback analysis • Analysis of feedback and corrective actions taken	Feedback committee	End of Semester
CO-PO Attainment	• Questions as per CO • CO PO mapping with curriculum • CO evaluation based on each question and gap identification • Attainment of CO • Attainment of PO • Attainment of PSO	Course Teacher, CO-PO coordinator, HOD and IQAC Coordinator	End of Semester

The process of continuous improvement is guided by an action plan developed in alignment with the assessment criteria of the academic audit. This plan identifies specific areas for enhancement across teaching, learning, and departmental operations based on audit findings. The detailed action plan is presented in Table 7.2.2.

Table 7.2.2: Academic Audit report and action plan

Assessment Criteria of Audit	Audit Reports	Action Plan

Academic Calendar audit	Compliance report of Planned and conducted date of the event	If any Event is not conducted according to the scheduled date, the event is rescheduled by the concerned Faculty.
Course File Audit	Course File Audit Report	If any of the Faculty is not able to complete files or any documents, the HoD and IQAC coordinator gives the reminder and gets it done.
Syllabus Completion Audit	Syllabus Completion Report	If any course is lagging in the syllabus coverage as per the course teaching plan, the respective faculty will be personally called and given Suggestions by HoD. They are also advised to take extra classes to complete the syllabus within time.
Internal Examination Audit	Question Paper Preparation and Answer Sheet Evaluation Audit Report	Every Faculty prepares the question paper for the assigned course and is verified by respective members of Internal Examination Evaluation Committee.The members suggest the modification based on Course Outcomes and Blooms taxonomy.
Laboratory Audit	Practical Completion Report	According to the laboratory work plan coverage, if any laboratory-related experiment is lagging as per the syllabus, the respective faculty will be personally called and given Suggestions by HoD. They are also advised to take extra sessions to complete the experiments within time.
Event and Course wise Activity Audit	Event Report	The event report is not completed by Event coordinator then HOD reminds about its completion.
Attendance Monitoring	Class Wise Monthly attendance Preparation of defaulter list	The GFM compiles monthly attendance report for each class and identifies the student having low attendance. At the end of semester parents of such students are informed for a meeting with higher authorities.
Student Performance	Student progress report for internal marks Course wise student progress report	The Retest/Oral is scheduled for failed and absent students in unit test. The status of the same is maintained in the Aacademic Record Book.
Faculty Mentoring	Mentoring activity report	Mentor provides the remarks to the mentee for the smooth and effective conduction of the course. Mentor also provides the guidance on course planning, content delivery, student engagement, and timely assessment to ensure quality teaching and learning outcomes.
Student Mentoring	Mentoring Activity Report	If the mentoring reports are not properly filled out or if any records are incomplete, the Department Mentor Coordinator sends reminders to mentors and gets the work completed.
Feedback Analysis	Analysis of feedback	Faculty are encouraged to improve in the teaching-learning process based on feedback received from students.

CO PO PSO Attainment	Observation Report	CO-PO/PSO attainment is observed and the actions are taken for the improvement.

II. External Audit

The external audit of the program is conducted at both the program and institute levels. It is carried out by program-specific External Auditors and members of the Internal Quality Assurance Cell (IQAC). The action plans developed by IQAC aim to continuously update quality parameters for enhancing performance in higher education.

The aspects of external audits include the Annual Quality Assurance Report (AQAR), the Academic and Administrative Audit (AAA) Report for Outcome-Based Practices.

1. AQAR (Annual Quality Assurance Report)

The audit report is prepared at the program level to detail the achievements of the program in different key areas:

- Student and Faculty Performance
- SWOC Analysis

The IQAC collectively prepares the AQAR at the institute level.

The AQAR details:

- The results of the prospective plan worked out by the IQAC.
- The plan of action chalked out by the IQAC at the beginning of the year toward quality enhancement.
- The outcomes achieved by the end of the year.

2. AAA Report (Academic and Administrative Audit)

The AAA is a peer review process that includes a self-study and a site visit by peers from both inside and outside the institution.

The purpose of the academic audit is to:

Encourage programs, departments, and the institution to evaluate their quality processes and standards. Use predetermined benchmarks to suggest necessary activities for improving the quality of systems including curricular and co-curricular programs, activities, infrastructure, and support services.

Audit Process:

Once the audit report is prepared, the external audit team is invited to conduct the AAA.

The external committee conducts the audit in all departments, administrative units, and facilities.

Based on their visit, observations, and discussions with the IQAC Coordinator and the Principal, the external team gives remarks on the report. A detailed plan of action prepared to implement the suggestions in organized manner.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10) Total Marks 7.00

Institute Marks : 7.00

Analysis of Placement, Higher Studies and Entrepreneurship

The Table 7.3 provides a year-wise comparison of final-year student outcomes in placements, higher education, and entrepreneurship. While the number of students placed has declined over three years, there is a slight increase in higher studies. The entrepreneurial activity has been recorded, indicating scope for development in this area. The data highlights the need for targeted efforts to enhance both employability and academic progression.

Table7. 3 : Comparative analysis of Placement, Higher Studies and Entrepreneurship

Item	CAY m1	CAY m2	CAY m3
	2023-24	2022-23	2021-22
Total No. of Final Year Students	122	71	79
No. of students placed in companies or Government Sector	55	56	74
No. of students admitted to higher studies with valid qualifying scores(GATE or equivalent State)	2	1	1
No. of students turned entrepreneur engineering/technology	1	0	0

Notably, the institution has maintained a moderate but consistent number of students opting for higher studies in the respective assessment year indicating the presence of academic motivation and institutional support mechanisms such as GATE preparation. However, less students reported entrepreneurial ventures, signaling a potential area for development, such as incubation support, mentoring, or startup exposure. The assessment in improvement is done on the basis of placement number, core industry, and year wise average packages.

A.Improvement in Placement:

The Table 7.3.1 presents placement numbers and percentages over the past three academic years. A notable drop in placement percentage is observed, from 93.67% in 2021–22 to 45.08% in 2023–24. The decline suggests the need for enhanced placement readiness and improved industry engagement. Strengthening skill development and aligning with current market demands will help reverse this trend.

Thus, to improve student placements, the Institute has taken several initiatives to strengthen technical competencies of students. As part of this, the institute has requested the Zensar RPG Zensar ESD Program to select more students for RPG Zensar ESD training Program opportunities. The college also organizes regular mock interviews that include competitive programming questions to help students gain practical experience. In addition, the institute actively runs several aptitude clubs that focus on building core skills. Together, these continuous efforts have contributed to qualitative improvements in placement.

Table7. 3. 1 : Yearwise Details of Placement

Year	No of students in Final Year	No of students Placed	Placement in Percentage
2023-24	122	55	45.08
2022-23	71	56	78.87
2021-22	79	74	93.67

Quality and Core Hiring Industry

The year-wise list of the core industry, where the students have placed is summarized in Table 7. 3. 2. The Table 7.3.2**,** shows the number of students placed in core engineering and technology companies over three years. It shows varied engagement from reputed firms like Spark Minda, VOIS, and Vodafone Idea. The growing presence of core-sector companies in recent placements is encouraging. Continued collaboration with such industries can improve both placement quality and technical relevance.

Core Industry Analysis

Table7.3. 2 : Yearwise Student placement in core industry

Core Industry	2023-24	2022-23	2021-22	Total
L&T Technology	-	-	16	16

Reliance Jio	-	-	1	1
Indus Tower	-	3	-	3
Spark Minda	13	6	-	19
Uno Minda Limited	5	4	-	9
Vodafone Idea	23	6	9	38
VOIS	3	13	4	20
Stridely Solutions	-	2	-	2
LTIMindtree	1	-	-	1

The year-wise analysis for Minimum, Average and Maximum packages is listed in Table 7. 3. 3. The Table 7.3.3 outlines the minimum, average, and maximum packages offered to students during placements. While the minimum package has remained constant, the average and maximum packages have shown minor fluctuations. A slight dip in average salary in 2023–24 suggests a need to push for higher-value job opportunities. Focused training for high-paying roles can help improve this metric.

Table 7. 3. 3: Yearwise Details of Min, Avg and Max Package

Year	Min Package (LPA)	Average Package (LPA)	Max Package (LPA)	Number of students received highest package	Number of students received package >= Avg Package
2023-24	3.36	4.25	7.25	1	40
2022-23	3.36	4.75	7.50	1	26
2021-22	3.36	4.00	7.50	2	54

B.Improvement in Higher Studies:

The Table 7.3.4 details the number of students pursuing higher studies, segmented by program types such as M.Tech/M.E., M.S., and PGDM. The data reflects a steady interest in postgraduate education, with programs like M.S. and PGDM attracting a small but consistent number of students each year. The notable rise in M.E./M.Tech admissions in 2023-24 may indicate renewed interest in technical specialization. Despite these positive academic indicators, the document also notes that there has been less entrepreneurial activity among students during this period, highlighting a gap in innovation and startup culture that the institution may need to address in the future.

Table 7. 3. 4 : Yearwise Details of Higher Studies

Name of Program	2023-24	2022-23	2021-22
M.Tech/M.E.	2	-	-
M.S.	-	-	1
PGDM	-	1	-
Total	2	1	1

C.Improvement in Entrepreneurs:

The Entrepreneurs count is improved as compared with the base year and students are continously motivated through seminars and sessions under startup cell.

7.4 Improvement in the quality of students admitted to the program (10) Total Marks 9.00

Institute Marks : 9.00

Item		2024-25	2023-24	2022-23
National Level Entrance Examination	No of students admitted	13	12	13
	Opening Score/Rank	82.54	84.30	78.58
JEE Entrance Examination	Closing Score/Rank	78.76	77.63	71.51
State/ University/ Level Entrance Examination/ Others	No of students admitted	107	73	92
	Opening Score/Rank	92.55	88.86	88.64
MHT-CET Entrance Examin	Closing Score/Rank	13.23	19.93	5.12
Name of the Entrance Examination for Lateral Entry or lateral entry details	No of students admitted	64	28	35
	Opening Score/Rank	85.09	87.35	86.65
Diploma Examination	Closing Score/Rank	59.32	76.63	73.77
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		68	59	65

8 FIRST YEAR ACADEMICS (50)

Total Marks 35.83

8.1 First Year Student-Faculty Ratio (FYSFR) (5)

Total Marks 5.00

Institute Marks : 5.00

Please provide First year faculty information considering load for the particular program

Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Date Of leaving(In case Currently Associated is 'No')
							CAY	CAYm1	CAYm2			
Prof.Dr.P.V.Jad	AGKPJ6476H	Ph.D	09/05/2014	Mechanical Engineering	Professor	07/03/2024	100	0	0	Yes	Regular	
Dr. A.M.Pawar	AIGPP7322L	Ph.D	23/09/2019	Mechanical Engineering	Associate Professor	25/09/2000	100	100	100	Yes	Regular	
Mr.S.R. Mitkari	ALJPM4479P	M.Sc	26/09/2001	Mathematics	Assistant Professor	02/02/2005	100	100	100	Yes	Regular	
Dr.M.A.Patwar	APJPP8841C	M.Sc. (Physics) and Ph.D.	29/11/2024	Physics	Assistant Professor	07/08/2006	100	100	100	Yes	Regular	
Mr.Y.D.Kute	AWHPK6609C	M.Tech	21/05/2018	Mechanical Engineering	Assistant Professor	03/07/2007	100	100	100	Yes	Regular	
Mrs. D.P. Chop	AIMPC1525E	M.Tech	14/01/2012	Electrical Engineering	Assistant Professor	02/08/2007	100	100	100	Yes	Regular	
Mrs. U.S. Zope	BYBPS8842R	M.Tech	16/10/2015	Mechanical Engineering	Assistant Professor	02/01/2012	100	100	100	Yes	Regular	
Mr.K.B. Naikwa	AJHPN8180A	M.Sc	08/07/2008	Mathematics	Assistant Professor	12/09/2016	100	100	100	Yes	Regular	
Dr. S.S.Jadhav	AFCPA5581R	Ph.D	15/02/2022	Chemistry	Assistant Professor	18/07/2019	100	100	100	Yes	Regular	
Mr.A.B.Vitekar	ADWPV8474A	M.E.	28/11/2015	Electronics and Telecommunication Engineering	Assistant Professor	04/08/2009	100	100	100	Yes	Regular	
Mrs. K.S.Sawa	CBLPS5417B	M.Tech	31/01/2015	Information Technology	Assistant Professor	18/09/2010	100	100	100	Yes	Regular	
Dr.G.G.Patil	AKDPP1063B	Ph.D	07/09/2015	Physical Education	Assistant Professor	01/07/2020	100	100	100	Yes	Regular	
Mrs.S.R.God	AFUPV1281P	M.E.	17/12/2005	Civil Engineering	Assistant Professor	17/08/2023	100	100	0	Yes	Regular	
Dr.M.K.Kapse	AXPPK0292E	Ph.D	30/10/2023	English	Assistant Professor	16/10/2024	100	0	0	Yes	Regular	
Dr.S.S.Khan	DYUPK0818K	Ph.D	26/08/2023	Mathematics	Assistant Professor	05/11/2024	100	0	0	Yes	Regular	
Mr.K.S.Aware	CRSPA6167P	M.Tech	13/10/2023	Civil Engineering	Assistant Professor	04/11/2024	100	0	0	Yes	Regular	
Mrs. Bonsale I	DMMPM5181D	M.E.	28/01/2023	Computer Science and Engineering	Assistant Professor	14/10/2024	100	0	0	Yes	Regular	

Year	Number Of Students(approved intake strength) N	Number of Faculty members(considering fractional load) F	FYSFR (N/F)	*Assessment=(5*20)/FYSFR(Limited to Max.5)
2022-23(CAYm2)	240	11	22	5
2023-24(CAYm1)	240	12	20	5
2024-25(CAY)	300	17	18	5
Average	260	13	20	5

8.2 Qualification of Faculty Teaching First Year Common Courses (5) Total Marks 3.33

Institute Marks : 3.33

Year	x (Number Of Regular Faculty with Ph.D)	y (Number Of Regular Faculty with Post graduate Qualification)	RF (Number Of Faculty Members required as per SFR of 20:1	Assessment Of Faculty Qualification [(5x + 3y) / RF]
2022-23	3	10	12	3.00
2023-24	3	11	12	4.00
2024-25	4	12	15	3.00

Average Assessment: 3.33

8.3 First Year Academic Performance (10) Total Marks 7.50

Institute Marks : 7.50

Academic Performance	2024-25	2023-24	2022-23
Mean of CGPA or mean percentage of all successful students(X)	8.25	7.73	8.14
Total Number of successful students(Y)	65.00	92.00	97.00
Total Number of students appeared in the examination(Z)	70.00	105.00	98.00
API [X*(Y/Z)]	7.66	6.77	8.06

Average API[(AP1+AP2+AP3)/3] : 7.50

Assessment [1.5 * Average API] : 7.50

8.4 Attainment of Course Outcomes of first year courses (10) Total Marks 10.00

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

Institute Marks : 5.00

First Year Engineering (2019 Pattern)

[Common to All UG Engineering Programs]

(With effect from Academic Year 2019-20)

Assessment and Attainment Process

Assessment refers to a systematic set of processes undertaken by the institution to identify, collect, and analyze data that evaluates the achievement of **Course Outcomes (COs)** and **Program Outcomes (POs)**. **Attainment** signifies the degree to which students achieve the desired learning outcomes, primarily gauged through academic performance in tests, examinations, and other evaluative tools.

Assessment methods are broadly categorized into **Direct** and **Indirect** approaches. This section focuses on the **Direct Assessment Method**, which provides tangible evidence of student learning by evaluating their performance in unit tests, semester examinations, assignments, and practical assessments. These evaluations are mapped directly to specific COs, which in turn are linked to relevant POs.

Direct Assessment Method

The Direct Assessment Method evaluates the extent to which students achieve COs through continuous assessment tools such as:

- **Internal Assessments** (20% weightage): Unit Tests, Assignments, and other classroom-based evaluations.
- **External Assessments** (80% weightage): University In-Semester and End-Semester Examinations.

Each component is aligned with specific COs. Internal assessments assess student performance via unit-wise tests and assignments, offering insights into their conceptual understanding, technical skills, and communication abilities. Assignments may also include oral components to further evaluate comprehension and articulation.

University examinations are evaluated after result declaration, and the marks obtained in In-Semester (30 marks) and End-Semester (70 marks) are mapped against COs and corresponding POs. The cumulative data offers a quantitative measure of attainment for each course.

Attainment Levels

Course Outcome attainment is calculated based on the percentage of students exceeding a predefined target:

- **Level 1:** ≥ 40% of students score above the set target
- **Level 2:** ≥ 50% of students score above the set target
- **Level 3:** ≥ 60% of students score above the set target

At the beginning of each semester, faculty define the **Course Set Target** based on the average marks of all students. If the **Course Attainment** meets or exceeds this target, the course is considered **Attained**; otherwise, it is marked as **Not Attained**, prompting identification of improvement areas and the formulation of an **Action Plan**.

Corrective Measures for Non-Attainment of COs and POs

When CO and/or PO attainment targets are not met, the following corrective actions are initiated:

1. **Revision of Teaching Methodologies**
   Instructional strategies are evaluated and improved to better align with COs and support effective student learning.
2. **Improvement of Assessment Tools**
   Assessment methods are reviewed to ensure they accurately measure student performance with respect to the intended outcomes.
3. **Faculty Development Initiatives**
   Faculty members are encouraged to participate in Faculty Development Programs to enhance teaching effectiveness and promote adoption of innovative pedagogical techniques.
4. **Enhancement of Learning Resources**
   Academic materials and digital content are updated or expanded to provide comprehensive support for student learning.
5. **Strengthening Student Support Services**
   Additional mentoring, remedial classes, and counseling are offered to assist students in meeting the expected COs and POs.

These actions aim to continuously improve educational quality and ensure that students achieve the desired graduate attributes.

Structure of Direct Assessment Implementation

The continuous internal evaluation is structured as follows:

- **Unit Test I** (30 marks) covers Units 1 and 2.
- **Unit Test II** (30 marks) covers Units 4 and 5.
- **Assignment I** (15 marks) evaluates Unit 3.
- **Assignment II** (15 marks) evaluates Unit 6.

Assignments are designed to promote self-learning and are assessed not just on written content but also through **oral examinations**, focusing on comprehension, communication, and technical knowledge.

For university examinations:

- **In-Semester Exam** (30 marks) covers the first two units.
- **End-Semester Exam** (70 marks) covers the remaining four units.

Final grades and marks are published in the university mark sheet, as per the defined **university evaluation scheme** (refer to Table 8.4.1.1).

Table 8.4.1.1: University marks scheme

Marks Range	Grade Points	Grade	
90-100	10	O	Outstanding
80-89	9	A	Very Good
70-79	8	B	Good
60-69	7	C	Fair
50-59	6	D	Average
40-49	5	E	Below Average
Below 40	0	F	Fail
FX	Detained, Repeat the Course		
IC	Incomplete- Absent for Exam but continue for course		
AC	Audit Course Completed		
ACN	Audit Course Not Completed		

Theory Course Performance – University Assessment

The University Examination scheme has two examinations, first is In-semester examination for 30Marks with 1 hr. duration and an End-semester examination for 70 Marks of 2 and a half hr duration. All the COs are distributed as shown in Table 8.4.1.2

Table 8.4.1.2: Distribution of COs for University Theory Exam

Assessment Tool	CO1	CO2	CO3	CO4	CO5	CO6

University Theory In semester Exam	15%	15%				
University Theory End semester Exam			18%	17%	18%	17%

Theory Course Performance – Internal Assessment

Internal Assessment performance is calculated based on the marks scored by the student in Unit Test-I (30), Unit Test-II (30), and Assignment. Assignment is given for each unit and all subjects for self-learning. The COs are distributed as shown in Table 8.4.1.3

Table 8.4.1.3 Distribution % of COs (Theory)

Assessment Tool	CO1	CO2	CO3	CO4	CO5	CO6
Unit Test – I	15%	15%				
Unit Test - II				20%	20%	
Assignment I			15%			
Assignment II						15%

The overall Percentage Distribution for assessing COs based on Internal assessment tests for theory subjects is shown in Table 8.4.1.4

Table 8.4.1.4 Distribution % of Assessment Methods (Theory)

Assessment Tool	UT - I	UT - II	Assignment - I	Assignment -II
% Distribution	30%	40%	15%	15%

Lab Performance: Internal Assessment

During the Laboratory session, the student practically performs all the experiments with the help of various equipment’s and software to enrich their knowledge in various domains. The students maintain the observations and practical notebook for each Laboratory course which reflects their work during the laboratory session and verified by the respective subject teacher. Lab assessment is carried out on continuous basis and record is maintained in the Academic Record Book.

National Education Policy (NEP)-2020 Compliant Curriculum

First Year Engineering (2024 Pattern)

[Common to All UG Engineering Programs]

(With effect from Academic Year 2024-25)

Guidelines for Examination Scheme

Theory Examination: The theory examination shall be conducted in two different parts Comprehensive Continuous Evaluation (CCE) and End-Semester Examination (ESE).

Internal Evaluation Comprehensive Continuous Evaluation (CCE) of 30 marks

University Evaluation End-Semester Examination (ESE) of 70 marks

Comprehensive Continuous Evaluation (CCE)

Comprehensive Continuous Evaluation (CCE) of 30 marks based on all the Units of course syllabus to be scheduled and conducted at Department level. To design a Comprehensive Continuous Evaluation (CCE**)** scheme for a theory subject of 30 marks with the specified parameters, the allocation of marks and the structure can be detailed as follows:

Table 8.4.1.5 Distribution of Assessment Marks

Sr.	Parameters	Marks	Coverage of Units
1.	Unit Test	12 Marks	Units 1 & Unit 2 (6 Marks/Unit)
2.	Assignments / Case Study	12 Marks	Units 3 & Unit 4 (6 Marks/Unit)
3.	Seminar Presentation / Open Book Test/ Quiz	06 Marks	Unit 5

Table 8.4.1.6 Distribution % of COs CCE (Theory)

Assessment Tool	CO1	CO2	CO3	CO4	CO5
Unit Test – I	6%	6%			
Assignment I			6%		
Assignment II				6%	
Seminar Presentation / Open Book Test/ Quiz					6%

Format and Implementation of Comprehensive Continuous Evaluation (CCE)

Unit Test:

Format: Questions designed as per Blooms Taxonomy guidelines to assess various cognitive levels (Remember, Understand, Apply, Analyze, Evaluate, Create).

Implementation: Schedule the test after completing Units 1 and 2. Ensure the question paper is balanced and covers key concepts and applications.

Sample Question Distribution:

- Remembering (2 Marks): Define key terms related to [Topic from Units 1 and 2].
- Understanding (2 Marks): Explain the principle of [Concept] in [Context].
- Applying (2 Marks): Demonstrate how [Concept] can be used in [Scenario].
- Analyzing (3 Marks): Compare & contrast [Two related concepts] from Units 1 and 2.
- Evaluating (3 Marks): Evaluate the effectiveness of [Theory/Model] in [Situation].

Assignments / Case Study:

Students should submit one assignment or one Case Study Report based on Unit 3 and one assignment or one Case Study Report based on Unit 4.

Format: Problem-solving tasks, theoretical questions, practical exercises, or case studies that require in-depth analysis and application of concepts.

Implementation: Distribute the assignments or case study after covering Units 3 and 4. Provide clear guidelines and a rubric for evaluation.

Seminar Presentation:

Seminar Presentation Format:

- Oral presentation on a topic from Unit 5, followed by a Q&A session.
- Deliverables: Presentation slides, a summary report in 2 to 3 pages, and performance during the presentation.

Implementation: Schedule the seminar presentations towards the end of the course. Provide students with ample time to prepare and offer guidance on presentation skills.

Open Book Test:

Format: Analytical and application-based questions to assess depth of understanding.

Implementation: Schedule the open book test towards the end of the course, ensuring it covers critical aspects of Unit 5.

Quiz :

Format: Quizzes can help your students practice existing knowledge while stimulating interest in learning about new topic in that course. You can set your quizzes to be completed individually or in small groups.

Implementation: Online tools and software can be used create quiz. Each quiz is made up of a variety of question types including multiple choice, missing words, true or false etc

End-Semester Examination (ESE)

End-Semester Examination (ESE) of 70 marks written theory examination based on all the unit of course syllabus scheduled by university. Question papers will be sent by the University through QPD (Question Paper Delivery). University will schedule and conduct ESE at the end of the semester.

Question Paper Design

Below structure is to be followed to design an End-Semester Examination (ESE) for a theory subject of 70 marks on all 5 units of the syllabus with questions set as per Blooms Taxonomy guidelines and 14 marks allocated per unit.

Balanced Coverage: Ensure balanced coverage of all units with questions that assess different cognitive levels of Blooms Taxonomy: Remember, Understand, Apply, Analyze, Evaluate, and Create. The questions should be structured to cover:

- Remembering: Basic recall of facts and concepts.
- Understanding: Explanation of ideas or concepts.
- Applying: Use of information in new situations.
- Analyzing: Drawing connections among ideas.
- Evaluating: Justifying a decision or course of action.
- Creating: Producing new or original work (if applicable).

Detailed Scheme: Unit-Wise Allocation (14 Marks per Unit): Each unit will have a combination of questions designed to assess different cognitive levels. By following this scheme, you can ensure a comprehensive and fair assessment of students understanding and application of the course material, adhering to Blooms Taxonomy guidelines for cognitive skills evaluation.

Table 8.4.1.7 Distribution % of COs ESE (Theory)

Assessment Tool	CO1	CO2	CO3	CO4	CO5
ESE	14%	14%	14%	14%	14%

Guidelines for Term Work Evaluation

Term Work assessment shall be conducted for the theory courses, lab practical, VSE, IKS, AEC and CCC assignments submitted in journal form. Term work is continuous assessment based on work done, submission of work in the form of report/journal, timely completion, attendance, and understanding.

It should be assessed by subject teacher of the institute and the final grade for a Term Work shall be assigned based on the performance of the student and is to be submitted to the Savitribai Phule Pune University (SPPU) at the end of the semester.

Evaluation Criteria:

Completeness (20%): All practical assignments are included, completed, and properly labeled. Reflective entries are present for each practical assignment.

Quality of Work (40%): Practical assignments are completed with a high level of accuracy and thoroughness. Demonstrates a strong understanding of practical techniques and principles. Reflective entries provide meaningful insights into the learning process.

Organization (20%): The journal is well-organized and easy to navigate. Practical assignments and reflections are clearly labeled and ordered chronologically. Supplementary materials are appropriately linked and referenced.

Presentation (10%): The journal is neatly presented and free of spelling and grammatical errors. Includes a cover page with the students name, course title, and submission date. Utilizes a consistent format and style throughout.

Creativity and Engagement (10%): Demonstrates creativity in approach and presentation. Engages deeply with the practical work, going beyond surface-level understanding. Shows evidence of critical thinking and personal engagement with the assignments.

Table 8.4.1.8 Distribution % of COs TW (Practical/Tutorial)

Assessment Tool	CO1	CO2	CO3	CO4	CO5
TW/PR/Tutorial	20%	20%	20%	20%	20%

8.4.2 Record the attainment of Course Outcomes of all first year courses (5)

Institute Marks : 5.00

Justification for Setting CO Attainment Target Levels

The Course Outcome (CO) attainment target levels were set as:

- **1.5 for 2021–22**
- **1.6 for 2022–23**
- **1.7 for 2023–24**

These targets were decided based on the following reasons:

1. **Based on Past Performance:**
   The target of 1.5 was set in 2021–22 by looking at the average performance of students in previous years. It was a realistic starting point.
2. **Gradual Improvement:**
   To improve the quality of teaching and learning each year, we increased the target slightly. This helps faculty to focus more on student learning and take steps like giving better study materials and extra support.
3. **Continuous Improvement:**
   This step-by-step increase helps the institute improve steadily over time. It encourages teachers and students to do better each year.

The attainment level for each course is determined by the respective faculty member. For all first-year subjects in the academic years 2021–22, 2022–23, and 2023–24, Course Outcome (CO) attainment has been evaluated using a weighted system: 80% from university examination performance and 20% from internal assessment tests.

Table 8.4.2.1 Attainment of Course Outcomes (AY 2023-24)

Course Code NBA	Subject code	Subject name	Target Level for CO Attainment	Total CO Attainment	Remarks
C1101	107001	Engineering Mathematics-I	1.7	2.14	Attained
C1102P	107002	Engineering Physics	1.7	2.1	Attained
C1102C	107009	Engineering Chemistry	1.7	2.2	Attained
C1103	102003	Systems in Mechanical Engineering	1.7	2.11	Attained
C1104EE	103004	Basic Electrical Engineering	1.7	2.83	Attained

C1104EX	104010	Basic Electronics Engineering	1.7	1.85	Attained
C1105P	110005	Programming and Problem Solving	1.7	1.5	Not Attained
C1105E	101011	Engineering Mechanics	1.7	2.35	Attained
C1201	107008	Engineering Mathematics-II	1.7	2.14	Attained
C1205	102012	Engineering Graphics	1.7	2.3	Attained
C1106	111006	Workshop	1.7	3	Attained
C1206	110013	Project Based Learning	1.7	3	Attained

Table 8.4.2.2 Attainment of Course Outcomes (AY 2022-23)

Course Code NBA	Subject code	Subject name	Target Level for CO Attainment	Total CO Attainment	Remarks
C1101	107001	Engineering Mathematics-I	1.6	1.71	Attained
C1102P	107002	Engineering Physics	1.6	2.10	Attained
C1102C	107009	Engineering Chemistry	1.6	2.34	Attained
C1103	102003	Systems in Mechanical Engineering	1.6	2.21	Attained
C1104EE	103004	Basic Electrical Engineering	1.6	1.62	Attained

C1104EX	104010	Basic Electronics Engineering	1.6	2.27	Attained
C1105P	110005	Programming and Problem Solving	1.6	2.4	Attained
C1105E	101011	Engineering Mechanics	1.6	2.03	Attained
C1201	107008	Engineering Mathematics-II	1.6	2.13	Attained
C1205	102012	Engineering Graphics	1.6	2.4	Attained
C1106	111006	Workshop	1.6	3	Attained
C1206	110013	Project Based learning	1.6	3	Attained

Table 8.4.2.3 Attainment of Course Outcomes (AY 2021-22)

Course Code NBA	Subject code	Subject name	Target Level for CO Attainment	Total CO Attainment	Remarks
C1101	107001	Engineering Mathematics-I	1.5	2.18	Attained
C1102P	107002	Engineering Physics	1.5	1.80	Attained
C1102C	107009	Engineering Chemistry	1.5	2.4	Attained
C1103	102003	Systems in Mechanical Engineering	1.5	2.44	Attained
C1104EE	103004	Basic Electrical Engineering	1.5	1.81	Attained

C1104EX	104010	Basic Electronics Engineering	1.5	2.44	Attained
C1105P	110005	Programming and Problem Solving	1.5	3	Attained
C1105E	101011	Engineering Mechanics	1.5	2.40	Attained
C1201	107008	Engineering Mathematics-II	1.5	2	Attained
C1205	102012	Engineering Graphics	1.5	2.4	Attained
C1106	111006	Workshop	1.5	3	Attained
C1206	110013	Project Based Learning	1.5	3	Attained

8.5 Attainment of Program Outcomes from first year courses (20) Total Marks 10.00

8.5.1 Indicate results of evaluation of ezch relevant PO and/ or PSO, if applicable (15) Institute Marks : 5.00

POs Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C1101	2.14	2.14	PO3	1.43	1.43	PO6	PO7	PO8	PO9	0.71	PO11	0.71
C1102P	2.10	1.4	1.4	2.1	1.68	PO6	PO7	PO8	2.1	1.4	PO11	1.4
C1102C	2.2	1.8	1.3	PO4	1.2	2.2	1.1	PO8	1.3	1.5	PO11	0.7
C1103	2.11	1.64	1.13	0.84	0.7	1.41	1.27	PO8	PO9	0.7	PO11	0.7
C1104EE	2.51	1.88	1.88	1.88	PO5	1.88	PO7	PO8	0.94	0.94	PO11	1.41
C1104EX	1.85	1.13	1.03	PO4	0.93	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C1105P	1	1	0.92	1	1	PO6	PO7	PO8	0.63	1	PO11	1
C1105E	2.35	2.35	1.31	0.78	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C1201	2.14	2.14	PO3	1.43	1.43	PO6	PO7	PO8	PO9	0.71	PO11	0.71
C1205	2.3	1.53	1.15	PO4	1.66	1.33	PO7	PO8	PO9	1.28	PO11	PO12
C1106	3	1	3	PO4	PO5	3	PO7	1	2	PO10	PO11	2
C1206	3	2	2.75	2.75	2.75	2.25	2.25	2.25	3	2.5	2.25	3

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.22	1.67	1.59	1.53	1.42	2.01	1.54	1.62	1.66	1.19	2.25	1.29
CO Attainment	2.22	1.67	1.59	1.53	1.42	2.01	1.54	1.62	1.66	1.19	2.25	1.29

PSOs Attainment:

Course	PSO1	PSO2	PSO3	PSO4
	PSO1	PSO2	PSO3	PSO4

8.5.2 Actions taken based on the results of evaluation of relevant POs (5)

Institute Marks : 5.00

POs Attainment Levels and Actions for Improvement- (2023-24)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	1.5	2.22	Attainment is good but still 26% below ideal. CO-PO mapping is moderate; deeper lab integration recommended.
Action Taken: Action 1. Extra practice sessions arranged for difficult topics. Action 2. Collaborative learning strategies such as Think-Pair-Share were implemented during key conceptual discussions to promote peer interaction, critical thinking, and deeper understanding of the subject matter.			
PO 2 : Problem Analysis			
PO 2	1.5	1.67	Attainment is above target, but 44% below ideal. Scope exists for deeper conceptual and analytical training.
Action Taken: Action 1. Explained real-world use of science in class. Action 2. Used simple models to explain key concepts.			
PO 3 : Design/development of Solutions			
PO 3	1.5	1.59	Attainment is slightly above target. Still 47% below ideal. Design-thinking needs reformed.
Action Taken: Action 1. Group activities included in tutorials. Action 2. Extra examples solved during lab sessions.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	1.5	1.53	Attainment is barely above target. Moderate mapping. Project -based learning needs enhancement.
Action Taken: Action 1. Small group projects introduced. Action 2. Students asked to present simple solutions to problems.			
PO 5 : Modern Tool Usage			
PO 5	1.5	1.42	Attainment is below target and 53% below from ideal. Tools not well-integrated. Mapping needs improvement.
Action Taken: Action 1. Basic design tasks given as assignments. Action 2. Encouraged students to explain their logic. Action 3. Encouraged students to work with Virtual labs by IIT Bombay and Amrita University.			
PO 6 : The Engineer and Society			
PO 6	1.5	2.01	Attainment is good but still 34% below ideal. CO-PO mapping is moderate; Community projects may help bridge gap.
Action Taken: Action 1. Regular mentor meetings conducted. Action2. Students guided to take part in social activities.			
PO 7 : Environment and Sustainability			
PO 7	1.5	1.54	Attainment is barely above target. 49% below ideal. More experiential learning needed.
Action Taken: Action 1. Poster-making on environment awareness conducted. Action 2. Classroom discussion on sustainable habits.			
PO 8 : Ethics			
PO 8	1.5	1.62	Attainment is above target but 46% below ideal. More focus on Case studies is needed.
Action Taken: Action 1.Discussed basic workplace practices in class.			
PO 9 : Individual and Team Work			
PO 9	1.5	1.66	Attainment is Moderately achieved but below 45% from ideal. Peer assessment or structured group tasks could help.

Action Taken: Action 1. Students were actively encouraged to participate in NSS activities to develop a sense of social responsibility. Action 2. Students were motivated to contribute as volunteers during institutional and community events, enhancing their teamwork and organizational skills.			

PO 10 : Communication

PO 10	1.5	1.19	Target not attained. 60% below ideal. Communication needs strong integration and tracking.
Action Taken: Action 1.Commumication skills are encouraged. Action 2.Group discussions encouraged. Action 3. Basic tips for presentations shared.			

PO 11 : Project Management and Finance

PO 11	1.5	2.25	Though attainment is good ; still 25% below from ideal. Integrating budgeting and real planning exercises for carrying out Mini Projects is needed.
Action Taken: Action 1. Students motivated to join coding or idea competitions Action 2. Simple team activities held in class.			

PO 12 : Life-long Learning

PO 12	1.5	1.29	Target not attained. 56% gap from ideal. Need for structured self-learning modules.
Action Taken: Action 1. Introduced students to professional bodies like IEEE. Action 2. Motivated students to read Journal articles, Technical magazines.			

PSOs Attainment Levels and Actions for Improvement- (2023-24)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Give techniques and solutions by using acquired knowledge and skills.			
PSO 1			
PSO 2 : Design and develop Electronics and Telecommunication-based systems.			
PSO 2			
PSO 3 : Create, select and adapt techniques, resources and tools with understanding of associated limitations.			
PSO 3			
PSO 4 : Identify and address their own needs in the changing world through lifelong learning.			
PSO 4			

9 STUDENT SUPPORT SYSTEMS (50) Total Marks 44.00

9.1 Mentoring system to help at individual level (5) Total Marks 4.00

Institute Marks : 4.00

Student Mentoring System

A mentoring relationship is established to support students in developing their skills, expanding their knowledge, and fostering personal and professional growth. Our students come from various parts of Maharashtra also from India, often residing far from home. So, they require consistent mentoring and counseling support, both on a personal and professional level. To address this, each faculty member is assigned as a mentor to a group of 20 to 25 students and the meetings conducted thrice in a semester. Additionally, a **Guardian Faculty Member (GFM)** is appointed for each class to ensure the smooth conduct of academic activities.

The institute has implemented a robust and effective mentoring system designed to assist students in multiple domains—**coursework, laboratory work, professional guidance, career advancement**, and a**ll-round Development**. This mentoring is provided by the **Principal**, **Heads of Departments (HODs)**, **Guardian Faculty Members (GFMs)**, **Course Coordinators**, and other **professional experts**.

Role of the Principal

The Principal addresses students at the beginning of first year, introducing them to academic procedures, available campus facilities, and the curriculum's relevance in the current industrial and societal context. During this session, stakeholders such as alumni and employers are also introduced to inspire students and align them with real-world expectations. The Principal remains accessible to students for academic concerns or facility-related issues via email, SMS, or in-person meetings. Regular updates about important events, academic performance, attendance, and examination schedules are communicated through notices. The Principal holds weekly meetings with the Heads of Departments (HODs), during which he also reviews students' performance in exams and their attendance.

Role of Vice Principal

The Vice Principal plays a pivotal role in ensuring the effectiveness of the student mentoring system. They act as a bridge between the Principal and academic departments, monitoring the mentoring activities across all levels. The Vice Principal regularly reviews reports from HODs, Guardian Faculty Members (GFMs), and Course Coordinators to ensure timely resolution of student concerns related to academics, discipline, or personal issues. They also help design strategies to improve the mentoring framework, address escalated student grievances, and ensure smooth coordination between faculty and administrative units for student support. Through periodic meetings and feedback mechanisms, the Vice Principal ensures that student development remains a continuous and focused priority.

Internal Quality Assurance Cell

IQAC plays a strategic role in enhancing the effectiveness and quality of student mentoring. They ensure that the mentoring system aligns with institutional objectives and quality benchmarks set by accreditation. The coordinator monitors the planning, implementation, and documentation of mentoring activities across departments. They collect feedback from students and mentors to assess the impact of mentoring and recommend improvements. By conducting awareness sessions through Anti-ragging, ICC and SGRC cells, the IQAC Coordinator ensures that mentoring contributes to the overall academic, emotional, and professional development of students in a systematic and measurable manner.

Role of the Head of Department (HOD)

HOD's meets with students, accompanied by the GFM. These meetings provide a platform for students to voice concerns regarding academics, discipline, or infrastructural facilities. The HOD takes necessary action or escalates the matter to the Principal, if required. HODs also communicate essential information via instructions, notices and online platform.

Role of the Guardian Faculty Member (GFM)

GFM is a Guardian faculty member of a particular class who plays an important role in mentoring of students. GFM also acts as mediator between student and parents.

- **Objectives of GFM:**

1. To bridge the gap between the students, faculty and parents.
2. To monitor the academic involvement & progress of students.
3. To solve issues faced by the students & address their grievances.
4. To communicate with the wards parents & provide necessary counseling.
5. To enlighten students on professional ethics & conduct.

- **Responsibilities of a GFM:**
- Ensuring timely conduct of lectures and practical sessions, arranging substitutes when faculty are on leave.
- Holding regular meetings with students to discuss academic or personal issues.
- Identifying students with low attendance and offering guidance.
- Maintaining regular communication through calls, WhatsApp, and emails.
- Assisting with administrative processes, academic grievances, and personal matters.
- Promote the students to participate in co-curricular & extra- curricular activities for their all-round development as well as competitive examinations for their further studies.
- Staying in touch with parents to discuss student progress.

- Providing support during medical emergencies and offering motivation for academic success.

Types of Mentoring

- **Professional Guidance**

Each department has a Training and Placement Coordinator who works in coordination with the central Training and Placement Cell to connect with the students. Seminars and workshops are conducted to keep students informed about current industry trends and to equip them with essential skills. Industry experts, HR managers, technical experts interact with the students in online or offline mode for providing professional guidance. AWS academy and Oracle academy industry experts provide company specific professional guidance by conducting workshops, seminars and certification courses at the institute level. Faculty members also guide students on emerging areas such as startups, entrepreneurship, and innovations in various industries through various courses taught in the curriculum such as Project Management, Digital Marketing, Innovation & Entrepreneurship, Digital Business Management etc.

- **Career Advancement**

Institute has an exclusive Career Guidance cell to support students in their higher education and career goals. Guest lectures and seminars of eminent speakers are organized to conduct sessions such as GATE, GRE, TOEFL, entrepreneurship, and competitive exams. Many of these initiatives are also conducted through active student chapters at the departmental level. Students are motivated to undertake projects, write technical papers for conferences and journals, and participate in various technical competitions.

- **Coursework-Specific Mentoring**

Coursework-specific mentoring focuses on supporting students in understanding and excelling in their academic subjects. Faculty members play a key role in this by teaching both theory and practical of the syllabus. They assist students in resolving doubts, guide them in solving question papers, and help them prepare for internal assessments and oral examinations. Remedial lectures and practical are conducted by the course teacher for better understanding of the concept, topics and experiments of the respective course. Additionally, course teacher takes feedback in regular classes for continuously improving the teaching-learning process.

- **Laboratory-Specific Mentoring**

For laboratory sessions, each faculty member is assigned a batch of students from particular class. The laboratory manuals are prepared to give instructions and procedures for conducting the laboratory experiments. Continuous assessment is carried out for maintaining discipline, punctuality and regularity. Faculty help students to understand experimental setups, conduct experiments, and address queries specific to lab work. Feedback is taken about the understanding of assignment/experiment. Special attention is given towards slow learners while performing the laboratory experiments. Tutorials are discussed in groups so that the queries are resolved.

- **All-round Development**

The institute promotes holistic development by encouraging students to participate in various social clubs that enhance both interpersonal and intrapersonal skills. Opportunities are provided for organizing and engaging in sports activities, while the annual national-level technical and cultural festival fosters creativity, leadership, and teamwork. Students are also motivated to contribute articles, poems, and both technical and non-technical content to the college magazine.

The **National Service Scheme (NSS)** plays a vital role in shaping students personalities through community service, inspiring them to take part in social initiatives that build responsibility, discipline, and a spirit of national integration. Under the **Student Development Section (SDO)**, the institute organizes self-defense workshops and gender sensitization seminars. Additionally, students are encouraged to benefit from the Earn and Learn Scheme to support their education financially while gaining practical experience. Internal complaint committee, Anti-ragging committee, Grievances committee are constituted at the institute level to support the students.

- **Faculty as a Mentor**

Each class has three batches. One faculty is assigned as a student mentor for each batch. Faculty member conducts batch-wise mentoring. There are three mentoring meetings as per academic calendar in a semester. Students issues are discussed in meetings, and staff members offer advice to students with their coursework, extracurricular activities, and co-curricular. Attendance, Unit test performance, family and personal issues, issues related to hostel food and facilities, payment of college and examination fees, remedial actions etc. are the points of discussion in the meetings. Students propose actions to be taken for improvement in the teaching learning process and other support facilities. These suggestions are conveyed to the appropriate level of authority for further necessary action.

- **Mentor Mentee Ratio department wise:**

Department Name: FE (Engineering sciences & Allied Engineering):

Table 9.1.1: Mentor Mentee Ratio ES&AE department

Academic Year	Class	No. of Students	Total Students	No. of Faculty	Number of students per mentor

2024-25	FE DIV-1	69	343	15	22.87
	FE DIV-2	69			
	FE DIV-3	70			
	FE DIV-4	68			
	FE DIV-5	67			
2023-24	FE DIV-1	56	224	10	22.4
	FE DIV-2	56			
	FE DIV-3	56			
	FE DIV-4	56			
2022-23	FE DIV-1	64	255	09	28.33
	FE DIV-2	64			
	FE DIV-3	64			
	FE DIV-4	63			
Average Faculty Mentor: Student Mentee Ratio					**1:24**

Department Name: Electronics &Telecommunication Engg.

Table 9.1.2: Mentor Mentee Ratio E & Tc Engineering Department

Academic Year	Class	No. of Students	Total Students	No. of Faculty	Number of students per mentor
2024-25	SE	153	412	20	20.6
	TE	136			
	BE	123			
2023-24	SE	143	413	22	18.77
	TE	132			
	BE	138			
2022-23	SE	152	390	23	16.95
	TE	148			
	BE	90			
Average Faculty Mentor: Student Mentee Ratio					**1:19**

List of Student Mentor

Academic Year-2024-25 Semester-II

Table 9.1.3: Mentor assignment for E & Tc Engineering department

Class	GFM	Batch	Student Mentor

SE I	Prof. S.M. Thorat	1 to 19	Prof. Dr. S. L. Kore
		20 to 38	Prof. Dr. S.A Dhole
		39 to 57	Prof. S.M. Thorat
		58 to 77	Prof. Dr. S. R. Patil
SE II	Prof. Dr. R.M. Shamalik	1 to 19	Prof. Dr. S. S. Chorage
		20 to 38	Prof. K.R. Choudhary
		39 to 57	Prof. Dr. R. M. Shamalik
		58 to 76	Prof. Dr. S.M. Jagdale
TE I	Prof. S.M. Patil	1 to 22	Prof. S.M. Patil
		22 to 44	Prof. A. P. Yadav
		45 to 66	Prof. Dr. S. M. Rajbhoj
TE II	Prof. V.P. Mulik	1 to 23	Prof. R. J. Sapkal
		23 to 47	Prof. V. P. Mulik
		48 to 71	Prof. S.V. Shelke
BE I	Prof. M.S. Kasar	1 to 25	Prof. S.A. Itkarkar
		26 to 50	Prof. P.R. Yawle
		51 to 57	Prof. M. S. Kasar
BE II	Prof. Dr. S. S. Salunkhe	1 to 18	Prof. M. S. Kasar
		19 to 43	Prof. Dr. S. S. Salunkhe
		44 to 66	Prof. Dr. V. R. Pawar

9.2 Feedback analysis and reward /corrective measures taken, if any (10) Total Marks 9.00

Institute Marks : 9.00

YES, feedback is collected for all courses.

For every course, student input is gathered once every semester. Over 90 percent of students participate in the feedback. At the conclusion of specific study modules, students receive an email invitation with a link to a quick online feedback form. Over the course of a single academic year, this process takes place every six months. As per the institute academic calendar at the conclusion of each odd or even semester in a respective academic year, the student feedback process is carried out.

The following concerns are the main emphasis of the student feedback form:

1. Basic questions related to the study unit
2. A comparison between the description of the study unit and its actual delivery
3. Methodology for delivering lectures
4. Qualities of lecturers
5. Assessment technique
6. Administration and resources
7. Extra remarks (if any)

- **Effectiveness of feedback**

1. To give students a chance to offer feedback on the caliber of educational experiences, as needed in advance of and during review procedures
2. To evaluate the effectiveness of instructional offerings in light of students expectations
3. To offer input to enhance the study units content and/or delivery.
4. To Improve teaching learning process
5. To Improve CO-PO attainment

- **The Types of stakeholder's feedback collected are as follows:**

1. Student's Feedback Form
2. Parent's Feedback form
3. Course Feedback Form
4. Employers Feedback Form
5. Alumni Feedback Form
6. Graduate Exit Survey
7. External Examiner Feedback
8. External internship Mentor feedback
9. Workshop/ seminar/ activity feedback

- **Feedback Process –**

The Institute is committed to maintaining a robust feedback mechanism involving various stakeholders. The centralized feedback committee collects feedback from students, teachers, parents, alumni, and employers to enhance the overall development of the institution. Key aspects of the feedback process include:

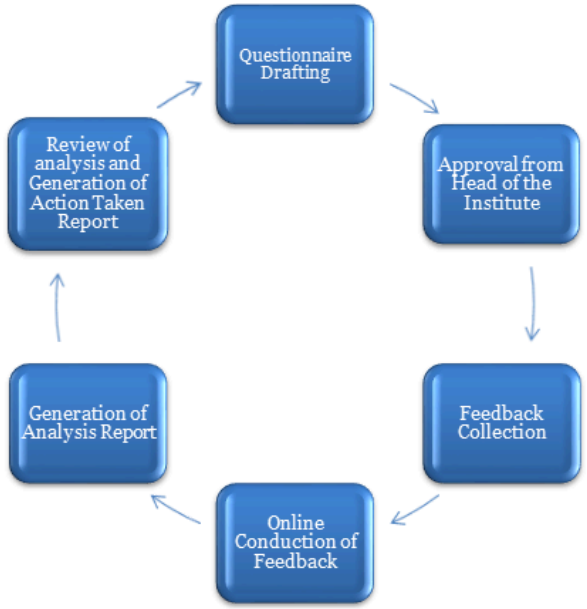


Fig. 9.2.1 Feedback Process

- **Questionnaire Drafting**

Drafting of questionnaires for feedback involves meticulous formulation of questions based on mapping of program outcomes (Pos) and perspectives from stakeholders, with a focus on areas identified for improvement. This process adheres to NAAC guidelines, ensuring questions are structured to align with institutional goals.

- **Approval from the Head of the Institute**

Approval from the Head of the institute further ensures that the feedback collection process facilitates comprehensive insights from stakeholders, contributing to continuous enhancement and compliance with accreditation standards.

- **Feedback Collection**

Feedback is collected through different methods over the years to ensure maximum participation and accurate data gathering.

2018-2019 to 2021-2022: Methods Used: Feedback was gathered via Google Forms.

Organization: Stakeholders were managed through Google Groups for efficient communication and distribution of forms.

2022-2023 Onwards: The new feedback collection approach utilizes the Institutes ERP portal, "vmedulife," where faculty and students log in to submit feedback on educational aspects. Employers, alumni, and other stakeholders provide feedback through external links generated from the "vmedulife" portal. This transition enhances data management, accessibility, and participation, facilitating comprehensive insights for continuous institutional improvement.

- **Generation of Analysis Report**:

Upon collection, the feedback will undergo analysis, utilizing appropriate statistical methods tailored to each stakeholder group. Results will be presented graphically to enhance clarity and understanding, aligning with the mode of data collection (offline or online).

- **Review of analysis and Generation of Action Taken Report**

Analysis results are reviewed by committees such as IQAC, DAB, and PAC. Meetings with faculty, staff, and administration are held to discuss findings and necessary actions.

- **Action Planning:**

Action plans are developed based on the review. Responsibilities are assigned to relevant individuals or departments.

- **Implementation of Actions:**

Actions such as additional classes, career programs, and the incorporation of modern pedagogical tools are implemented. Regular monitoring ensures proper implementation. Actions are monitored and documented.

- **Reporting and Feedback Loop:**

Outcomes are reported to stakeholders. Stakeholder feedback is collected for future planning and continuous improvement. This systematic approach ensures effective utilization of feedback for continuous improvement in academic and administrative practices.

- **Basis of reward / corrective/remedial measures for feedback on faculty by students**

From the Academic year 2024 -2025 institute has decided, faculty members graded above 90% will receive a certificate of appreciation and a token of recognition for each course. Those graded below 90% will be individually counselled by the HOD/Principal and advised to seek assistance from senior faculty, attend refresher/orientation courses, observe senior faculty classes, watch relevant instructional videos, and interact with peers, students, and alumni to identify and address weak areas. However, faculty may opt to withdraw from the subject for one semester for thorough preparation and improvement. This iterative process is designed to enhance teaching quality.

- **TYPES OF FEEDBACK**

Feedback mechanisms are integral in maintaining and enhancing the quality of academic and administrative processes in educational institutions. At our institute, a structured and comprehensive feedback system has been implemented to gather insights from various stakeholders, including students, faculty, alumni, employers, and parents. This system ensures continuous improvement and alignment with stakeholder expectations, contributing to the institutions overall quality and effectiveness. The following types of feedback are collected:

1. **Academic Performance and Institution Ambience Feedback:**

Collected annually from teachers, students, alumni, and employers to assess and improve the academic environment and overall institutional atmosphere. This feedback is initiated from academic year 22-23

2. **Faculty Feedback by Students:**

Conducted at the end of every semester to enhance the teaching-learning process. Students provide feedback on faculty performance, which is crucial for identifying areas of improvement. Questionaire for faculty feedback is as follows:

Title: BVCOEW-Course Feedback for Semester-II A.Y.2024-25

Class: SE SEM II DIV II [Electronics and Telecommunication Engg]

Details: Object Oriented Programming - Theory | Regular (Kalyani Choudhary)

Table 9.2.1 Questionnaire for Course Feedback

Q. No.	Questions	Response %
Q. 1	Whether the Course Objectives are Clear and Specific.	51.35
Q. 2	To what extent you have understood the basic concepts of this course.	92.70
Q.3	Whether the course is appropriate at this semester.	52.70
Q. 4	Whether the prerequisite contents of the course covered earlier.	52.03
Q. 5	Whether the course is well organized and structured (e.g. Unit wise content flow, inclusive of important information).	51.35
Q. 6	Whether the course is well structured to achieve the learning outcomes (there was a good balance of no of lectures ,tutorials and practical in a week).	51.35
Q. 7	Which topics should be added or covered in greater depth.	Text
Q. 8	At what extent this course do you feel applicable to IT /Computer /EnTC industry.	Text
Q.9	Whether the course content cover sufficient references.	52.70
Q. 10	Any other Suggestions.	Text

3. **NAAC Student Satisfaction Survey:**

An annual survey is conducted at the end of each academic year to gauge overall student satisfaction and identify areas needing attention.

4. **Graduate Exit Survey:**

Collected from final-year students at the time of their project examinations. This feedback focuses on the students overall educational experience and preparedness for future endeavours.

5. **External Feedback Based on Project Examination:**

Initiated this year, external examiners provide feedback during project examinations to ensure an unbiased assessment of student performance.

Title: BVCOEW-BE EnTC Project Stage-2 external Feedback A.Y. 24-25

Class: BE [Electronics and Telecommunication Engg]

Table 9.2.2 Questionnaire for External Examiner

Q. No.	Questions	Response %
Q. 1	Name of External Examiner.	Text
Q. 2	Institute/Company Name of External Examiner.	Text
Q.3	Name of Internal Examiner.	Text
Q. 4	Date of Project Examination.	Text
Q. 5	Name of the Programme.	Text
Q. 6	Name of Project Title.	Text
Q. 7	Understanding of Problem Statement.	81.71
Q. 8	Analysis of the Project.	79.27
Q.9	Level of Literature Survey.	76.22
Q. 10	Understanding of Project Design.	80.49
Q. 11	Skill Level of the students for actual implementation	79.88
Q. 12	Utility of the project for Industry or society	80.49
Q. 13	Potential for taking the project ahead to user level	79.88
Q. 14	Soft Skills - Communication Skills, Team spirit (if any for working in group) & Presentation of project work	80.49
Q. 15	Efforts in making the prototype of the solution and testing	80.1
Q. 16	Any other suggestions related to project	Text

6. **Internship External Mentor Feedback:**

Gathered from internship mentors at the end of each students internship. This feedback evaluates the practical skills and professional development of students during their internships.

7. **Activity-Based Feedback:**

Collected from students at the end of each activity organized by the institution. This feedback helps in assessing the effectiveness and impact of various extracurricular and co-curricular activities.

8. **Syllabus and Curriculum Feedback:**

Feedback regarding the syllabus and its implementation is gathered every semester from teachers and students, and at the end of the academic year from alumni and employers. This feedback is crucial for conveying appropriate changes in courses to the Board of Study members of the respective departments, ensuring that the curriculum remains relevant and up to date. As our institute is affiliated with Savitribai Phule University, this process helps maintain academic standards and align with university guidelines.

9. **Alumni Feedback:**

Collected during alumni meets, this feedback provides insights into the long-term impact of the educational programs and suggestions for future improvements.

Title: Alumni Meet A.Y. 24-25

Class: BE [Electronics and Telecommunication Engg]

Table 9.2.3 Questionnaire for Alumni Meet

Q. No.	Questions	Response %
Q. 1	Name of the Alumni	Text
Q. 2	Department	81.58
Q.3	Passout Batch	Text
Q. 4	Do you Feel Proud to be associated with BVCOEW as an Alumna ?	100
Q. 5	Are you willing to contribute to the development of your Alma Matter?	98.42
Q. 6	Were your grievances properly handled when you were a student?	100
Q. 7	How do you rate developement activities organised by college for your overall development ?(A: Highly Efficient ; B: Efficient C: Satisfactory D: Below Satisfaction)	96.32
Q. 8	Rate the Laboratories and Equipments as they were during your span as a student in BVCOEW.(A: Highly Efficient ; B: Efficient C: Satisfactory D: Below Satisfaction)	94.21
Q.9	Rate the Library Facility as they were during your span as a student at BVCOEW.(A: Highly Efficient ; B: Efficient C: Satisfactory D: Below Satisfaction)	96.32
Q. 10	Rate the Computer Facility as they were during your span as a student at BVCOEW.(A: Highly Efficient ; B: Efficient C: Satisfactory D: Below Satisfaction)	95.26
Q. 11	Rate the Internet and WiIfi Facility as they were during your span as a student at BVCOEW.(A: Highly Efficient ; B: Efficient C: Satisfactory D: Below Satisfaction)	93.68
Q. 12	Have you obtained sufficient technical know- how in theory and practical at BVCOEW ?	100
Q. 13	Is the Education impaired useful and relevant in your present Job?	98.95
Q. 14	Rate the Industry Oriented Projects (an academic initiative) taken by BVCOEW to improve technical knowledge of students.	93.68
Q. 15	Rate the seminars and workshops (an academic initiative) taken by BVCOEW to improve technical knowledge of students.	96.32
Q. 16	Rate the Special Training sessions for bridging Industry Gap (an academic initiative) taken by BVCOEW to improve technical knowledge of students.	95.26
Q. 17	Have you ever been appreciated by your Company? If Yes, Please share details.	Text
Q. 18	Have you ever been appreciated by Faculty at BVCOEW? If Yes, Please share details.	Text
Q. 19	Have you ever been appreciated by your Peers? If Yes, Please share details.	Text

Q. 20	Have you made any significant achievement as a student at BVCOEW? If Yes, Please share details	Text
Q. 21	Have you made any significant achievement as an employee of your organization? If Yes, Please share details	Text
Q. 22	Suggestions for Improvement for your Department.	Text
Q. 23	Suggestions for Improvement for Institution and areas in which you can contribute as an alumni.	Text
Q. 24	Most memorable moment in the college	Text
Q. 25	Are you aware about the vision and mission of Institute ?	100
Q. 26	Have you contributed for framing the vision and mission of institute or department ?	Text
Q. 27	List the competencies developed at the institute .(For e.g.: Skills such as soft skills ,technical knowhow etc.)	Text
Q. 28	Kindly give suggestions for active functioning of Alumni Association.	Text

10. **Parent Feedback:**

Gathered during parent meets, this feedback helps in understanding the parents perspective on the institutions performance and their childrens development. By systematically collecting and analysing this diverse feedback, the institution can ensure that its programs and services meet the standards expected by all stakeholders, fostering an environment of continuous improvement and excellence.

Title: BVCOEW_Parent(s) Meet Feedback A.Y. 24-25 :Semester-2

Table 9.2.4 Questionnaire for Parent Feedback

Q. No.	Questions	Response %
Q. 1	Full Name of the Parent(s)	Text
Q. 2	Mobile Number	Text
Q.3	Email	Text
Q. 4	Profession	Text
Q. 5	Wards Name	Text
Q. 6	Wards Academic Details	69.47
Q. 7	Branch	60
Q. 8	Roll Number	Text
Q.9	Are you satisfied with the quality of teaching provided by the faculty?	89.47
Q. 10	Does the institute provide adequate academic support for students.	100
Q. 11	Are the laboratory facilities sufficient and well-maintained?	100
Q. 12	Are you satisfied with the availability and condition of infrastructure (classrooms, library, labs, etc.)?	85.26
Q. 13	Is the Girls' Common Room well-maintained and accessible?	100

Q. 14	Are the sports, extracurricular, and recreational facilities adequate?	100
Q. 15	Do you feel the institute provides a safe and secure environment for students?	100
Q. 16	Are anti-ragging measures and grievance redressal mechanisms effective?	100
Q. 17	Are you satisfied with the industry interaction opportunities provided (e.g., internships, seminars, guest lectures)?	100
Q. 18	Are you satisfied with the training and placement support provided by the institute?	100
Q. 19	Does the institute encourage participation in innovation and entrepreneurship activities?	100
Q. 20	Is communication from the institute (regarding academic schedules, events, etc.) timely and clear?	100
Q. 21	Are you satisfied with the counseling and mentoring support provided to students?	100
Q. 22	How would you rate your overall satisfaction with the institute?	87.37
Q. 23	Any other suggestions or feedback to improve the institute	Text

- **Action Taken:**

Faculty feedback analysis is conducted, and an improvement or appreciation letter is provided to the respective faculty member. The faculty feedback analysis includes semester wise satisfactory score and Improvement score for the academic year. Based on the analysis and remarks from the students about the subject, faculty is advised to improve. Failure to improve the same will lead to disciplinary action by the authority. If the Satisfactory score is good, then an Appreciation letter is given to the respective faculty member. Faculty course feedback is taken regularly and suggestions are forwarded to the respective authorities for necessary action. Program Outcomes attainment is calculated based on feedbacks through surveys. Attainment levels are revisited if not attained for continuous improvement. Various programs, focusing on human values, life skills, and employability, are organized based on feedback suggestions for the continual advancement of the Institute. This comprehensive feedback system reflects the Institutes commitment to continuous improvement, ensuring that the influences of students, faculty, alumni, employers, and parents contribute to the ongoing development of the institution. The inclusion of online feedback through the ERP portal demonstrates the Institutes adaptability and commitment to leveraging technology for effective feedback processes.

- **Faculty Feedback Academic Year-2024-25 Semester-I**

Table 9.2.5 Faculty Feedback for Academic Year-2024-25 Semester-I

Sr. No.	Name of the Faculty	Class	No. of Students	Subject	% Feedback
1	Prof. Khot S.T.	S.E. II	75	Electronic Circuits	90.64
2	Prof. Dr. Chorage S.S.	B.E. II	66	Radiation & Microwave	91.27
3	Prof. Dr. Pawar V.R.	T.E. II	71	Digital Signal Processing	93.29
4	Prof. Dr. Rajbhoj S.M.	T.E. I	65	Digital Signal Processing	81.47
5	Prof. Itkarkar S.A.	B.E. I	57	Modernized IoT	86.96
6	Prof. Dr. Kore S.L.	S.E. I	77	Electrical Circuits	87.49
7	Prof. Dr. Dhole S.A.	T.E. I	65	Digital Signal Processing	91.81
8	Prof. Dr. Jagdale S.M.	B.E. I	66	VLSI Design and Technology	87.18
9	Prof. Chaudhari K.R.	S.E. I	75	Data structures	91.39
10	Prof. Salunkhe S.S.	S.E. I	75	Electronic Circuits	88.64
11	Prof. Dr. Bhilegaonkar S.M.	T.E. II	70	Electromagnetic Field Theory	93.22
12	Prof. Kasar M.S.	T.E. I	64	Digital Communication	86.32
13	Prof. Yawale P.R.	B.E. I	57	Cloud Computing	91.65
14	Prof. Mulik V.P.	T.E. I	70	Microcontrollers	92.55
15	Prof. Sapkal R.J.	T.E. II	70	Database Management	92.22

16	Prof. Shelke S.V.	T.E. I	64	Database Management	90.92
17	Prof. Vitekar A.B.	FE III	70	Basic Electronics Engineering	82.55
18	Prof. Thorat S.M.	S.E. I	77	Digital Circuits	89.73
19	Prof. Dr. Shamalik R.M.	B.E. II	66	Cloud Computing	86.73
20	Prof. Yadav A.P.	T.E. II	70	Digital Communication	93.29
21	Prof. Patil S.M.	S.E. II	75	Electrical Circuits	90.09

- **Academic Year-2024-25 Semester-II Result Analysis**

Table 9.2.6 Result Analysis for Academic Year-2024-25 Semester-II

Sr. No.	Name of Faculty	Class	No. of Students	Subject	Result %
1	Prof. Dr. S.S. Chorage Prof. S.A. Itkarkar	BE	139	FOC	100.00%
2	Prof. Dr. V.R. Pawar	BE	139	BSP	100.00%
3	Prof. Dr. S.S. Salunkhe	BE	139	DM	100.00%
4	Prof. M.S. Kasar Prof. R.J. Sapkal	TE	128	CN	90.62%
5	Prof. Dr. R.M. Shamalik	TE	128	PM	96.87%
6	Prof. V.P. Mulik Prof. A.P. Yadav	TE	128	PDC	86.71%
7	Prof. S.V. Shelke	TE	65	SA	95.38%
8	Prof. Dr. S.M. Rajbhoj	TE	63	DIP	91.22%
9	Prof. Dr. S.L. Kore Prof. P.R. Yawle	SE	138	S&S	81.15%
10	Prof. Dr. S.M. Bhilegaonkar	SE	138	C S	80.88%
11	Prof. Dr. S.A. Dhole Prof. Dr. S.M. Jagdale	SE	138	PCS	85.92%
12	Prof. K.R. Chaudhari Prof. S.M. Thorat	SE	138	OOP	94.89%

- **Action Taken Report for A.Y. 2024-2025**

Table 9.2.7 Action Taken Report for A.Y. 2024-2025

Stakeholder	Suggestions By Stakeholders	Action Taken	Outcome
Students	Second-year students have shown interest in holistic development into their academic curriculum	Forwarded these suggestions to Board of Studies of E&TC Engg. Members at the time of syllabus revision of 2024 pattern.	Board of Studies (E&TC Engg.) members took the feedback into consideration and to be implemented in new course.
Teachers	Time could be more effectively utilized by focusing on modern electronic sensors and digital signal interface	Forwarded the suggestions to Board of Studies (E&TC Engg.) members at the time of syllabus revision of BE	Board of Studies members took the feedback into consideration for further revision

Employers	Needs to work on improving professional communication, maintaining a positive attitude & development of technical skills	Forwarded the suggestions to Head of Department (E&TC Engg.)	Head of Department (E&TC Engg.) took the feedback into consideration.
Alumni	Addition of New course : AI & Data Science in Industry Applications	Forwarded the suggestion to Principal through Head of the Department.	The college is commencing with Artificial Intelligence and Machine Learning Course as a part of Undergraduate program from the academic year 2025-2026.

9.3 Feedback on facilities (5) Total Marks 4.00

Institute Marks : 4.00

Through the following strategies for fostering stronger stakeholder relationships, the institution makes sure that facility feedback is swiftly addressed and successfully handled.

- The purpose of the grievance redressal committee is to handle any type of grievance complaint that staff members and students make. This committee assesses the situation, determines whether any outstanding concerns require attention based on past experiences, and establishes procedures and acts appropriately.
- To stop ragging, an anti-ragging committee was established. This committee was established to stop ragging at the institutes residence halls and on campus in general. It is operating effectively, with squad members—including senior students and faculty—working around the clock at the start of each academic year to ensure the safety of the current student and foster an extremely secure learning environment at the institution.
- From time to time, feedback is taken from students by their assigned mentor regarding what can be done to improve the available facilities. And according to the survey and feedback, further steps are being taken.
- Students were asked to rate several facilities, including the library, training and placement services, laboratories, and general amenities, using the following scale: Excellent, Good, Average.
- After every semester feedback is collected from students manually to improve the quality of the available facilities.
- A suggestion box is placed to collect feedback from the students.

Based on the feedback taken from overall, the corrective measures are being taken like:

- In laboratories, the number of display charts has increased for better comprehension.
- Damaged equipment is identified and repaired as soon as possible.
- The number of computers and lab equipment has increased.
- The lab equipment is calibrated regularly.
- For student safety, the institute has a first-aid kit and a fire extinguisher.
- The number of general, novel, and competitive books in the library has increased.
- The working hours and library hours have been extended to allow students to use the library after regular working hours. It is also open on weekends and holidays.
- Incinerator and vending machine for sanitary napkins is fitted in every washroom.
- Proper hygiene and cleanliness is maintained in all washroom.
- Girls common room and sick room is well equipped and is maintained.

Infrastrucure facilities and Academic ambiance feedback is taken on the students responses for the following questions.

Title: BVCOEW-Students Feedback on Infrastructural Facilities

Academic Year: 2024-25

Class: BE SEM II DIV I , Electronics and Telecommunication Engg.

Table 9.3.1 Questionnaire for Student Feedback on Infrastructural Facilities

Q. 1	Academic Facilities Classrooms are clean and well-maintained.
Q. 2	Laboratory equipment is functional and sufficient.
Q.3	Computer labs have working systems and internet.
Q. 4	The library has sufficient books and e-resources.
Q. 5	Drinking water and washrooms are clean and functional.
Q. 6	Medical and first-aid facilities are available.
Q. 7	Sports and extracurricular facilities are provided
Q. 8	Cafeteria provides hygienic food.
Q.9	Girls' common room is clean and accessible.
Q. 10	Security and CCTV arrangements are adequate.
Q. 11	Mention any facility you found most useful
Q. 12	Mention any facility that needs improvement
Q. 13	Any other suggestions

- **Action Taken report Academic Year 2024-25**

Table 9.3.2 Action taken report for Academic Year 2024-25

Stakeholders	Suggestion by stakeholders	Action Taken	Action Implemented
Students	Washrooms need to be cleaner and more hygienic	Issue is reported to HOD and then coordinated with Admin	Increased cleaning frequency and Renovation is in process
	Labs should be tested and should have all working pcs with proper internet connection	Requested for lab audit and report faults.	Pcs repaired/replaced; internet upgraded
	Library time should increase	Request for extended hours to librarian.	Library hours extended to 7 PM
	Drinking water should not be near washroom area	Identified the space and new spots suggested.	Water cooler placed at proper space.
	Xerox facilities should be available inside college premises	Suggestion is forwarded to higher authority.	Higher authority is working on it.
	Cafeteria food	Conducted food audit; updated menu	Food quality improved; new menu introduced
	Gym and common room facility need improvement.	Renovated facilities	New gym equipment and renovated common room provided
	E resources and IEEE access	Institutional access provided	IEEE and e-resources enabled
	Wi-Fi password should be given to all and speed	Requested to increase bandwidth and register new devices	Wi-Fi access granted to students; speed improved
	Need an auditorium in college	Plan proposed in budget	Seminar Hall is provided for activities
	Parking space for vehicles	Parking space issue reported to higher authority.	Higher authority is working on this

9.4 Self-Learning (5) Total Marks 4.00

Institute Marks : 4.00

Institute has provided a large scope to students to learn on their own as per their interest. To help students become independent learners, the college encourages them to take part in various online courses offered by platforms like **NPTEL, SWAYAM, Coursera, edX, AWS Academy, and Oracle Academy.** These courses allow students to learn new skills at their own pace, based on their interests and career goals. The college also uses **Learning Management Systems (LMS)** such as Google Classroom or Moodle to share study materials, conduct quizzes, and give assignments that support self-learning.

Students have access to a **digital library** where they can read e-books, journals, and research papers from trusted sources like **IEEE and DELNET**. Institute has introduced "Knimbus" platform for Digital Library services it includes open Access resources and Subscribed resources. Each department also has its own **departmental library** with textbooks, project reports, and question papers. A special **reference book section** is available in the main library with standard books that help students study topics in more detail.

Regular assignments, mini-projects, and case studies that help students think and learn on their own is an important practice in all departments. Faculty mentors guide them in choosing the right resources and tracking their progress. Students also form study groups and take part in activities by clubs, student associations such as **ETSA, CESA, ITECHSA and student chapters,** where they learn from each other by sharing knowledge, attending workshops, and participating in events. This creates a strong learning environment beyond the classroom.

B. The institution needs to specify the facilities, materials for learning beyond syllabus,

Webinars, Podcast, MOOCs etc. and demonstrate its effective utilization (3) -

Facilities created for self-learning:

- All laboratories are open to students so they can work independently and test their knowledge through brainstorming, problem-solving, and debates centered on learning outcomes and academic careers.
- Professional skill development courses are arranged through student associations.
- Facility of Language laboratory.
- Virtual Lab access.
- Department-organize industrial visits.
- Technical talks by external/internal experts are arranged for the students.
- Lab manuals are provided.
- Internet facilities, smart boards are provided in the college.
- Students are encouraged for writing research papers and present them at conferences.
- Educational resources made available on Google Classroom.
- Students can test their ideas in the labs.
- Pre-placement training for the students.
- Library facilities are extended beyond working hours. Digital library and Reference book section provides a wealth of information to support in-depth learning.
- Smart boards are available in classrooms for interactive learning. The campus is equipped with Wi-Fi to encourage self-study.
- Under student's Association, department organize online seminars, webinars, workshops, and training programs that contribute to the overall personality development of students.
- Repository of seminar/project reports in the department library for the reference of students and faculty.
- Online course participation is encouraged for students.
- The curriculum offers courses and important projects with subjects that students can choose for themselves or that are offered by a guide. In these courses, the self- learning component is evaluated.
- Every student is required to turn in two theoretical assignments for every course, each of 15 marks. To encourage students to improve their capacity for self-learning, several of these assignments go beyond the syllabus. Capacity building program is conducted for the second year students for knowing their own self and their SWOT analysis.
- Books of all branches are available for students to read in the library.
- Students are given links to various informative YouTube and other e-Learning sites to help them expand their knowledge.
- The programs weekly schedule and facilities were designed to give students enough time and space to develop and put their ideas into practice. Academic calendar is displayed well in advance to plan their activities.
- Students have access to a well-equipped common computing lab with around-the- clock internet access.
- As per the academic calendar, the institute has plans for industrial training, company specific training such as Zensar ESD training.

- **Digital Library Access Facility:**

Institute has provided a large scope to students to learn on their own as per their interest. This is in the form of online and offline, on campus and off campus. AICTE's NPTEL platform has attracted students a lot at par with regular courses. Students can register online and learn at their pace. Subscribed E-resources are K-hub, DELNET, iThenticate Plagiarism Software, IEEE, ShodhSindhu, Shodhganga, Science Direct. NPTEL, Knimbus Digital Library Access to Provide. Digital Library: institute has introduced "Knimbus" platform for Digital Library services it includes open Access resources and Subscribed resources.

E-resources: Access Provide to Self-Learning facilities: Details of Digital Library/Remote Access

Table 9.4.1 Library E-Recourses with link

E Resource	Link
DELNET	https://discovery.delnet.in (https://discovery.delnet.in/)
K-hub (elibrary)	https://www.k-hub.in (https://www.k-hub.in/)
NDLI (National Digital Library in India)	https://ndl.iitkgp.ac.in (https://ndl.iitkgp.ac.in/)
NPTEL	https://onlinecourses.nptel.ac.in (https://onlinecourses.nptel.ac.in/)
IEEE (EJournals) ASSP, POP	https://ieeexplore.ieee.org/Xplore/home.jsp (https://ieeexplore.ieee.org/Xplore/home.jsp)
eShodhSindhu	https://ess.inflibnet.ac.in/memberdetails-1.php?catid=5 (https://ess.inflibnet.ac.in/memberdetails-1.php?catid=5)
Shodhganga	https://shodhganga.inflibnet.ac.in (https://shodhganga.inflibnet.ac.in/)
Science Direct	https://www.sciencedirect.com (https://www.sciencedirect.com/)
Knimbus (Digital Library Platform)	https://bvuniversity.knimbus.com/portal/v2/custom/source (https://bvuniversity.knimbus.com/portal/v2/custom/source)
iThenticate- Plagrisum Software	https://app.ithenticate.com/en_us/login (https://app.ithenticate.com/en_us/login)

Institute Library has made the following online resources available to the staff and students. Various online resources are available in Library. For easy access, all the online resources are subscribed as IP Based access subscription. This helps users to access any resource from any computer connected to the LAN and through WiFi enabled devices. This helps users to search multiple databases at a stretch. Remote off campus access facility is created, and this can be used by students from home.

- **Knimbus Digital Library**

Digital Library: Knimbus Digital Library and Remote Access -

Link : https://bvuniversity.knimbus.com/portal/v2/default/home (https://bvuniversity.knimbus.com/portal/v2/default/home)

Remote Access to E resources facility is available under the platform.

- **Knimbus:**

Knimbus is the leading digital library platform used by 700+ reputed institutions. Institutions are transforming their library for a digital future with the Knimbus mLibrary platform. Knimbus mLibrary is a one-stop solution with rich features to build a powerful and user friendly digital library through which users can seamlessly access the digital resources anytime, anywhere and on any device.

- **DELNET**

Link for DELNET Service – https://discovery.delnet.in (https://discovery.delnet.in/)

Facilities available:

1 Interlibrary Loan - Required books /Articles can be borrowed from member Library

2 Free access to digital resources ebooks

3 Remote access is available

- **K-hub (elibrary): - ebooks, ejournals, etc.**

K-Hub (elibrary) Link : https://www.k-hub.in/ (https://www.k-hub.in/)

K-HUB is the leading platform for collective academic e-resources, offering one of the biggest subject's collection among other very rare and useful databases.

NDLI Membership (Certificate of Registration)

- **NDLI Membership Certificate**

The National Digital Library of India (NDLI) is a virtual repository of learning resources accessible through a single-window interface. Its sponsored by the Ministry of Education, Government of India, as part of the National Mission on Education through Information and Communication Technology (NMEICT).

- **Quality of learning resources**

The Learning Resource Center, the Central Library excellent resources plays proactive role in providing excellent user services, optimal use of resources supporting quality enhancement in teaching-learning, research and extension. keeping pace with the developments in the ICTs, Institute library works as a digitized knowledge Center for accessibility with print and e-resources and provides focused services to the students and faculty. The Library has significant collection of books, journals, e-books, e-journals, secondary sources, databases, digital primary sources.

- **Integrated Library Management System (KOHA):**

Integrated Library Management System (KOHA) is used to manage different functions of library for improving accessibility to students. Institute Central Library is using commercial software as well as Open Source software for Automation of Library Services. With KOHA retrieval of information becomes easy and even a catchy phrase in the description of the catalogued item can be used for searching. supports flexible workflow to cover activities related to Circulation, Cataloging, Patrons, Serials, Advance Search, Tools, Lists, About KOHA.

KOHA Software

With the growing popularity of e-resources, library is gradually migrating from print documents to e-resources. Qualified and experienced staff plays an important role in providing easily accessible and cost- effective information services. The Institute library has subscribed / implemented learning and e-learning resources as shown in the tables below.

Department Library

The Department Library plays a key role in promoting self-learning among students by providing a well-curated collection of academic resources. With a total of 627 books covering 457 unique titles, the library supports a broad spectrum of learning needs. It subscribes to 15 national journals and 105 periodicals/magazines, offering students access to up-to-date knowledge and current trends in their field.

A highlight of the department library is its dedicated reading hall, which has a seating capacity of 20 students, providing a quiet and focused environment conducive to independent study and research.

Table 9.4.2 Departmental Library details

Details	Numbers
Volumes	627
Titles	457
National Journals	15
Periodicals/ Magazines	105
Total No. of Books	627

- **Virtual Lab**

Table 9.4.3 Virtual Lab Links

Class	Course	Virtual Lab Link

SE	Electronic Circuits Lab	http://vlabs.iitb.ac.in/vlabs-dev/vlab_bootcamp/bootcamp/electronerds/index.html
		http://vlabs.iitkgp.ernet.in/be/
	Digital Circuits Lab	http://vlabs.iitb.ac.in/vlabs-dev/labs/dldesignlab/experiments/implementation-multiplexer-using-msi/index.html (http://vlabs.iitb.ac.in/vlabs-dev/labs/dldesignlab/experiments/implementation-multiplexer-using-msi/index.html)
		http://vlabs.iitb.ac.in/vlabs-dev/labs/digital_application/experiments/washing-machine-control-pvg/index.html (http://vlabs.iitb.ac.in/vlabs-dev/labs/digital_application/experiments/washing-machine-control-pvg/index.html)
	Data Structure Lab	https://ds1-iiith.vlabs.ac.in/data-structures-1/
		https://ds2-iiith.vlabs.ac.in/data-structures-2/
TE	Digital Signal Processing Lab	http://vlabs.iitkgp.ernet.in/dsp/exp1/Exp1S/Exp1_S.html (http://vlabs.iitkgp.ernet.in/dsp/exp1/Exp1S/Exp1_S.html)

- **Certification Courses**

Table 9.4.4 Certification Courses

Sr. No.	Date	Name Of the student	Name of the Online Course	
1	5/03/2025	Radhika Sadale	Engineering Thermodynamics	NPTEL
2	5/03/2025	Sharvari Rahul Boney	Complete guide for campus interviews: Step by step preparation for Internships and Full-time jobs	NPTEL
3	5/03/2025	Spandan Bhaskar Nagarkar	Patent Law for Engineers and Scientists	NPTEL
4	1/04/2025	Amruta Ajay Pol	Python Programming	Core2web.xo.
5	1/04/2025	Saloni Navalachand Londhe	National Level Project competition	National Level Project complete (NLPC)
6	1/04/2025	Rajashri Dattatray Rajage	NPLC project competition	-
7	1/04/2025	Pratiksha Laxman Kadam	AWS Certified Cloud Practitioner	Udemy (https://katalyst.udemy.com/course/aws-certified-cloud-practitioner-step-by-step/learn/lecture/22578970#overview)
8	2/04/2025	Gayatri Valmik Yeole	Certificate of Participation of IETE project competition	-

9	2/07/2025	Shravani Parbhat Chavan	Learn JAVA Programming - Beginner to Master	Udemy
10	5/04/2025	Gayatri Valmik Yeole	Certificate of appreciation of ProjectExpo	-
11	6/01/2025	Janhvi Kadam	Semiconductor physics:Foundation in electronics and Vlsi	Udemy
12	9/06/2025	Riddhi Pravin Gole	java	Udemy
13	16/05/2025	Pratiksha Laxman Kadam	Oracle Certified Professional	Mylearn.oracle. (https://mylearn.oracle.com/ou/learning-path/become-an-oracle-apex-developer-professional/146080)
14	16/05/2025	Shravani Parbhat Chavan	Oracle APEX Cloud Developer Certified Professional	Oracle India
15	16/05/2025	Riddhi Pravin Gole	oracle apex	Oracle
16	17/03/2025	Arya Nevase	C progamming	Chedo tech
17	21/02/2025	Laxmi Rohidas Salekar	Python and machine learning	Core2web
18	20/05/2025	Shweta Shashikant Kadam	Data science	Data science .com
19	20/05/2025	Shweta Shashikant Kadam	Aws	Upgrade (http://upgrade.com/)
20	20/05/2025	Shweta Shashikant Kadam	Python	Upgrade (http://upgrade.com/)
21	19/05/2025	Janhvi Kadam	Oracle apex cloud developer certified professional	Oracle apex
22	21/05/2025	Sakshi Dinesh Sheth	Excel using AI	Officemaster
23	21/05/2025	Sakshi Dinesh Sheth	Data science basics	Forge
24	21/05/2025	Sakshi Dinesh Sheth	Data analytics basics	Forge
25	22/03/2025	Vandana Kishtyya Gundla	AWS educate introduction to cloud 101	AWS Educate
26	23/01/2025	Vaishnavi Rajendra Japkar	Embedded system	Tronix365
27	26/03/2025	Shravani Parbhat Chavan	AWS Certified Cloud Practitioner - AWS Certification	Udemy
28	26/03/2025	Janhvi Kadam	The AI engineering course: Complete AI engineer bootcamp	Udemy

29	27/02/2025	Vandana Kishtyya Gundla	AWS Academy cloud foundation	AWS Academy
30	28/02/2025	Vandana Kishtyya Gundla	Code without barriers	Microsoft AI
31	25/03/2025	Arya Nevase	Ai Microsoft certification	Microsoft code without barrier
32	31/01/2025	Riddhi Pravin Gole	Internship	CGPI software limited
33	1/03/2024	Sanji Mukesh Pardeshi	Web Development	My Captain
34	1/06/2024	Sanji Mukesh Pardeshi	Python Programming	My Captain
35	1/08/2024	Sanji Mukesh Pardeshi	Data Analytics with Python	My Captain
36	3/08/2024	Siddhi Jaysing Kadus	AWS Academy Graduate - AWS Academy Cloud Foundation	Credly (https://www.credly.com/go/ZHLHm1KP)
37	4/07/2024	Blayna Fernandes	Electric Vehicle Technology	Kodacy
38	7/10/2024	Isha Prashant Vetal	Aws mod 1	Aws academy
39	8/01/2024	Ketaki Sunil Todkar	AWS Cloud foundation	AWS
40	8/03/2024	Saloni Navalachand Londhe	AWS Academy cloud foundation	AWS
41	8/04/2024	Gayatri Valmik Yeole	AWS Academy Graduate - AWS Academy Cloud Foundations	-
42	8/05/2024	Blayna Fernandes	AWS Academy Cloud Foundations	AWS Academy
43	8/05/2024	Gayatri Patve	AWS	AWS Academy
44	8/05/2024	Amruta Ajay Pol	AWS certificate	AWS Academy
45	8/05/2024	Laxmi Rohidas Salekar	AWS and cloud	AWS academy
46	9/01/2024	Saloni Navalachand Londhe	Microsoft Excel	Coursera
47	11/07/2024	Gayatri Patve	Python programming	Scaler
48	13/10/2024	Arya Nevase	Database programming with sql	Oracle
49	13/10/2024	Subhrangana Rout	Application Development Foundations	Oracle Academy
50	14/01/2024	Kaple Manasi Jivan	Python	-
51	14/04/2024	Siddhi Jaysing Kadus	Core Java	N infinity Info Solution
52	14/10/2024	Subhrangana Rout	PL/SQL Database Programming	Oracle Academy
53	15/05/2024	Dnyaneshwari Jayprakash Ekhande	C++	Business card

54	18/09/2024	Sanika Krishnat Kadam	AWS	Aws
55	19/05/2024	Pratiksha Laxman Kadam	Mastering in DSA using c & c++	Udemy
56	20/01/2024	Amruta Ajay Pol	Codsoft	Codsoft
57	20/01/2024	Kaple Manasi Jivan	Data science	-
58	20/06/2024	Ketaki Sunil Todkar	Lean Six sigma white belt	Lean Six sigma
59	22/06/2024	Sharvari Shrikrishna Inamdar	Python course by udemy	Udemy
60	24/06/2024	Sharvari Shrikrishna Inamdar	MySQL course	Udemy
61	24/11/2024	Rajashri Dattatray Rajage	-	–
62	24/12/2024	Isha Prashant Vetal	AWS mod 2	Aws academy
63	28/09/2024	Swara Deshpande	Embedded systems training	Internshala
64	30/07/2024	Riddhi Shailesh Baldwa	AWS	Credly
65	31/03/2024	Kaple Manasi Jivan	SQL	-
66	31/08/2023	Riddhi Shailesh Baldwa	Matlab	Mathswork
67	2/09/2023	Subhrangana Rout	C# Data Structures and Algorithms	Infosys
68	4/07/2023	Blayna Fernandes	Excel for Beginners	Great Learning
69	15/12/2023	Rajashri Dattatray Rajage	Python developer	Codsoft
70	18/02/2023	Dnyaneshwari Jayprakash Ekhande	Web development	Our portfolio
71	10/8/2023	Vaishnavi Rajendra Japkar	Digital marketing	Teachnook
72	10/12/2023	Swara Deshpande	MATLAB	Math works
73	21/01/2023	Vaishnavi Rajendra Japkar	C & C++	Globe Infotech
74	21/08/2023	Isha Vijay Patil	Matlab OnRamp	Mathworks
75	23/05/2023	Disha Vikas Kabra	C laguage	Offline
76	24/01/2023	Dnyaneshwari Jayprakash Ekhande	Frond end	The baap company website
77	21/05/2023	Disha Vikas Kabra	C++Language	Offline
78	21/08/2023	Isha Vijay Patil	Matlab on Ramp	Mathworks
79	25/08/2023	Ketaki Sunil Todkar	Matlab on Ramp	Mathworks
80	30/10/2023	Disha Vikas Kabra	Cloud foundation	Aws aspire

81	30/10/2023	Isha Vijay Patil	Cloud Practitioner Essential course	AWS
82	11/02/2023	Shrutika Pawar	Hackerrank	Sql(Basic)
83	05/01/22 To 07/02/2022	Esha Singh	Elon Power, Pune	Internship
84	1/08/2022	Esha Singh	Great Learning Academy	Front End Development-Html
85	5/01/2022	Esha Singh	Great Learning Academy	Java Programming
86	13/12/2022	Mitali Waghmode	Hackerrank	Sql(Basic)
87	19/07/2022	Esha Singh	Suryodaya College Of Eng &Tech,Nagpur	Internet Of Things E-Webinar

9.5 Career Guidance, Training, Placement (10) Total Marks 10.00

Institute Marks : 10.00

A. Availability of career guidance facilities

The Career Guidance Cell (CGC) of the institute plays a key role in mentoring students aiming for higher education or careers in government and defense sectors. It regularly conducts awareness sessions and expert talks on postgraduate opportunities like M.Tech, MS, MBA, and PhD—in India and abroad. The CGC also guides students on application procedures, writing Statements of Purpose (SOPs), selecting universities, securing scholarships, and preparing for exams such as GATE, GRE, TOEFL, and IELTS.

For those preparing for competitive exams, the cell offers support through coaching resources and sessions focused on GATE, UPSC, and MPSC. It also creates awareness about careers in the Indian Armed Forces through sessions on NDA, CDS, AFCAT, and SSB interviews, often involving experienced professionals.

The CGCs efforts have led to an increasing number of students succeeding in competitive exams and pursuing higher education. Regular student feedback helps the cell improve its programs and stay aligned with students goals, contributing significantly to their overall growth and success.

Table 9.5.1 Career Guidance Cell (CGC) Committee list

Name of the Member	Designation
Prof. V. D. Kulkarni	Coordinator
Prof. S. M. Patil	Co-coordinator

B. Counseling for higher studies

Table 9.5.2 Activities conducted under Career Guidance Cell regarding higher studies

Sr. No.	Date	Time	Title of Session	organized by	Resource person	Number of students attended
1	29-07-24	10.00am – 11.00am	How to prepare for Competitive exams	Unique Academy, Pune	Mr.Ketan Kumar Patil	27
2	07-12-24	10:00am – 11.00am	Internship opportunities and importance of Microsoft certification	Kasnet Technologies, Pune	Mr.Amol Aher	41
3	11-01-25	04:00pm – 5.00Pm	Importance of Profile Building and Career Mapping	EUGATEWAY, Pune	Benita Albert	7
4	25-01-25	11:00am – 12.00pm	GATE Exam Aptitude Tips and Tricks	Ohm Institutes, Hyderabad	Mr. Amarnadh Emani	38
5	18-02-25	02:15 pm – 03.45 pm	Higher studies in India and abroad	IMS Learning Resources Pvt Ltd, Pune	Mr.Ranjit Kalangutkar	34
6	04-03-25	03:45pm – 4.30Pm	Introduction to futuristic engineering courses by DADB Germany	DADB Academy of Digital Education, Pune	Ms.Pooja Sinha	7
7	22-03-25	11.30am - 1.00pm	Career Opportunities in Armed Forces After Graduation	Retired Naval officer, Pune	Captain Rammohan Oka	14

8	26-08-23	11.00am to 12.00 pm	A session on How to prepare for GATE	ACE Engg. Academy, Pune	Mr.Arjun Chhabra	10
9	13-09-23	6.00pm to 7.00pm	A session on Scope of foreign language for engineering students	ASAP Language Institute, Pune	Mr.Anand Bannatkar	12
10	23-09-23	11.00am to 12.00 pm	A session on How to prepare for competitive exams MPSC, UPSC	Unique Academy, Pune	Mr.Sunny Mankoskar	13
11	27-09-23	9.00am to 10.00 am	A session on Crack GATE exam in first attempt	Imperial Institutes, Pune	Mr. Paresh Gugle	25
12	02-02-24	10.00am to 11.00 am	A session on How to prepare for GATE 2024 examination	ACE Engg. Academy, Pune	Arjun Chhabra	10
13	03-02-24	11.00am to 12.00pm	A session on Career Guidance on study abroad	Admit 360 Edu Abroad Solutions, Pune	Mr. Vivek Gupta	10
14	27-02-24	11.00am to 12.00pm	A session on Higher Studies in the U.S. and Student Visa	Education USA, Pune	Dr.Aditi Lele, EducationUSA adviser.	23
15	30-04-24	11.00am to 12.00pm	A session on Give wings to your higher education dream abroad	ETS, the tracker and maker of TOEFL/GRE, Pune	Sarika Balchandani	13
16	27-08-22	11.00am to 12.oopm	Career opportunities after Engineering	ACE Engineering Academy, Pune	Mr. Shankar Wadne	5
17	17-03-23	3.00 to 4.00 pm	Career Guidance for Abroad study options after engineering	Jamboree Institutes, Pune	Mr. Shreyas Ramkrishnan	4
18	24-03-23	3.00 to 4.00 pm	Importance of Aptitude for Placement and Higher studies	ACE Engineering Academy, Pune	Ms. Aishwarya Vijay	4
19	07-07-21	3.30 to 4.30	MBA in India	IMS, Pune	Mr. Ranjit Calangutkar	9
20	12-08-21	2.00 to 4.00	Overseas education	IDP education	Mr. Omkar Kargar	200
21	14-08-21	1.00 to 2.00	Benefits & career opportunities in GATE	The GATE Academy, Pune	Mr. Akash Pushkar, M.Tech. IIT, Kanpur	144

22	21-09-21	4.00 to 5.00	How to prepare for banking/SSC Insurance during graduation	Unique Academy, Pune	Ms. Mayuri Sawant, Pune	2
23	29-01-22	11.00 to 12.00	How to clear GATE exam in first attempt	ACE engineering Academy, Pune	Mr. Anish Singh Rajput	2
24	19-03-22	12.30 to 1.30	Study abroad for engineers	Jamboree Institutes, Pune	Mr. Rajarshi Banergee	12
25	23-04-22	5.00 to 6.00	How to prepare for competitive exams-UPSC/MPSC	Unique Academy, Pune	Mr. Pankaj Vhatte	70

- **Higher studies students summary**

Table 9.5.3 Student summary count for Higher Studies

Sr. No	Academic Year	Student Count
1	2023-24	2
2	2022-23	1
3	2021-22	1

C. Pre-placement training

The institute has a well-structured system to help students improve their skills, get ready for jobs, and plan their careers. From the second year onwards, students take part in a Pre-Placement Training Program that helps them understand their strengths, set goals, and learn better through activities like SWOC analysis and peer feedback. Senior students who are already placed share their experiences with juniors through Peer-to-Peer Training, building confidence and motivation. A major part of this is the Employability Skill Development (ESD) Program, which gives more than 400 hours of training in areas like programming, SQL, testing, aptitude, and communication skills. Student-run clubs such as the Coding Club, Aptitude Club, HR Club, and Test Series Club offer regular practice and discussions, helping students prepare for company tests and interviews.

The Training and Placement Cell also works with industry partners to offer expert-led training programs like the RPG Zensar Employability Program and AI Skilling Program in collaboration with RT-MSSU and Microsoft. These programs teach students in-demand skills like Java, Python, and Artificial Intelligence, and focus on practical knowledge. Mock interviews, resume writing sessions, and company-specific training are regularly organized to help final-year students prepare for real job interviews.

- **Skill Enhancement Club**

Different Coding Clubs like Coding, Aptitude and HR are conducted by students, observed and corrective actions are suggested by the Training Coordinator. One of the students gives a task daily and other students solve it by end of the day which enhance their thinking power and also receive constructive solutions from other students. These clubs are helpful to broaden the knowledge of students in terms of Placement.

HIGHLIGHTS OF THE ACTIVITIES HELD:

1. Capacity Building Programme for SE: These sessions focus on **different VAK learning styles, Knowing yourself, Life values, How to do self and peer diagnosis and SWOC analysis**. Many fun activities are also conducted in the process to cheer up the students and help them boost confidence. Every student is able to self-analyze their own **Strengths, Weaknesses, Opportunities and Challenges**. At the end, this does help the students in their placement recruitment process and to achieve a great future.

2. Capacity Building Programme of Students by Students (Peer to Peer Training Programme): In this training programme, BE students who are placed in various MNC companies deliver the seminars to SE and TE students on various topics such as **Aptitude test, Coding, Technical, HR interviews and Company Specific Training.** The entire programme covers all the aspects of placement procedures, professional future post and completing graduation. It eases and prepares the students for their future journey.

3. HR Group [Group Discussion Programme]: This activity is conducted for all the students from SE to BE of all departments and it engages students in **developing their communication skills** and making themselves more **comfortable for HR rounds** in placement. During these sessions' students get a brief review about different current affairs, expected topics in GD round and learning styles.

4. Coding and Aptitude skill Enhancement Clubs: To enhance Coding and Aptitude skills of students, these enhancement clubs are started for SE, TE and BE students of all branches. It eradicates the fear of coding and increases their computational thinking. It helps them to acquire the requisite skill set to think “Out of the box” and develop a rational approach towards Problem-solving. It prepare students to solve questions in aptitude and coding tests conducted during placement drives and in competitive exams.

5. Activities conducted in Coding group: The questions are posted related to coding in these groups. These are either **Mcqs or problems statements type** Special focus is on problem statements which are repeatedly asked in **company campus drives.** Students co-ordinator also share YouTube videos which are beneficial for learning concepts. This makes the students, especially weak ones, comfortable with different coding questions and helps to eradicate the fear of coding.

6. Activities conducted in Aptitude group: The student co-coordinators posts questions on aptitude group. These are divided into **Arithmetic, Verbal and Current Affair** section. Also 5 new words are posted along with their meanings, synonym and their use in sentence to increase vocabulary. Every night the solutions are sent for students to refer. The main focus is on questions which are asked in **competitive exams** and **campus drives**. This helps the students to practice and get familiar with aptitude and increase their knowledge on the same.

7. Test Series Club: The main objective of this club is to prepare the students for the different competitive stages in campus drives like **the aptitude test, coding test, English (verbal ability) test.** These tests help the students to understand the pattern of various placement drives tests and gives them a real time experience. The technical tests are conducted on Hacker rank platform .This way the students became well versed with online compilers and it helps in increasing their confidence too. They also get an opportunity to work on their weak points.

- **RPG ZENSAR TRAINING**

Table 9.5.4 RPG Zensar Training students summary

Sr. No.	Academic Year	No. of shortlisted Students for Zensar Training	No of Students Placed	% Placement of Zensar trained Students
1	2023-24	27	08	29.62
2	2022-23	98	48	48.97
3	2021-22	42	18	42.85

- **Employability Skills Development (ESD) Training**

Table 9.5.5 Employbility Skills Development (ESD) Training details

Sr. No.	Date	Type of Event	Name of activity	Name and Address of resource person	Contact Details	Organized for	No of students attended
1	19/7/2023 to 29/7/2023, 2/8/2023 & 5/8/2023	Training	Employability Skills Development Training by Campus Credentials	Mr. Rohit Runwal, Mr. Ronak Mitra, Mrs. Sapna Sood Campus Credentials Trainer	8888519569 8653830911 9272730903	BE	32

- **Mock Interview and placed students**

Table 9.5.6 Mock Interview and Placed Students Summary

Sr. No	Academic Year	No. of shortlisted Students for Mock Interview	No of Students Placed	% Contribution of Mock Interview in total AY Placement
1	2024-25	73	34	46.57
2	2023-24	135	53	39.25

3	2022-23	89	56	62.92
4	2021-22	100	74	74

D. Placement process and support

Campus Placement process is as follows

- The Institute follows “one student one job policy”. Software companies and Core (Non Software) Companies are the major categories of the companies conducting the campus placement drive throughout the Academic Year.
- Students who are interested in Placements, the academic database of the students is collected, verified. The database is updated after each SPPU 6th, 7th semester exam result declaration.
- An invitation mails are sent to the HR Team, based on the requirements HR revert back to the mail. The dates are mutually finalized.
- The Campus Placement schedule is confirmed based on Eligibility criteria (maximum number of students should get the opportunities), Job Profile, Annual Salary Package offered by the company, Past history of recruitment, feedback of the selected students’ experience from past batches regarding the company.
- The company selection process, Job Profile, Annual Salary Package, eligibility criteria, date of conduction of the process, mode of conduction of the process is broadcasted once a confirmation mail is received from HR.
- The recruitment process may be online, offline or hybrid mode.
- The recruitment process includes Pre Placement talk, Proctored test, Group discussion, Technical Interview, Management Interview etc.
- It is mandatory for students to follow College uniform dress code at the time of Campus Placement drive.
- Pre Placement talk in most of the cases is preferred in offline mode. Company higher authorities elaborate about salary break-up, job profile, place of work, bond details, company culture, projects etc. Attendees are expected to clarify their doubts (if it is) from company authority in Q and A session.
- Post Pre Placement talk interested and eligible students appear for aptitude, technical, coding tests in Computer Center. The PCs are enabled with web cameras and the test is a proctored test.
- Department Placement Coordinators and the team supervise the test along with Company authorities.
- Placement Cell Team along with Placement Cell Student volunteers assure the arrangement of Group Discussion room, Interview Rooms and the necessary prerequisites.
- The selects are declared orally on the same day and in most of the cases written mail in the next few days.
- Based on the Company policy the Expression of Interest or Offer letter is mailed to Placement Officer or the selects.
- All students are expected to accept the offer letter by signing on the hard copy, scanning the signed offer letter and mailing it to HR, sometimes the HR expects it in a centralized way through the Placement Officer.

- **Placement cell infrastructure and facilities:**

Table 9.5.7 Placement Cell infrastructure and facilities details

Sr. No.	Facilities	Quantity
1.	Training cell	1
2.	Placement cell	1
3.	Seminar Hall	1
4.	Computer center for online placement drives/tests	Capacity of 110 PCs
5.	Meeting room	1
6.	placement coordinator	1 college level 3 department level
7.	Supporting staff	2

- **List of companies visited for placement**

Table 9.5.8 List of companies visited for placement

Sr. No	Company visited in A.Y. 2024-25	Company visited in A.Y. 2023-24	Company visited in A.Y.2022-23
1	AIRBUS	PERSISTENT	ACCENTURE
2	RTCAMP	TCS	ALOHA TECHNOLOGIES

3	STANDARD CGARTERED GBS	ACCENTURE	AMAZON
4	PERSISTENT	VOIS	AMAZON CUSTOMER SUPPORT
5	DASSAULT SYSTEMS	RTCAMP	AMDOCS
6	ALSTOMGROUP	STANDARD CHARTERED GBS	ATOS
7	ION GROUP	DASSAULT SYSTEMS	ATOS
8	ACCENTURE	IBM	BNY MELLON
9	ATLAS COPCO	RELIANCE JIO	CAPGEMINI
10	AMDOCS	KANINI SOFTWARE	CIMPRESS
11	NICE	AMAZON	CIRRIUS TECHNOLOGIES
12	BOSCH	AMDOCS	COGNIZANT
13	FUNDSROOM	GOLDMAN SACHS	DELOITTE
14	UNO MINDA	NOMURA	DELOITTE
15	CAPGEMINI	SUEMENS (ONLY E&TC)	eEMPHASYS
16	UBS	IBM	EURONET
17	FORVIA	LTTS	EURONET WORLDWIDE
18	L & T TECHNOLOGY SERVICES	NATIONAL PAYMENTS CORPORATION OF INDIA 9NPCL-UPI,RUPAY,FASTAG ETC)	FIDELITY INTERNATIONAL
19	NEILSON IQ	VISTEON	FINULENT SOLUTIONS
20	TATA TECHNOLOGIES	RUDDER ANALYTICS	FLENTAS TECHNOLOGIES (Cloud Consulting and Devops)
21	ICON IT TECHNOLOGIES	FIS	FPX SOLUTIONS (IOT BASED CORE COMPANY OPTION)
22	RUDDER ANALYTICS	VODAFONE IDEA	FUTURENSE TECHNOLOGIES
23	RINEX TECHNOLOGIES	DELOITTE	GOLDMAN SACHS
24	COGNIZANT GENC	NEEYAMO	HEXAWARE
25	FIS	SECLORE TECHNOLOGY	HURON CONSULTING GROUP
26	BNY MELLON	UNO MINDA (only E*TC) Campus	IBM
27	DEUTSCH	IDFCFIRST BANK	IDFY
28	FAURECIA	DASSAULT SYSTEMS	INDUS TOWERS
29	TECHMAHINDRA	ICON SINGAPORE	JOHNSON CONTROL

30	COVIE	SPARK MINDA (ONLY E&TC) CAMPUS	KPIT
31	WNS	PARKAR DIGITAL	KYNDRYL GLOBAL TECHNOLOGY SERVICES(GTS)
32	PARKER DIGITAL	PETROFAC	L&T TECHNOLOGY SERVICES LIMITED
33	RED HAT	MICRON	LTTS
34	VANDERLANDE (TOYATO)	CAPGEMINI	MAERSK
35	MINDSTIX	BNY MELLON	MASTEK
36	ZENSAR	WALMART 9THROUGH HACKATHON)	MINDSTIX
37	INFOSYS	CCTech	NEOSOFT
38	COVINE	EQW	NIELSEN IQ (Campus)
39	EQUATIONS WORK	RSQUARESOFT TECHNOLOGIES	NTT DATA
40	CODITUDE	ADOR POWETRON (E&TC)	PERSISTENT
41	VOIS	AMAZON	PRINCIPAL GLOBAL SERVICES
42	TCS	PUBLICIS SAPIENT	PTW
43	AMAZON	WESTERN UNION	PUBMATIC
44	REDHAT INDIA	AIRBUS	QUALITY KIOSK
45	PLANET SPARK	WILEY EDGE	RELIANCE JIO
46	WIPRO	VOIS	RENAULT NISSAN TECHNOLOGY
47	WESTERN UNION	ZENSAR	SPARK MINDA (Campus)
48	INTELLIPAAT SOFTWARE SOLUTIONS PVT LTD	IT WORLD WEB.COM	STANDARD CHARTERED GBS
49	BUSINESS OCTANE	IDEAL RESOURCES PRODUCTS PVT LTD (CORE E&TC)	STRIDLEY SOLUTION
50	LTI Mindtree	BHARARPE	TATA TECHNOLOGY
51	ENCORA	DIGITAL	TCS
52	SOLARSQUARE ENERGY (core)	FOURCOLOURS	TCS
53	TRINITY TOUCH (core)	LTIMINDTREE	TECH MAHINDRA
54	HANYAA AUTO TECHNOLOGIES	SAMPRADAA SOFTWARE TECHNOLOGIES	THOUGHT WORKS

55	SMARTDATA ENTERPRISES	JADE GLOBAL	UBISOFT
56	KANINI	PTC	UBISOFT
57	SILVER PUMPS (core)	ZENSAR	UNOMINDA LTD (E&TC)
58	APPLUS IDIADA (core)		UPGRAD
59	INNOVATECH TECHNOLOGY SOLUTIONS		VIRTUSA
60	RINEX TECHNOLOGIES		VIRTUSA
61	GE HEALTHCARE		VODAFONE IDEA
62	SILVER PUMPS (core)		VOIS
63	EXENITY EXCELLENCE INFINITE		WILEY EDGE
64	PTC		WIPRO
65	DELOITTE		ZOMATO
66	GEMINUS TECH PRIVATE LIMITED		ZYNGA TECHNOLOGY
67	RIBBON COMMUNICATION		
68	COGNIZANT		

- **Placement Summary of all Departments**

Table 9.5.9 Placement summary of all departments

Academic Year	E&TC	
	Number of Students Placed with single offer	Number of Students Placed with multiple offers
2024-2025	33	2
2023-2024	55	14
2022-2023	56	0
2021-2022	74	32

Industry-Institute Interaction Cell (IIIC) plays an important role in connecting the college with industries. It works to reduce the gap between what students learn in the classroom and what is needed in the real world. The III Cell arranges guest lectures by industry experts, industrial visits, hands-on workshops, and collaborative projects with companies. It also helps the college sign MoUs (agreements) with industries to support training, internships, research, and skill development activities. These efforts give students a better understanding of current technologies, tools, and industry expectations.

Through its partnerships, the III Cell supports internship opportunities for students in various sectors. It works with the Training and Placement Cell to help students get internships during their vacations. These internships give students valuable work experience, help them learn professional behavior, and improve their technical and communication skills. Industry mentors guide students and give feedback that helps them grow.

The college has a proper system to manage internships. Students are guided before and during the internship, and their work is reviewed after completion. They submit reports and give presentations on what they learned. In some cases, internships are linked to academic credits. Overall, the III Cell ensures that students are better prepared for jobs, have industry exposure, and are ready for future careers.

- **Industry Institute Interaction Cell (IIIC) Data**

Table 9.5.10 Industry Institute Interaction Cell Data

Academic Year	Industrial visits	Industrial Interaction through Internships	Number of Internships	Placements	MOU's
2024-25	13	73	278	129	31
2023-24	7	73	282	150	16
2022-23	6	93	338	153	20
2021-22	0	63	285	198	28

9.6 Entrepreneurship Cell (5) Total Marks 4.00

Institute Marks : 4.00

- **Innovation and Entrepreneurship are promoted through two distinct yet collaborative bodies within the college: The Institute Innovation Cell (IIC) and the Entrepreneurship Development Cell (EDC):**

The **Institute Innovation Cell (IIC)** focuses on cultivating a spirit of innovation among students. It encourages them to think creatively and develop solutions to real-world problems. Through regular activities such as idea generation workshops, innovation competitions, hackathons, and prototype building sessions, the IIC provides students with a platform to turn their concepts into viable projects. The cell also connects students with mentors and industry experts who guide them through the innovation lifecycle, from problem identification to proof of concept. It actively promotes participation in national innovation challenges and supports students in patent filing and product development.

The **Entrepreneurship Development Cell (EDC)** is dedicated to fostering an entrepreneurial mindset and helping students turn innovative ideas into business opportunities. The EDC organizes seminars, startup boot camps, and guest lectures by successful entrepreneurs to expose students to the world of startups and business planning. It provides guidance on preparing business models, securing funding, understanding legal compliance, and building a minimum viable product (MVP). Students with entrepreneurial aspirations are supported with mentorship, networking opportunities, and assistance in participating in incubation programs. The cell acts as a catalyst in bridging the gap between innovation and entrepreneurship.

The ED Cell acts as a vibrant platform that encourages creativity, leadership, and innovation by offering necessary resources, guidance, and mentoring. It is committed to building an entrepreneurial ecosystem within the campus that evolves continuously to meet the changing needs of the start-up environment.

Objectives of the ED Cell:

- To instill entrepreneurial spirit and leadership qualities in students.
- To provide guidance and mentorship for converting innovative ideas into start-ups.
- To create awareness about entrepreneurship as a career option.
- To build a self-sustaining start-up ecosystem within the institute.
- To support students in accessing funding opportunities, incubation, and networking.

Key Activities Conducted:

- **Entrepreneurship Awareness Programs (EAPs):** Workshops and seminars to sensitize students toward entrepreneurship.
- **Mentorship Opportunities:** Students receive personalized guidance from experienced entrepreneurs, alumni, and industry experts.
- **Start-Up Showcases:** Platforms to pitch innovative ideas to potential investors and incubation partners.
- **Skill Development Workshops:** Training sessions on business model canvas, design thinking, financial literacy, and legal compliance.

The ED Cell has contributed significantly for promoting an entrepreneurial culture across disciplines. Students have actively participated in ideation events, pitch competitions, and national innovation contests. A few student start-ups have progressed to early-stage funding and incubation. The Cell continues to evolve as a hub of entrepreneurial excellence by fostering innovation and ethical business practices. The department had one entrepreneur in the academic year 2023–24.

Table 9.6.1 Activities conducted under Entrepreneurship Development Cell

Sr. No.	Details of activity conducted	Name of chief guest/coordinator	Date and duration	Total number of students and faculty participated
1	Poster Competition “Poster Vision”,Bharatiyugam’ 25	Ergen Technovision Pvt. Ltd.	08/04/2025	29 students
2	Startup Idea Competition “Pitchforge”,Bharatiyugam’ 25	Ergen Technovision Pvt. Ltd.	08/04/2025	20 students
3	Internship	Ergen Technovision Pvt. Ltd.	15/01/2024	35 Students
4	IIC “Impact Lecture Series 2024” Session1: “Entrepreneurship an Innovation as a career opportunity”	Synnollect Innovations	12/04/2024	60 Students
5	Poster Competition “VisioVerse”, Technophilia’ 24	Ergen Technovision Pvt. Ltd.	04/04/2024	150 students
6	Internship	Ergen Technovation Pvt. Ltd.	01/01/2023- 15/02/2023	TE E&TC -35 Students
7	“Yukti (poster Competition)” in Avinya’23 Techfest	BVCOEW, Pune	27/04/2023	17 students

8	Start-up Idea Competition- “AAROHANA” in Avinya, 23 Techfest	BVCOEW, Pune	28/04/2023	45 Students
9	Seminar on Entrepreneurship Development	deAsra Foundation	31/05/2023	150 students
10	Workshop on “Start-up & Entrepreneurship Development”	Opex Accelerators	15/09/2023	102 students
11	Interaction with Entrepreneur	Symbiosis Institute of Technology, Lavale	16/12/2023	04 Faculty
12	Interaction with Entrepreneur	Mr. Nityanand Prabhu Tendolkar Ergen Technovation Pvt. Ltd.	28/09/2022	05 Faculty

- **IPR Cell:**

IPR cell is established in the year 2024. IPR Committee is formed including internal and external stakeholders. Internal stakeholders are Principal and faculty. External stakeholders are Alumni, Industry expert and IPR expert. To create awareness among students and faculty, in total 06 various activities were conducted at department and institute levels. Also, Institute has registered for KAPILA in 2021-22, a scheme by MoE IIC &AICTE to provide financial assistance to students and faculty of the institutes who filed, published or granted patents. Institute has joined the NISP Campaign. Student’s cell is formed for start-up and innovation activities In-line with NISP Ministry of Education (MoE) policy, institute has drafted institute NISP. The approved I&E policy is notified / published among all the stakeholders via notice boards and on the institute website.

The outcome of this cell resulted in 19 patents filed by 21 faculty members out of which 6 are granted.

- **Start-up Cell**

As a part of our commitment to fostering an **entrepreneurial** ecosystem, the Start-up Cell at Bharati Vidyapeeth’s College of Engineering for Women, Pune, operates in alignment with the National Innovation and Start-up Policy (NISP) 2021 guidelines. The Start-up Cell is driven by the institutes vision to promote innovation, support early-stage entrepreneurial initiatives, and bridge the gap between academia and industry. In line with the institutional policy, we have established a dedicated infrastructure and governing mechanism to support student and faculty-led innovations. To strengthen our ecosystem, the institute has signed two Memoranda of Understanding (MOUs) with reputed external organizations, aiming to provide mentorship, incubation support, and industry collaboration for emerging start-ups.

Every academic year, the Start-up Cell organizes a wide range of initiatives, including start-up competitions, industrial visits, and internships, to encourage hands-on learning and real-world problem-solving among students. Notably, 30 students are offered internship opportunities through this platform annually, helping them gain valuable industry exposure and entrepreneurial skills. These efforts are supplemented by workshops, awareness drives on IPR and innovation, and the active involvement of the Institution’s Innovation Council (IIC). Through a structured and inclusive approach, the Start-up Cell continuously nurtures entrepreneurial thinking and contributes to the national goal of building a robust, innovation-driven economy.

Together, the IIC and EDC create a comprehensive ecosystem that motivates students to explore new ideas and pursue entrepreneurial ventures, equipping them with the skills, exposure, and confidence required to become future innovators and job creators. The activities conducted under IIC cell are listed below.

Table 9.6.2 Activities conducted by Institution’s Innovation Council

Sr. No.	Academic Year	Activity	Resource Person	Activity Date	No. of students attended
1	2024-25	Session on Business Model Canvas (BMC)	Prof. Sunita Dhotre, Associate Professor, Dept of CSE, BVUCOE	27/09/2024	59 TE IT Students
2		Workshop on “Simulation & Modelling using Python”	Mr. Santosh Yadav Business Consultant, CADD CAREER	18/03/2025 & 19/03/2025	196 FE Students

3	2023-24	Celebration activity on “Successful Landing of Chandrayan 3 on moon at south pole”	-	14/09/2023	143 SE Students
4		Seminar on “Intelluctual Property Rights & Technology Transfer”	Prof. Dr. Nidhi Jain, BVCOE, Lavale, Pune	07/02/2024	58 TE IT Students
5		Workshop on “Intelluctual Property Rights”	Mrs. Kalyani Ahir	12/04/2023	78 SE & TE Students
6	2022-23	Motivational Session by Successful Enterpreneur	Dr. Prakash Sharma (Founder & CEO Passion Infotech)	16/02/2023	180
7		How to plan for Start Up	Dr. Prakash Sharma (Founder & CEO Passion Infotech	11/05/2023	70
8		Workshop on Enterprenuership and Innovation	Dr. Prakash Sharma (Founder & CEO Passion Infotech	19/05/2023	75

- **Departmental Activities Under MoU:**

Table 9.6.3 Activities conducted under MoU

Sr. No.	Year	Name of the Industry	Purpose	Activities
1	2024-25	Aashay Measurements Pvt. Ltd	Internship, Workshop, Seminar	Invited as Judge for Start-up Idea Competition
2	2024-25	H.T. SWITCHGEARS	Internship, Workshop, Seminar	Invited as Judge for Start-up Idea Competition
3	2024-25	Dolphin Labs	Internship, Workshop, Seminar	Internship - 16 Students
4	2024-25	Akshay Embedded Pvt .ltd	Internship, Workshop, Seminar	Internship - 03 Students
5	2024-25	Ergen Technovation Pvt. Ltd	Internship, Workshop, Seminar	1. Internship - 30 Students 2. Industrial Visit - TE E&TC Students
6	2023-24	Aashay Measurements Pvt. Ltd	Internship, Workshop, Seminar	Internship -05 Students
7	2023-24	H.T. SWITCHGEARS	Internship, Workshop, Seminar	Invited Mr.Sukumar Badave as Judge for Project Competition
8	2023-24	Ergen Technovation Pvt. Ltd	Internship, Workshop, Seminar	Internship - 30 stduents Sponsorship to Start-up Idea Competition (Innoventure-24) = 10,000/-

9	2023-24	Mikro Innotech India Pvt. Ltd	Internship, Workshop, Seminar	Internship - 13 Students
10	2023-24	Akshay Embedded Pvt Ltd	Internship, Workshop, Seminar	Internship -02 Students
11	2022-23	Dolphin Labs	Internship, Workshop, Seminar	Workshop on PCB Making" Students -135
12	2022-23	Ergen Technovation Pvt. Ltd	Internship, Workshop, Seminar	Internship - 30 7Students Industrial Visit - 148 students + 5 staff
13	2022-23	Mikro Innotech India Pvt. Ltd	Internship, Workshop, Seminar	Internship -13 Students

9.7 Co-curricular and Extra-curricular Activities (10) Total Marks 9.00

Institute Marks : 9.00

Bharati Vidyapeeth's College of Engineering for Women offers a vibrant and inclusive environment for the holistic development of its students through a rich blend of co-curricular and extra-curricular activities. These activities are designed to promote creativity, leadership, technical excellence, physical well-being, social awareness, and a strong sense of community—complementing academic learning and helping students grow into well-rounded professionals. Ensuring safety, inclusivity, and student welfare, the Internal Complaint Committee (ICC) addresses concerns related to harassment or inappropriate behavior in a confidential and just manner. Regular awareness programs are conducted to create a culture of respect and dignity on campus. The Student Grievance Redressal Committee (SGRC) provides a platform for students to voice academic and infrastructure-related concerns, resolving them promptly. Additionally, the Reservation Committee ensures equitable access to opportunities, admissions, and scholarships for students from reserved categories, following government norms. Technical and cultural festivals remain central to student life, providing platforms for students to engage in coding contests, hackathons, paper presentations, exhibitions, drama, music, and dance. These festivals encourage innovation, collaboration, and strategic thinking while fostering friendships and team-building. With active student participation, faculty mentoring, and industry involvement, these events serve as a key measure of the quality and relevance of student engagement. Together, all these initiatives create an enriching and inclusive ecosystem at Bharati Vidyapeeth's College of Engineering for Women—one that not only emphasizes academic excellence but also fosters leadership, compassion, innovation, and personal growth.

- **Art Circle:**

The Art Circle is a dynamic platform that allows students to explore various forms of creative expression including music, dance, drawing, painting, and photography. It helps cultivate skills like leadership, time management, and event coordination. Through cultural events, workshops, and intercollegiate competitions, students are encouraged to express their creativity and gain confidence.

Table 9.7.1 Activities conducted under Art Circle

Sr. No.	Date	Activity Name	Resource Person/Guest	Faculty/Staff/Students	Number of students participated
1	13/8/2024	Rakhi Making and Mehandi Competition	Prof. Charuta Kharokar BV Fine art College, Katraj	SE, TE, BE Students and College staff	58
2	28/8/2024	Eco-Friendly Ganesha Idol Making Workshop	Prof. Deshpande, BV Fine art College, Katraj	SE, TE, BE Students and College staff	60
3	19/2/2025	Chhatrapati Shiv Jayanti Celebration	-	FE, SE Students and College staff	44
4	29/2/2024 to 2/3/2024	Cultural Days	Dr. Kavita Murugkar, BV Architecture College, Pranali Shende, BV Fine Art College, Katraj, Arpita Sonpatki Actress and Model	FE, SE, TE, BE Students and College staff	600
5	29/02/2024 to 02/03/2024.	Cultural Days	Prof. Mahima Chandra Prof. Hardip Kuar BV Optometry College	SE, TE, BE Students and College staff	500
6	8/8/2022	Rakhi Making and Mehandi Competition	-	SE, TE Students and College staff	60
7	27/8/2022	Eco-Friendly Ganesha Idol Making Workshop	Prof. Deshpande, BV Fine art College, Katraj	SE, TE, BE Students and College staff	60
8	27/09/2022 to 30/09/2022	Zest Fiesta 2022	-	SE, TE, BE Students and College staff	500

9	19/2/2023	Chhatrapati Shiv Jayanti Celebration	-	SE, TE, BE Students and College staff	40
10	25/3/2023	Women's Day Celebration- Women's health Seminar for teaching and non-teaching staff	Dr. Edalabadkar	SE Students and College staff	35
11	19/4/2023 to 21/4/2023	Cultural Days	Miss. Mugdha Deshpande, Actress and Model	FE, SE, TE, BE Students and College staff	500

- **Annual College Magazine "Oyster"**

Additionally, the annual college magazine highlights the talents and accomplishments of both students and staff. It features articles (Marathi, Hindi, English, Technical) poems, artwork, Drawing, Photography) and reports in the year's events and activities. Capturing the dynamic academic and cultural spirit of the college, it serves as a creative platform. Our college magazine has also earned recognition and awards at the university level. The annual college magazine is a vibrant platform that showcases creative talents of students and staff. It reflects the academic achievements, cultural activities, and innovative spirit of the institution throughout the year. Till date, the institute has received six awards from Savitribai Phule Pune University. In the last three years, the institute secured the First Prize for Oyster'20, announced in the academic year 2023–24.

- **Tech fest**

Table 9.7.2 Students Participation in Annual Technical Fest

Academic Year	Event Name	No. of students participated
2024-25	BharatiYugam 2025 – "Transforming Dreams into Reality"	275
2023-24	Technophilia	235
2022-23	Avinya	232

- **Annual Social Gathering**

Table 9.7.3 Students Participation in Annual Social Gathering

Academic Year	Event Name	No. of students participated
2024-25	BharatiYugam 2025- "Retro to Metro"	275
2023-24	Silverstone	235
2022-23	Adwitiya	232

- **Student Development Section:**

The Student Development Section organizes a variety of student-centered programs focused on life skills, social values, and personal growth. Events such as self-defense workshops, meditation sessions, awareness campaigns on minority rights, charity drives, and language appreciation days help students become socially responsible and emotionally resilient. The section also implements student welfare initiatives like the K.B.P. Earn and Learn scheme and career counseling sessions to ensure all-round student support.

Table 9.7.4 Activities conducted under Student Development Section

Sr. No.	Date	Activity Name	Venue	Resource Person	Number of Staff/Students participated
1	13 -15/08/ 2024	Har Ghar Tiranga Campaign	BVCOEW ,Pune	Principal BVCOEW,Pune	78 students

2	14/08/2024	Awareness and Implementation of "Partition Horrors Remembarance day" Play	BVCOEW ,Pune	National School of Drama	210 students
3	1/09/2024 to 15/09/2024	Swacchta Pandharawada	BVCOEW ,Pune	All the staff members and Students	60 staff, 250 students
4	24/09/2024	Hindi Diwas celebration	BVCOEW ,Pune	SDO BVCOEW,Pune	40 students
5	11/12/2024	Bharatiya Bhasha Utsav Cebration	BVCOEW ,Pune	Online Mode: Mr.Pravin Tarade	6 staff, 58 students
6	18/12/2024	Alpasankhyank Hakka Din Celebration	BVCOEW ,Pune	Prof.Nikita Chaudhari(PVG,Pune)	2 staff, 66 students
7	25/01/2025	Road Safety Awareness	BVCOEW ,Pune	Mr. Ram Takbhate ,Mr. Mr. Sacheen Jahagirdar Dy. General Manager – Human Resource Kirloskar Ferrous.	60 staff, 249 students
8	27/01/2025	Know Your Hospital	BVCOEW ,Pune	Bharati Hospital,Pune	60 staff
9	30/01/2025	हुतात्म्यांना श्रद्धांजली कार्यक्रमा	BVCOEW ,Pune	Principal ,BVCOEW, Pune	60 staff, 250 students
10	11-13/03/2025	3-Day Workshop on Core Well-being Practices for First-Year Students	BVCOEW ,Pune	Heartfullness team,Pune	150 students
11	1/02/2025	Self Defence Workshop	BVCOEW ,Pune	School of Marshal arts,Pune	132 students
12	20- 22/02/2025	Workshop on Skill Development and Complementary Activities	BVCOEW ,Pune	BVCOEW Pune and Tronics 365 Pune	2 staff, 70 students
13	22/01/2025	Sakal YIN Event (Young Inspiration Network)	BVCOEW ,Pune	Principal ,BVCOEW, Pune	4 staff, 60 students
14	14/01/2025	Stationary Distribution and Visit to Janseva Foundation,Pune	Janseva Foundation,Pune	Principal ,BVCOEW, Pune	9 staff, 12 students
15	13/01/2025	Youth Day	BVCOEW ,Pune	Principal ,BVCOEW, Pune	42 staff, 291 students
16	19/02/2025	Jay shivaji jay bharat padyatra	COEP Ground Pune	--	4 staff, 150 students
17	28/07/2023	Activities under NEP 2020	BVCOEW, Pune	Principal BVCOEW,Pune.	15 students
18	9/08/2023	Swatantryacha Amrut Mahotsav Oath	BVCOEW, Pune	Principal BVCOEW,Pune	38 staff, 295 students
19	11/08/2023	Essay and Speech Competition Shivrajy abhishek -350	BVCOEW, Pune	Principal BVCOEW,Pune	15 students
20	14/09/2023	Vishesh Nav matador Nondani Abhiyan	BVCOEW, Pune	Principal BVCOEW,Pune	63 students
21	26/11/2023	Sanvidhan Diwas Celebration	BVCOEW, Pune	Principal BVCOEW,Pune	60 students
22	3/01/2024	Savitribai Phule Jayanti	BVCOEW, Pune	Principal BVCOEW,Pune	35 students

23	13/01/2024	सामाजिकप्रबोधनसप्ताह Celebration	Sumatibalvan,Nimbalkarwadi	Principal BVCOEW,Pune	45 students
24	30/01/2024	Hutatma Din	BVCOEW, Pune	Principal BVCOEW,Pune	236 students
25	17/02/2024	Nirbhaya Kanya	BVCOEW, Pune	Mrs.HemlataGawade(Bhaarati Vidyapeeth Police Station)	70 students
26	20/02/2024	Nirbhaya Kanya: Women Rights	BVCOEW, Pune	Mrs.Anisa Shaikh(New Law College Pune)	70 students
27	21/02/2024	Generation of Electricity from Green Energy	BVCOEW, Pune	Mr.RahulNalawade	84 students
28	22/02/2024	Nirbhaya k Kanya: Change in Lifestyle and Gynaecological Disorders	BVCOEW, Pune	Dr.MrudulaKharnar (kulkarni)Bharati Vidyapeeth ayuvedic College	50 students
29	13/04/2024	Women Health Awareness Session	BVCOEW, Pune	Miss.AartiShitole,from Unimax India	39 students
30	11/05/2024	Student Health Check-up Camp	BVCOEW, Pune	Bharati Hospital,Pune	100 students
31	May 2023 to Feb 2024	KBP Earn and Learn	BVCOEW, Pune	----	32 students
32	21/06/2022	International Yoga day	BVCOEW, Pune	Dr.G.G.Patil,Mrs.Pravina Shete	55students
33	12/07/2022	Workshop on Electric Vehicles for Smart Cities	BVCOEW, Pune	Prof.Vaishali Yawale and Prof.Krutuja Gadgil of AISSMS IOIT Pune.	71students
34	12/08/2022	Tree Plantation	Taljai pathar	Dr.S.R.Patil ,staff members and Students	12 students
35	12/08/2022	Swatantryacha Amrut Mahotsav,Har Ghar Tiranga	Bharati Vidyapeeth Campus	Dr.S.R.Patil ,staff members and Students	240 students
36	12/08/2022	Amali Padarth Virodhi Pratidnya	BVCOEW, Pune	Dr.S.R.Patil ,Teaching and non-teaching staff members	21 staff
37	17/08/2022	Samuhik Rashtrageet Gaan:Swarajya Saptaha	BVCOEW, Pune	Principal	30 staff
38	3/10/2022	Gandhi Jayanti Cleanliness Drive	BVCOEW, Pune	All the staff members	50 staff
39	15/10/2022	Wachan Prerana Din	BVCOEW, Pune	All the staff members	27 staff, 118 students
40	31/10/2022	Rashtriya Ekata Diwas	BVCOEW, Pune	All the staff members	26 staff, 127 students
41	31/102022	Alpasankhyanka Hakka Din	BVCOEW, Pune	All the staff members	15 staff
42	25/11/2022	Matdar Din	BVCOEW, Pune	–	2 staff, 40 students
43	26/01/2023 to 10/02/2023	Lokshahi Padharawada Celebration	BVCOEW, Pune	Principal,All HOD,Student Development Officer, ,Students	5 staff, 48 students

44	28/02/2023	Seminar On Nirbhaya Kanya	BVCOEW, Pune	Dr Ujwala Bendale ,Principal,BV law College,Pune	3 staff, 280 students
45	17/02/2023	Seminar On Women Health	BVCOEW, Pune	Dr.Vandana Nimbargi,Bharati Hospital, Pune	30 staff
46	15/02/2023	Seminar On Cyber Security"	BVCOEW, Pune	Mr.Maharudra Gitte, B.E.(IT),M.Tech.(CSE),LL.B. ,Diploma in Cyber LaW, Advocate,Pune	10 staff, 50 students
47	27/02/2023	Marathi Bhasha Gaurav Din	BVCOEW, Pune	–	82 students
48	3- 4/03/2023	Workshop on Green Electric Power Generation	BVCOEW, Pune	Mr. Yogesh Mahaparale,General Manager ,Hella Automotive Pvt.Ltd.	4 staff, 130 students
49	16/05/2023	G20 Antargat 3rd Energy Transition Working Group Upakram	BVCOEW, Pune	Prof.Diksha Chopade	1 staff, 55 students
50	A.Y. 2022-23	K, B, P. Earn and Learn	BVCOEW, Pune	–	20 students

- **Internal Complaint Committee:**

As per the guidelines and regulations laid by Maharashtra State Commission for Women (MSCW), an Internal Complaint Committee (ICC) is made mandatory to be formed at every educational institute. The ICC was formed at BVCOEW, Pune on 27th February 2017 with an inauguration function and a half day workshop on sexual harassment and awareness. This committee is setup in the view of giving guidelines about sexual harassment at workplace and helping a victim against it. This committee also ensures prevention, prohibition and redressal of sexual harassment. Reconstitution of the committee was done on 25th February 2021.

The students can drop in their complaints in written form in the drop box provided and also contact the ICC members for any kind of help they require.

Objectives of ICC:

- Improving the status and dignity of women in the society.
- Investigate into practices derogatory to women and suggest suitable remedial measures.
- Effectively monitor implementation of laws affecting women.

Functions of ICC:

- Provide assistance if an employee or a student chooses to file a complaint with the police.
- Provide mechanism of dispute redressal and dialogue to anticipate and address issues.
- Protect the safety of the complainant.
- Ensure victims and witnesses get proper treatment.

Table 9.7.5 Activities conducted by Internal Complaint Committee

Sr. No.	Date	Activity List

1	07/12/2022	As per the AICTE guidelines women “Pakhawada” is celebrated at BVCOEW Pune during 25/11/2022 to 10/12/22
2	28/08/2023	Awareness session on “Internal Complaint Committee” and code of conduct at the Institute for Newly admitted (FE) student.
3	09/09/2023	Appointment of New Student coordinators for ICC committee.
4	27/02/2024	One Day Workshop on Empower Her: Strengthening women Safety, Rights and Health.
5	08/10/2024	Awardees Session “ICC” for newly admitted (FE) Students.
6	07/01/2025	Seminar on “From Awardees to Action: Stopping Violence Against Women & “ Damini Pathak operating System(Karyapranali)”
7	02/06/2025	“Bharati Arogya Sakhi” on the occasion of the International Day of Action for Women’s Health.

- **Student Grievance Redressal cell**

The Institute has formed STUDENTS’ GRIEVANCE REDRESSAL COMMITTEE (SGRC) As per the AICTE circular. The primary objective of the committee is to provide opportunities for redressal of certain grievances of students already enrolled. Once in a semester the committee meeting is held to discuss and resolve the student’s grievances.

- **Anti- Ragging Committee (ARC):**

Anti -Ragging Committee is constituted in our college to prevent ragging and to take anti-ragging measures as per the guide lines issued by the Hon. Supreme Court of India & UGC. The undertaking by students regarding non-involvement in ragging act is introduced in admission process. Anti-ragging committee was reconstituted with senior and junior student representative, Sub Inspector of Police, Media Person, NGO, Representative from Non-teaching Staff etc. Anti-Ragging Committee was formed at BVCOEW, Pune in 2014

Objectives of ARC:

1. To Prevent, Prohibit, and Redress any and all forms and instances of Ragging in the College.
2. To educate the students on the meaning of ragging and what constitutes it.
3. To educate the students on the ill-effects of ragging and the consequences, including legal

   Consequences of indulging in ragging.
4. To keep a continuous watch and vigil over ragging so as to prevent its occurrence and

   Recurrence.

Functions of ARC:

1. To consider the complaints received from the students and conduct enquiry and submit report to the Anti- Ragging Committee along with punishment recommended for the offenders.
2. Oversee the procedure of obtaining undertaking from the students in accordance with the Provisions.

3. Conduct workshops against ragging menace and orient the students.

4. To provide students the information pertaining to contact address and telephone numbers of the person identified to receive complaints/distress calls.

5. To create awareness among the students about Anti ragging.

6. To take all necessary measures for prevention of Ragging inside the Campus/ Hostels.

Table 9.7.6 Activities conducted by Anti -Ragging Committee

Sr. No.	Date	Event conducted	Participation	
			Faculty and non-teaching staff	students
1.	12/08/2024	Pledge, Introduction and video of Anti ragging	03	200
2.	12/08/2024	Screening of short films and documentaries on anti-ragging	03	200
3.	13/08/2024	Digital Poster Making and Slogan Writing Competition	06	58

- **Gymkhana:**

Sports and Gymkhana activities are central to promoting physical fitness and team spirit. Students actively participate in college and university-level sports competitions in games such as basketball, volleyball, cricket, table tennis, and chess. Events like Yoga Day, Fit India Movement, and the Annual Sports Week help students maintain a healthy lifestyle while instilling qualities such as discipline, leadership, and perseverance. The sports facilities are well-equipped, and winners are recognized during the college's annual social gathering. Activities conducted during the assessment period are listed below:

Table 9.7.7 Activities conducted under Sports

Sr. No.	Name of the Event	No. of Players participated in Sports activities		
		2024-25	2023-24	2022-23
1	Yogasan	03	01	01
2	Chess	03	04	03
3	Badminton	03		04
4	Basketball	09	10	07
5	Volleyball	10	06	
6	Kho-Kho	12		
7	Athletics	09	06	06
8	Football	11	19	
9	Annual Sports	500	200	500
10	Cross-Country		01	03
11	Weight-Lifting		01	
12	Power-Lifting		01	

13	Kabaddi		10	
14	Fencing			01
15	Handball			01
16	Cricket			12
	Total No of Students	**560**	**259**	**538**

- **Alumni Association:**

A key pillar of institutional growth and student mentorship is the Alumni Association. Registered under the Charity Commissioner's Office, Pune (Reg. No. Maha/1403/2017/Pune dated 6 October 2017), the alumni association has over 4700 registered members. Its mission is to maintain a strong and lifelong connection between the institution and its graduates. This is accomplished through alumni meets, guest lectures, workshops, and mentoring sessions. Alumni share their professional journeys and industry insights, inspiring current students and offering valuable guidance on higher studies, placements, and career paths. Their active involvement significantly enhances the learning environment and strengthens the college's industry network. List of activities taken by Alumni Association given below.

Table 9.7.8 Activities conducted by Alumni Association

Sr. No.	Date	Name of the Activity	Name of the Alumna	Class
1	18/07/2024	MPSC Exam Preparation	Ms. Puja Khumkar	SE E&TC
2	18/07/2024	Job Opportunities in US Based Company	Ms. Sayali Kumbhar	SE E&TC
3	22/07/2024	Seminar on Career Path and Industry Insights	Ms.Utkarsha Kakade	SE IT
4	21/09/2024	Mastering the placement process	Ms. Tejas Takalkar	TE E&TC
5	03/10/2024	Higher Studies and Professional Experience in Company	Ms. Sneha Kumari Ms. Palak Agrawal	TE E&TC
6	19/10/2024	Seminar on Discussions on Emerging Trends in Technology	Ms. Smiti Chandwadkr	TE IT
7	13/01/2025	Seminar on Angular for Frontend Developers	Ms. Komal Jha	SE IT
8	03/02/2025	Guidance on Higher Education	Ms. Tanushree Desale	BE E&TC
9	03/02/2025	Understanding Company Expectations and Hiring Trends	Ms. Sayali Patil	BE E&TC
10	07/02/2025	Seminar on Career Pathways in Software Engineering	Ms. Smiti Chandwadkr	BE IT
11	18/02/2025	From Campus to Career: MS experience in UK	Ms. Shreya More	SE E&TC
12	22/03/2025	Data Cloud and Gen AI	Ms. Julekha Bagwan	SE Comp
13	21/04/2025	Career Opportunities in AI	Ms. Tanvi Sanerkar	SE Comp
14	08/08/2023	Preparation of CDAC entrance examination	Ms.Revati Gajbhar	TE E&TC
15	11/08/2023	Cracking Placemnet in hardcore company	Ms.Purva Mahadik	TE E&TC
16	19/08/2023	Seminar on Career Guidance and Alumni Interaction Session	Ms. Rajshri Ghatkar	SE IT

17	03/02/2024	Seminar on Oracle Application developer	Ms.Vaishnavi Bhutda	TE IT
18	29/02/2024	Guidance on Placement	Ms Shruti Burhade	SE E&TC
19	04/03/2024	Guidance on Group Discussion & Personal Interview	Ms.Radha Kure	BE E&TC
20	09/03/2024	Transitioning from academia to industry	Ms. Surbhi Malav	TE Comp
21	13/03/2024	Placement Preparation	Ms. Maithili Chaturbhuj	SE Comp
22	15/03/2024	Preparation for Competitive Examinations	Ms. Shital Vaidya	TE E&TC
23	16/03/2024	Professional Etiquettes	Ms. Rekha Takalkar	SE E&TC
24	27/03/2024	Seminar on Internship and Project Guidance	Ms.Aachal Bhatt	SE IT
25	16/04/2024	Preparation for placement and career opportunities	Ms.Vishakha Patil	SE Comp
26	19/04/2024	Seminar on Insights into industry expectation, career paths and professional development	Ms. Meenakshi Sinha	SE IT
27	25/04/2024	Seminar on Windows and networking-Citrix Technology	Ms. Shital Bhoite	SE and TE IT
28	18/05/2024	Balancing Academic Excellence and Career Advancement: Strategies for Placement Preparation	Ms. Aditi Kokil	SE Comp
29	15/09/2022	Seminar on Website Development using Wordpress	Ms. Shruti Lokhande	TE-IT
30	22/09/2022	Importance of Academics in view of Placement	Ms. Samrudhdhi Shukla	TE E&TC
31	15/02/2023	Placement and Interview Guidance	Ms. Aishwarya Mokashi	SE E&TC
32	22/02/2023	Work Etiquettes in IT Company	Ms. Komal Singh	SE E&TC
33	18/05/2023	Seminar on Career Guidance	Ms. Shruti Lokhande	SE-IT
34	26/08/2023	Cloud Computing	Ms. Siddhi Deshpande	SE Comp
35	30/08/2023	Balancing Academic Excellence with Enriching Extracurricular Activities	Ms. Harshada Ankam	FE

- **Department Student Associations:**

Student Associations such as ETSA, ITechS'A, CESA functions as a technically-focused student bodies that organize coding competitions, technical talks, seminars, industry interactions, and study-abroad awareness programs. These activities bridge the gap between academic learning and real-world applications, empowering students with the skills and exposure needed to thrive in competitive environments. Professional ethics, Technical skills, personality development, advance technology awareness and soft skills are the key topics covered through the events and activities conducted through the department student's associations. These associations are run by the students for the students with the guidance of faculty and staff.

- **Electronics &Telecommunication Engineering Students Association**

The Electronics and Telecommunication Student Association (ETSA) is a dynamic platform established to foster technical excellence holistic development among students of the Electronics and Telecommunication Engineering department. ETSA serves as a bridge between students, faculty, and industry experts, promoting a culture of continuous learning and professional growth. The association regularly organizes technical workshops, expert talks, seminars to enhance practical knowledge and industry readiness. Apart from technical events, ETSA also conducts soft skill development programs and social initiatives to nurture leadership, teamwork, and ethical values among students.

The Institution of Engineers (India) — IEI

The Institution of Engineers (India), commonly known as IEI, is the premier multidisciplinary professional body for engineers in India. It serves as a platform for engineers from various disciplines to come together, exchange ideas, develop professionally, and contribute to nation-building. List of activities taken under IEI are given below.

Objectives of The Institution of Engineers (India) (IEI)

·Advancement of Engineering and Technology

- Professional Development of Engineers
- Promotion of Ethical Standards
- Recognition of Engineering Qualifications
- Bridging Academia and Industry
- Promotion of Research and Innovation
- Nation Building through Engineering Expertise
- International Collaboration

Sr. No.	Date	Name of Activity	Resource Person	Student Participation
1	11/09/2023 to 25/09/2023	Student presentation event as on Electromagnetic Applications	Prof. S.M. Bhilegaonkar	150
2	21-22/08/2023.	Workshop on “Awareness of MATLAB”	Mr Ankit Kumar	T.E.(E&TC) I&II
3	21/02/2024	Workshop on demonstration and hands-on session on Klystron based Microwave test benches by TECHNILAB INSTRUMENT	Mr. J. Ravi Kumar, the Chief Executive of the TECHNILAB INSTRUMENT	T.E.(E&TC) I&II
4	09/05/23 to 11/05/23.	Expert lecture series on Control Systems	Prof. Ashwini Navghane, VIIT, Pune	S.E.(E&TC) I&II
5	11/02/2023	Webinar on Internship opportunities on VLSI, IOT, and RF	Abhiyantha training division of Entuple Technologies	T.E.(E&TC) I&II

- **IETE activities**

Institution of E&TC Engineers Student Forum(IETE)

The institution of E&TC Engineers Student Forum was established in the year of 2006. ISF coordinator was Executive Committee Member at IETE, Pune Center during the A.Y. 2014-16. In recognition of excellent work of ISF, the IETE Centre Pune awarded E&TC. dept. various awards for consecutive 7 years since its inceptions. Our institute students conduct and participate in the various activities conducted by IETE local Centre Pune. Final year students regularly participate in the project exhibitions and competitions organized by IETE Center, Pune. 3 project groups of final year received awards for best projects till date. The major activities include, National Level Project competition in association with IETE center Pune, visit to Electric Vehicle start up unit, one-day certificate course on battery manufacturing. 3 faculty members have Life Membership of IETE. List of activities taken under IETE are given below.

Sr. No.	Date	Name of Activity	Resource Person	Class

1	13/9/2023	Seminar on “Current Technologies used in Electric Vehicles”	Mr. Prakash Malvatkar, EV Expert, Center of Excellence in EV KJCOEMR Pune	SE E&TC DIV –I & II
2	28/11/2023	Visit to EV Center of excellence	KJCOEMR Pune	SE E&TC DIV –I & II
3	27/4/2023	National Level IETE Project Competition in Association with IETE centre, Pune	Vivek Sawant, MKCL, Pune, Prof. Dr. V. V. Shete, Chairman, IETE Centre, Pune, Prof. Dr. Somani	SE E&TC DIV –I & II
4	27/4/2023	National Level IETE Project Competition in Association with IETE centre, Pune	Vivek Sawant, MKCL,Pune, Prof. Dr. V. V. Shete, Chairman, IETE Centre, Pune, Prof. Dr. Somani	SE E&TC DIV –I & II

- **IEEE Student Chapter Initiation and Achievements:**

The IEEE Student Chapter was officially established at our institute in April 2025 with the aim of fostering innovation, technical excellence, and professional growth among students. Since its inception, the chapter has provided a dynamic platform for students to engage in technical activities, skill development sessions, workshops, and networking with industry professionals and academicians. The chapter has proven instrumental in connecting students with global IEEE resources and opportunities. Through its initiatives, students have been encouraged to participate in paper presentations, technical competitions, and collaborative research projects.

A significant achievement of the IEEE Student Chapter this year is that **nine students** were successfully selected for prestigious **IEEE internships**. These internships have provided them with invaluable industry exposure, practical experience in emerging technologies, and mentorship from domain experts, significantly enhancing their technical and professional competencies.

- **NSS Unit:**

The National Service Scheme (NSS) is a powerful platform for students to engage in social service and nation-building activities. The NSS unit at Bharati Vidyapeeth’s College of Engineering for Women, Pune was established in the academic year **2006–07** with an initial enrollment of **50 student volunteers**. Over the years, the unit received enthusiastic participation from students and strong institutional support, leading to a steady increase in its strength. The number of volunteers grew to **100** in **2010-11**, and further expanded to **200** in **2016-17**. With continued interest and commitment towards community development, the NSS unit has now reached a total strength of **250 volunteers** as of the academic year **2023-24**. The unit functions actively under the guidance of the Principal and appointed NSS Programme Officers, aligning with the objectives set by the Ministry of Youth Affairs and Sports, Government of India.

- **Objectives of NSS:**

The primary objective of the National Service Scheme (NSS) is to develop the personality of students through community service. It aims to help students understand the community in which they work and recognize their role within it. By engaging with local communities, students are encouraged to identify and analyze social problems and actively participate in finding and implementing practical solutions. The scheme fosters a sense of social and civic responsibility, cultivates democratic attitudes, and enhances leadership qualities. It also promotes group living, cooperation, and sharing of responsibilities. Through various activities, students acquire the skills needed to mobilize community participation and respond effectively to emergencies and natural disasters. Moreover, NSS instills the values of national integration, unity in diversity, and social harmony, shaping students into responsible and aware citizens.

- **Major Activities Conducted under NSS:**

The NSS unit of the college actively organizes and participates in a wide range of social, cultural, and developmental activities throughout the academic year. These include **tree plantation drives**, **Shramdaan (voluntary labour work)**, **blood donation camps**, **awareness campaigns** on health, hygiene, environment, and gender sensitization, as well as **lectures, seminars, and competitions** to promote civic and social values among students. The volunteers frequently **visit old age homes, orphanages, and schools for underprivileged children**, fostering empathy and community engagement.

Special emphasis is given to the celebration of important national and international days such as **Independence Day, Republic Day, Constitution Day, Engineers’ Day, and Women’s Day**. One of the key highlights of the NSS calendar is the **Seven-Day Special Residential Camp** held in rural or semi-urban areas, where students undertake activities like cleanliness drives, sanitation awareness, and socio-cultural programs focused on rural development. The residential camp in rural areas provide exposure to the grassroots realities and enabling community service for the students. The unit also takes pride in its volunteers being **selected to represent the college at prestigious events such as the State Republic Day Parade (SRD)** and the **National Republic Day Parade (NRD)** camps, showcasing their leadership, discipline, and active involvement in NSS at higher levels. Such selections reflect the dedication and excellence of the volunteers and contribute significantly to the visibility and impact of the institution’s NSS initiatives.

Sr. No.	Event Name	A.Y. 2022-23		A.Y. 2023-2024		A.Y. 2024-25	
		No. of activities	No. of students participated	No. of activities	No. of students participated	No. of activities	No. of students participated
1.	Har Ghar Tiranga	3	260	4	190	2	250
2.	Cleanliness Drive	1	60	4	50	4	55
3.	NSS Orientation Program	4	260	3	166	4	250
4.	Voter Awareness	1	80	1	200	5	250
5.	Tree plantation	1	50	1	28	2	150
6.	Mental health and meditation program	1	77	3	125	3	150
7.	Grantha Dindi	2	113	2	125	2	150
8.	Trekking	1	100	1	125	1	150
9.	Science day	1	100	1	66	1	150
10.	Health checkups	3	300	2	120	3	150
11.	Cultural gathering	1	100	1	125	1	150
12.	National Festivals & Patriotic Events	5	80	5	70	6	180
13.	Ganesh idol making workshop	1	50	1	35	1	250
14.	Seven Days Residential Camp in Village	1	100	1	125	1	125
	National/State/District level workshops						
15.	State Level Workshop on Contribution of Transgender in Election Process	1	10	-	-	-	-
16.	Gadsanvardhan (Fort conservation)	-	-	-	-	1	50
17.	Gender sensitization	-	-	-	-	1	100
18.	Meri mati mera desh	-	-	1	146	-	-
19	Viksit Bharat	-	-	1	168	-	-

- **FE Induction Program:**

Sr. No	Date	Activity	Resource Person

1	20/09/2024	Meditation/ Yoga	Prof. U. S. Zope Prof. K. S. Sawant
		Physical Activity Out Door(Ground)	Prof. K. B. Naikwadi Prof. Dr. G. G. Patil
2	23/09/2024	Happy Thought Session	Student Volunteers
		Youth for Nation	Vikram Magar
3	24/09/2024	Empowering Women by Incubating ideas to Startups	Dr.Atual Ayare
	24/09/2024	Department visit (COMP)	Prof. K. S. Sawant
4	25/09/2024	Katalyst Scholarship Session	Prof. Dr. S. S. Jadhav Prof. D. P. Chopade
	25/09/2024	Department visit (IT)	Prof. M. A. Rane
5	26/09/2024	Introduction of ICC	Prof. Dr. S. S. Chorage Prof. Dr. S. S. Jadhav
	26/09/2024	Community Outreach Program Info Session	Prof. S. A. Itkarkar
6	27/09/2024	Museum Visit	Prof. Y. D.Kute Prof. A. B. Vitekar
	27/09/2024	One minute game/Art related activities	Prof. M. A. Patwardhan Prof. U. S. Zope
7	28/09/2024	Principal address to students and Parents	
	28/09/2024	Cultural activities	Prof.Anjali Kadam
8	30/09/2024	Tree Plantation	All F.E. Teaching and Non-teaching staff NSS Unit
9	29/08/2023	Meditation/ Yoga	Prof. U.S. Zope Prof.S.R.God
		Katalyst Scholarship Session	Prof. Dr.S.S. Jadhav Prof. D. P. Chopade
10	30/08/2023	Meditation/ Yoga	Prof. U.S. Zope Prof.S.R.God
		Department visit (Comp)	Prof. D.P.Chopade Prof. U.S.Zope Prof.KS.Sawant

11	31/08/2023	Introduction of ICC	Prof.Dr.S.S.Chorage Prof. M.A. Patwardhan
		Department visit (IT)	Prof. Y. D. Kute Prof. Smita God Prof.M.A.Rane
12	01/09/2023	Cummins Scholarship Session	Prof. D.P.Chopade Prof. U.S. Zope Prof.S.R.God
		Department visit E & TC	Prof. Y. D. Kute Prof. M.A. Patwardhan Prof. K. D.Mahajan Prof. P.R.Yawale Prof. S.V. Shelake Prof. R. Sapakal
13	02/09/2023	Museum Visit	Prof. Y.D.Kute
		Practice for Cultural Activities	Practice for Cultural activities
14	04/09/2023	Sports activities (BV Ground)	Prof. K. B.Naikwadi Prof.Dr.G.G.Patil
15	05/09/2023	Cultural activities	FE ALL Teaching & Nonteaching Staff
16	22/11/2022	Meditation/ Yoga	Prof. U.S. Zope
		Physical Activity Out Door(Ground)/Indoor	Prof. K. B.Naikwadi
17	23/11/2022	Student Development session	Prof. K.R. Chaudhari Prof. D. P. Chopade Prof. Dr. S. S. Jadhav
		Feedback & allocation of next activity	
18	24/11/2022	Meditation and Yoga	Prof. U.S. Zope
		Physical Activity Out Door(Ground)/Indoor	Prof. K. B.Naikwadi
19	25/11/2022	Exam section Session	Prof. Dr. S.S. Thite Prof. M.A. Patwardhan
		Auditions for Cultural activities	Prof. D. P. Chopade Prof. Dr. S.S. Jadhav
20	26/11/2022	Meditation and Yoga	Prof. U.S. Zope
		Katalyst Scholarship Session	Prof. D. P. Chopade Prof. Dr. S.S. Jadhav

10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

Total Marks 110.00

10.1 Organization, Governance and Transparency (40)

Total Marks 36.00

10.1.1 State the Vision and Mission of the Institute (5)

Institute Marks : 5.00

Vision :
Women Empowerment through Technical Education.
Mission :
M1: Develop women students to rise to their full potential. M2: Impart knowledge and prepare competent engineers.

10.1.2 Governing body,administrative setup,functions of various bodies,service rules, procedures, recruitment and promotional policies (10)

Institute Marks : 9.00

A] List of Governing Body Composition, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities, frequency of the meetings; participation details of external members and attendance there in.

To achieve the organization's objectives and ensure transparency, a clear organizational structure and hierarchy of authority have been established. Duties, responsibilities, and powers are systematically assigned and coordinated across various levels of management. (The organizational chart is available on institute website)

Governing Body:

Table 10.1.2.1: Composition of Governing Body

Sr. No.	Nominations / Designation	Name
1	Chairman-Nominated by Trust	Hon. Dr. Vishwajeet Kadam
2	Members Nominated by Society /Trust	Dr. U. B. Bhoite
		Dr. S. F. Patil
		Principal Dr. K. D. Jadhav
		Dr. Mandar Karmarkar
3	Nominee of AICTE Regional office EX Officio.	
4	An Industrialist/ Techno. Educationist from region nominated by regional committee as nominee of council	Dr. A. S. Padalkar
5	Nominee of affiliating body/uni. /State Board of Technical Education	
6	Nominee of State Government DTE Ex. Officio.	Dr. D.V Jadhav
7	An Industrialist/ Techo. / Educationist from region nominated by Stat Government	Dr. P. B. Mane
8	Principal/Member Secretary (Nominated by Society/Trust)	Prof. Dr. P. V. Jadhav
9	Two Facility members regular (Prof. and Asst. Prof. level)	Prof. Dr. S. S. Chorage
		Prof. Dr. A. M. Pawar

Functions and responsibilities:

1. **Financial Approvals**
   - Approve the annual budget estimates in advance.
2. **Audit and Accounts**
   - Review and approve the audited financial statements for each year.
3. **Human Resource Management**
   - Approve the recruitment of faculty and staff.
   - Approve promotions and recognize outstanding performance of faculty and staff.
4. **Regulatory Compliance**
   - Ensure compliance with the requirements set by AICTE, the State Government, and the affiliating University.
5. **Infrastructure Development**
   - Review and approve proposals for new infrastructure and facility upgrades.
6. **Academic Expansion**
   - Approve proposals for increasing student intake and launching new academic programs**.**
7. **Service Conditions**
   - Implement service conditions for faculty and staff in accordance with guidelines from the State Government and affiliating University.
8. **Academic Review**

- Review the Principal's report on student admissions and academic performance.

Frequency of meeting: Two times in a year

2. **College Development Committee:**

As per the Maharashtra Public Universities Act 2016, Section 97, the College Development Committee is formed at the college level.

Table 10.1.2.2: Composition of College Development Committee

Sr. No.	Nominations / Designations	Name
1.	Chairperson of the management or his nominee ex officio Chairperson	Hon. Dr. Vishwajeet Kadam
2.	Secretary of the Management or his nominee	Dr. K. D. Jadhav
3.	One head of Department (to be nominated by the principal or the head of the Institution)	Prof. Dr. D. A. Godse
4.	Three teachers in the College or recognized Institution elected by the full time amongst themselves out of whom at least one shall be women	1. Prof. Mrs. P. D. Kale 2. Prof. Dr. V. R. Pawar 3. Prof. Dr. Mrs. K. A. Malgi
5.	One non-teaching employee elected by regular non-teaching staff from amongst themselves	Mr. S. J. Deshmukh
6.	Four local members, nominated by the Management in consultation with the principal, from the fields of education, industry, research and social service of whom at least one shall be alumnus	1. Dr .U.B. Bhoite 2. Dr. S. F. Patil 3. Dr. Mandar Karmarkar 4. Dr. Tansen Chaudhari
7.	Coordinator, Internal Quality Assurance Committee of the College	Prof. Dr. S. S. Chorage
8.	President and Secretary of the College Students Council	Miss. Hrucha Gohad
9.	Principal / Director of the College or Head of the Institution-Member – Secretary	Prof. Dr. P. V. Jadhav

Frequency of meeting: Two times in a year

3. **Internal Quality Assurance Committee (IQAC)**

IQAC Objectives:

- To decide upon quality initiatives and improvements needed at the institute for the benefit of the students.
- To imbibe quality environment at institute in all academic and administrative processes.
- To be instrumental in review of teaching learning process, structures, methodologies and student centric methods for achieving best educational environment.

Table 10.1.2.3: Internal Quality Assurance Committee (IQAC)

Sr. No.	Name of the IQAC Member	Designation	Position
1	Prof. Dr. P. V. Jadhav	Head of the Institute	Chairperson
2	Dr. K. D. Jadhav	Joint Secretary of Bharati Vidyapeeth	Member of Management
3	Dr. S. F. Patil	Executive Director of Bharati Vidyapeeth	Member of Management
4	Prof. Dr. S.R. Patil	HOD, E & TC Engineering	Teacher Representative
5	Prof. Mrs. Khot S.T	Training cell Coordinator	Teacher Representative
6	Prof. Dr. V. R. Pawar	Academic & Research Coordinator	Teacher Representative
7	Prof. Dr. S. M. Rajbhoj	Industry institute Interaction	Teacher Representative

8	Prof. Ms. K. D. Mahajan	Alumni Coordinator	Teacher Representative
9	Prof. Mr. D. D. Pukale	HOD, Computer Engineering	Teacher Representative
10	Prof. Mrs. P. D. Kale	Placement cell Coordinator	Teacher Representative
11	Prof. Dr. D. A. Godse	HOD, Information Technology	Teacher Representative
12	Prof. Dr. K. A. Malgi	ICT & IT Infrastructure Coordinator	Teacher Representative
13	Prof. Dr. A. M. Pawar	HOD, Engineering Sciences and Allied Engineering	Teacher Representative
14	Mrs. Vaishali Kadam	Office Superintendent	Admin. Representative
15	Dr. V.M. Mohite	Librarian	Admin. Representative
16	Mr. Nityanand Prabhu Tendolkar	Chief Technical Officer, Ergen Technovation Pvt. Ltd.	Industry Representative
17	Mr. Sanjaykumar Gupta	Parent	Parent Representative
18	Ms. Shital Patil	Alumna (IT)	Alumni Representative
19	Ms. Khushi Mittal	Student (E & TC)	Student Representative
20	Prof. Dr. S. S. Chorage	Professor (E & TC)	Coordinator of the IQAC

Roles and Responsibilities of IQAC:

- Keeping regular updates of NBA/NAAC and other quality improvement circulars.
- Preparing Strategic plan of the institute.
- Preparation and submission of Annual Quality Assurance Report (AQAR) yearly.
- Maintaining academic records and conducting various audits (e.g. energy audit, environment audit, academic and administrative audit, gender audit etc.) at required intervals.
- Taking review of updating of hardware and software requirements and internet facilities.
- Updating feedback forms as per guidelines from regulatory bodies.
- Providing guidelines for research proposals, implementing ERP and data management system.
- Mentoring to organize various technical and nontechnical events.
- Guiding for preparation of reports of various activities for quality improvement.

Frequency of meeting: Four times in a year.

B| The Published service rules, policies and procedures with year of publication

The rules and policies regarding recruitment and promotion are as per AICTE, DTE, and Savitribai Phule Pune University Pune.

C| Minutes of Meeting and action taken reports:

Agendas, notifications, minutes of meetings, and action taken reports for all previously held meetings of the Governing Body and the College Development Committee are available at the institute's administrative office.

10.1.3 Decentralization in working and grievanceredressal mechanism (10)

Institute Marks : 9.00

A] List the names of the faculty members who have been delegated powers for taking administrative decisions

The institution promotes a decentralized administrative structure to ensure effective governance and participative decision-making. Administrative powers and responsibilities are distributed among various faculty members and staff to streamline academic and operational efficiency. Key positions such as Principal, Vice Principals, Heads of Departments, and Office Superintendent are entrusted with specific decision-making authorities related to their roles. This empowers them to take independent decisions within their scope of work, thereby improving institutional functioning and responsiveness to stakeholder needs.

Table 10.1.3.1: Faculties Delegated with Administrative Powers

Sr. No.	Name	Designation
1	Prof. Dr. Pradeep V. Jadhav	Principal
2	Prof. Dr. A. M. Pawar	Vice Principal (Administration)
3	Prof. Dr. S. S. Chorage	Vice Principal (Academic)
4	Prof. Dr. S. R. Patil	Head of Electronics and Telecommunication Engineering
5	Prof. Dr. D. A. Godse	Head of Information Technology
6	Prof. Dr. S. P. Kadam	Head of Computer Engineering
7	Mrs. Vaishali Kadam	Office Superintendent

- To promote decentralised and participative governance, the institute has established various functional committees. Each committee is led by a senior faculty member serving as the coordinator.
- The coordinator has well defined roles and responsibilities to perform. The issues discussed in the respective meetings are considered and forwarded for further necessary action.
- The institute believes that decentralization will help involve every member of the institute and assign authority to representatives for decision making.
- Mainly decentralization at the institute is classified into Academic decentralization, Administrative decentralization and Students representation.
- Department heads are responsible for effective planning and implementation of academics and curriculum-based activities.
- Heads of the Department recommend new purchases in view of revised curriculum to the college level purchase committee.
- In administrative decentralization, all the activities related to the student section, establishment section, examination section, store, maintenance, accounts and audit are administered by the office superintendent.
- Important committees such as Internal Complaint Committee, Internal Quality Assurance Cell, Department Advisory Board, Anti ragging Committee etc. have effective representation of all stakeholders: parents, alumni, industry representative, counselors, campus police team etc. This assures participative management.
- The institute has a central feedback committee which looks after the feedback process of the institution. Feedbacks are collected from employers, students, examiners, etc.
- Faculty members who are representing as a subject chairman at university level can participate in reforms related to their respective courses and can convey the suggestions given by different stakeholders to the respective Board of Studies.

Details of all other statutory and non-statutory committees are available on the institutes official website.(https://coewpune.bharatividyapeeth.edu/index.php (https://coewpune.bharatividyapeeth.edu/index.php))

B] Specify the mechanism and composition of Grievance Redressal Cell

Table 10.1.3.2: Composition of Grievance Redressal Cell

Sr. No.	Name	Designation	Mobile No.
1	Prof. Dr. Pradeep V. Jadhav	Chairperson	9665696022
2	Prof Dr. Avinash M. Pawar	Vice-Chairman	9028771377
3	Prof. Dr. Suvarna S. Chorage	Vice-Chairman	9881717562
4	Prof. Dr. Sandip R. Patil	HOD of E & TC	9423211277
5	Prof. Dr. Godse Deepali A.	HOD of IT	9371444481
6	Prof. Dr. Sonali P. Kadam	HOD of Comp	9860623126

7	Mrs. Vaishali S. Kadam	Office superintendent	8805638555
8	Mr. Shivaji J. Deshmukh	Sr. Clerk	9767436197

Table 10.1.3.3: Composition of Student Grievance Redressal Committee (SGRC)

Sr. No.	Name	Designation	Mobile No.
1	Prof. Dr. P. V. Jadhav	Chairman	9665696022
2	Prof. S. R. Mitkari	Member	9960687039
3	Prof. S. A. Sagar	Member	9607557103
4	Prof. K. S. Warke	Member	9922414563
5	Miss Samiksha Pardeshi	Student Member	9420873914
6	Miss. Jagruti Kumbhar	Student Member	9322121765
7	Miss. Aarya Deshmukhe	Student Member	8788156489

Grievance Redressal Mechanism:

The Grievance Redressal Cell plays a crucial role in ensuring fair, timely and impartial resolution of concerns raised by students, faculty, and staff. It is headed by the Principal and includes senior faculty and administrative representatives. It addresses a wide range of concerns including academic issues, infrastructure-related complaints, faculty behavior, and general student welfare. Serious matters like harassment or ragging are directed to the Internal Complaints Committee (ICC) or Anti-Ragging Committee respectively.

Grievances may be submitted through the physical complaint boxes. Once received, the grievance is acknowledged, reviewed and resolved or escalated as needed in time. A fair hearing process ensures confidentiality and justice.

Any complaints oral or written submitted by students are first recorded by the Head of the Department through the designated Guardian Faculty Member. The grievances are then discussed and suitable action is taken.

This structured grievance redressal system contributes to a positive campus climate.

In addition to the Grievance Redressal Cell, the institute has constituted several other important bodies such as the Anti-Ragging Committee and the Internal Complaint Committee. Details of these committees are available on the official website (https://coewpune.bharatividyapeeth.edu/index.php)

C] Action taken report as per 'B' above

The action taken reports are maintained by the Cell and the Departments.

Sample Case

Meeting held on: 25/04/2022

Agenda:
Ms. Bhavana Khaire submitted an application regarding restriction from filling the Third Year examination form.

Action Taken:

The case was discussed in the SGRC meeting held on 25/04/2022. The SGRC directed the Examination Section to follow up with Savitribai Phule Pune University (SPPU) on the matter. As per the directions, the Examination Section communicated the issue to SPPU through the referenced letter. Subsequently, the issue was resolved, and the student was permitted to fill the examination form.

Ref.:

- Students application dated 11/04/2022
- Examination Section's letter to SPPU: Ref. No. BV/COEW/27-2022-23 dated 18/04/2022

10.1.4 Delegation of financial powers (10) Institute Marks : 9.00

A] Financial powers delegated to the Principal, Heads of Departments and relevant in-charges

The institution follows a structured and decentralized approach to financial decision-making. Financial powers are delegated across various administrative levels to ensure smooth functioning and timely execution of academic, administrative, and infrastructural activities.

- The Governing Body holds the apex authority and is responsible for approving major financial decisions, ensuring alignment with institutional goals.
- The Principal is delegated with operational-level financial decisions related to academic and campus development.
- Principal, Vice Principal and Heads of Department, office superintendent have the authority to handle academic and administrative expenses.
- Provision of petty cash Rs. 45000/- per month is available and Principal, Vice Principal and Heads of Department, office superintendent can make expenses using petty cash.

This delegation ensures timely utilization of resources, promotes accountability, and supports the effective implementation of institutional plans.

10.1.5 Transparency and availability of correct/unambiguous information in public domain (5) Institute Marks : 4.00

A] Information on the policies, rules, processes is to be made available on web site

The institution ensures transparency by proactively sharing accurate and unambiguous information with all stakeholders. Key institutional details such as vision, mission, admission procedures, faculty profiles, academic policies, course structures, examination schedules, placement data, grievance redressal mechanisms, and committee structures are regularly updated and published.

Information is made available through:

- Institute website
- Departmental notice boards
- Email circulars and internal communication

This openness enhances trust and ensures stakeholders—students, parents, faculty, and regulatory bodies—can access the required information at any time.

B] Dissemination of the information about student, faculty and staff

- Notices and circulars relevant to students are communicated in classrooms and prominently displayed on notice boards.
- Notifications from regulatory authorities are circulated to the Heads of Departments and further shared with faculty members and students to ensure awareness and compliance.
- The academic progress of the students is regularly informed to the parents by guardian faculty members.
- The institutes official website is regularly updated to provide timely information related to institutional policies, student services, faculty updates, and other essential announcements.

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30) Total Marks 27.00

Summary of currentfinancial year’s budget and actual expenditure incurred(for the institution exclusively)in the three previous financial years :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY : (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 - CFY 2024-25

Total Income 125387654				Actual expenditure(till…): 166388231			Total No. Of Students 1195
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
122859606	0	630360	1897688	133022076	32933305	432850	139237.01

Table 2 - CFYm1 2023-24

Total Income 113319782				Actual expenditure(till…): 139936659			Total No. Of Students 1092
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
110811207	0	0	2508575	118939263	20419896	577500	128147.12

Table 3 - CFYm2 2022-23

Total Income 112347980				Actual expenditure(till…): 131134332			Total No. Of Students 1118
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
111020996	0	0	1326984	109120036	21625528	388768	117293.68

Table 4 - CFYm3 2021-22

Total Income 103104365				Actual expenditure(till…): 101430816			Total No. Of Students 1093
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
101367288	00	462700	1274377	87132504	14241312	57000	92800.38

Items	**Budgeted in 2024-25**	**Actual Expenses in 2024-25 till**	**Budgeted in 2023-24**	**Actual Expenses in 2023-24 till**	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**
Infrastructure Built-Up	12055000	11709000	12500000	11419993	13000000	12436992	13000000	12384500
Library	1690000	882528	980000	643953	1195000	1007694	714000	405516

Laboratory equipment	22850000	19914569	8000000	6817187	8084800	7030446	1935000	300900
Laboratory consumables	7300000	5758339	7500000	6200416	4500000	3781306	3500000	3181901
Teaching and non-teaching staff salary	104600000	100980853	96654200	92112374	90060600	88186050	83087900	68985747
Maintenance and spares	4945000	4381839	2500000	1997829	2000000	1847835	1500000	1222560
R&D	650000	659150	200000	715000	600000	843425	300000	57000
Training and Travel	275000	218356	200000	137281	340000	308104	150000	87244
	0	0	0	0	0	0	0	0
Others, specify	24300100	21883597	22771200	19892626	19689200	15692480	16878300	14805448
Total	**178665100**	**166388231**	**151305400**	**139936659**	**139469600**	**131134332**	**121065200**	**101430816**

10.2.1 Adequacy of budget allocation (10)

Institute Marks : 9.00

A well-planned and sufficient budget is allocated to various departments and sections, based on academic goals, infrastructural needs, student strength, and forthcoming initiatives. Prior to the start of the academic year, departmental heads submit their budget proposals, which are compiled, reviewed, and sanctioned accordingly. The allocated budget is sufficient to support:

- Laboratory and equipment upgrades
- Faculty development programs
- Infrastructure maintenance
- Research and innovation activities
- Teaching-learning enhancements

The financial planning is aligned with the institution's growth and quality improvement goals.

The sanctioned budget is designed to effectively meet the infrastructural, academic, and administrative needs of the institute.

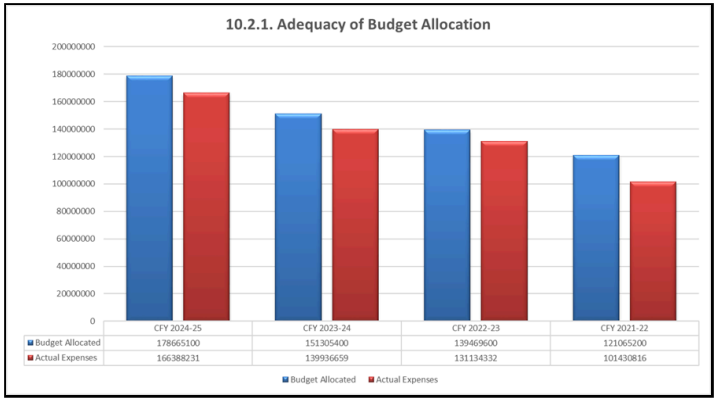


Figure 10.2.1.1 Adequacy of Budget Allocation

10.2.2 Utilization of allocated funds (15)

Institute Marks : 14.00

The funds allocated are effectively utilized aiming to enhance program outcomes. Each department utilizes its allotted budget through a well-structured and transparent process. Once approved, the Head of the Department holds discussions with faculty to identify procurement needs such as equipment, consumables and developmental tools. Faculty members responsible for laboratories and courses are assigned the task of identifying the necessary items. Quotations are collected from multiple vendors, and a comparative statement is prepared by the departmental purchase committee based on the received quotations.After receiving necessary approvals, purchase orders are placed, and the procurement is carried out as per institutional procedures. The HoD regularly monitors the process to ensure timely completion of purchases and full utilization of the allocated funds.

Table 10.2.2.1 Utilization of allocated funds in percentage

Items	2024-25	2023-24	2022-23	2021-22
Infrastructural built-up	97.13	91.36	95.67	95.27
Library	52.22	65.71	84.33	56.79
Laboratory Equipment	87.15	85.21	86.96	15.55
Laboratory Consumables	78.88	82.67	84.03	90.91
Teaching and Non-teaching staff salary	96.54	95.30	97.92	83.03
Maintenance & spares	88.61	79.91	92.39	81.50
R & D	101.41	357.50	140.57	19
Training and Travel	79.40	68.64	90.62	58.16
Other, Specify	90.06	87.36	79.70	87.72

10.2.3 Availability of the audited statements on the institute's website (5) Institute Marks : 4.00

The institute's audited financial statements are made publicly accessible on the official website. (https://coewpune.bharatividyapeeth.edu/index.php/downloads/fra-proposal (https://coewpune.bharatividyapeeth.edu/index.php/downloads/fra-proposal))

10.3 Program Specific Budget Allocation, Utilization (30) Total Marks 28.00

Institute Marks :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY: (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 :: CFY 2024-25

24721040		Actual expenditure (till…): 21295245.80		Total No. Of Students 396
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
12133000	12588040	11111721.80	10183524	53775.87

Table 2 :: CFYm1 2023-24

26400600		Actual expenditure (till…): 23479105.50		Total No. Of Students 396
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
11015000	15385600	9700997	13778108.50	59290.67

Table 3 :: CFYm2 2022-23

23804500		Actual expenditure (till…): 21021302		Total No. Of Students 396
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
11039900	12764600	10152646	10868656	53084.10

Table 4 :: CFYm3 2021-22

18663650		Actual expenditure (till…): 16072585		Total No. Of Students 396
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
8174500	10489150	6970206	9102379	40587.34

Items	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Laboratory equipment	4235000	3271262	3075000	2686807	3142400	3096418	642500	0
Software	0	170883	550000	769382	550000	411742	550000	575198
Laboratory consumable	2920000	2132452	3200000	2330827	1700000	1478911	1200000	1015753
Maintenance and spares	1978000	1752736	1250000	998915	1000000	923918	750000	611280
R & D	260000	90520	100000	646250	300000	387679	150000	29000

Training and Travel	110000	87342	100000	68641	170000	154052	75000	43622
	15218040	13790050	18125600	15978286	16942100	14568583	15296150	13797732
Total	**24721040**	**21295245**	**26400600**	**23479108**	**23804500**	**21021303**	**18663650**	**16072585**

10.3.1 Adequacy of budget allocation (10)

Institute Marks : 9.00

- During the annual budgeting process, departmental requirements are thoroughly assessed and integrated into the overall financial planning.
- Before the commencement of the financial year, all recurring and non-recurring purchase needs are gathered from departmental laboratory in-charges.
- The Head of the Department (HoD) finalizes the budget proposal by taking into account various factors such as student intake, university curriculum, industry needs, and the development of laboratory and infrastructure. Budget requirements for equipment, computers, software, consumables, maintenance, and furniture are consolidated accordingly.
- Once finalized, the departmental budget proposals are submitted by the Head of Department to the Principal. These are subsequently presented at the College Development Committee (CDC) and Governing Body (GB) meetings for discussion and revision if required
- Following this, the management reviews the proposals and grants final approval, incorporating any necessary modifications.
- The approved departmental budget supports upgrading of laboratories, procurement of equipment, consumables, software, computers, and maintenance materials, as well as facilitating both academic and extra curricular initiatives.

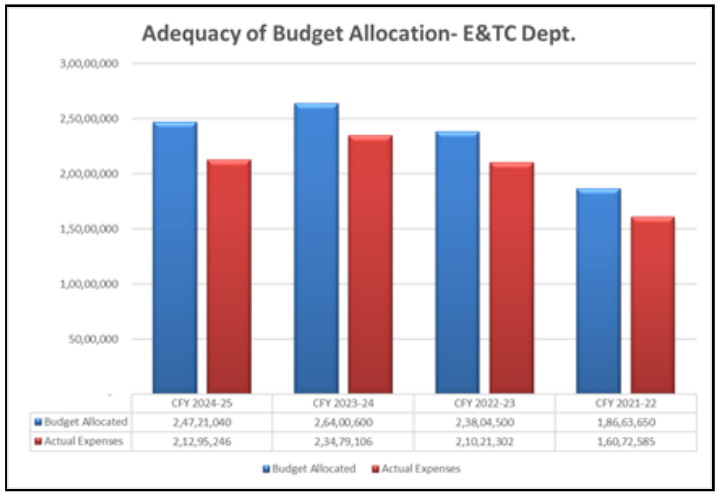
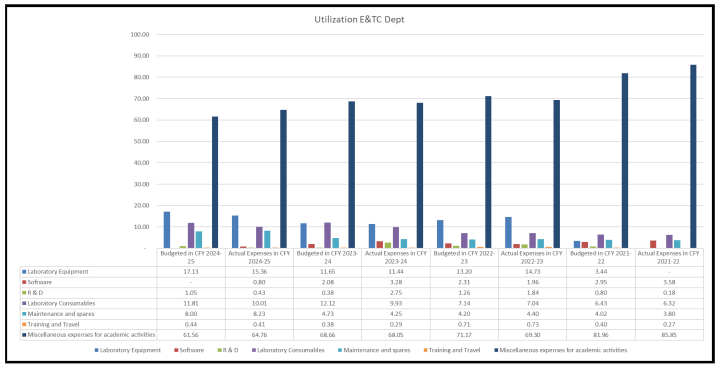


Figure 10.3.1.1 Adequacy of Budget Allocation and Expenses -E&TC Dept.

10.3.2 Utilization of allocated funds (20)

Institute Marks : 19.00

The funds allocated to the departments are effectively utilized , aiming to enhance program outcomes. This process ensures thorough planning is carried out prior to the commencement of each semester.



	Budgeted in CFY 2024-25	Actual Expenses in CFY 2024-25	Budgeted in CFY 2023-24	Actual Expenses in CFY 2023-24	Budgeted in CFY 2022-23	Actual Expenses in CFY 2022-23	Budgeted in CFY 2021-22	Actual Expenses in CFY 2021-22
Laboratory Equipment	17.13	15.36	11.65	11.44	13.20	14.73	3.44	-
Software	-	0.80	2.08	3.28	2.31	1.96	2.95	3.58
R & D	1.05	0.43	0.38	2.75	1.26	1.84	0.80	0.18
Laboratory Consumables	11.81	10.01	12.12	9.93	7.14	7.04	6.43	6.32
Maintenance and spares	8.00	8.23	4.73	4.25	4.20	4.40	4.02	3.80
Training and Travel	0.44	0.41	0.38	0.29	0.71	0.73	0.40	0.27
Miscellaneous expenses for academic activities	61.56	64.76	68.66	68.05	71.17	69.30	81.96	85.85

Laboratory Equipment Software R & D Laboratory Consumables Maintenance and spares Training and Travel Miscellaneous expenses for academic activities

Figure 10.3.2.1 Utilization of Allocated Fund in percentage

10.4 Library and Internet (20) Total Marks 19.00

10.4.1 Quality of learning resources (hard/soft) (10)

Institute Marks : 9.00

A] Availability of Relevant Learning Resources Including E-Resources and Digital Library

Our institution takes pride in offering a robust and resourceful Central Library that caters to the academic and intellectual needs of students and faculty alike. Since its inception in the year 2000 with a modest collection of 937 books, the library has grown tremendously, now 24,039 printed books volumes, 3,144 e-journals, 2,635 e-books, 53 print journals/magazines, 8 newspapers and 3,315 CDs/DVDs. This expansion reflects the institute's firm commitment to supporting quality education and research.

The library covers an area of 408 square meters and houses a spacious, well-lit reading hall with a seating capacity of approximately 200 students, offering a peaceful and conducive learning environment.

To support advanced learning, the institute subscribes to a wide range of national and international journals, including platforms such as DELNET, K-Hub and NPTEL. The access to these resources ensures that students stay updated with the latest developments in their respective domains.

Digital Library & E-Resource Access:

- **Knimbus Digital Library**: A unified, user-friendly platform allowing access to digital content anytime, anywhere. It is accessible through: Knimbus Portal (https://bvuniversity.knimbus.com/portal/v2/default/home)
- **DELNET**: Offers interlibrary loans, free e-resources and remote access: DELNET Portal (https://discovery.delnet.in/)
- **K-Hub (eLibrary)**: A rich repository of academic e-books and journals: K-Hub Portal (https://www.k-hub.in/)
- **NDLI (National Digital Library of India)**: As a registered member of NDLI, our students benefit from access to a national repository of curated academic content, supported by the Ministry of Education, Govt. of India.

In a bid to stay aligned with the digital transformation in education, our library functions as a hybrid knowledge hub with both physical and digital learning materials.

Library Automation: KOHA ILMS

The library is powered by the KOHA Integrated Library Management System, which ensures efficient cataloging, circulation, search and user services. KOHA enhances accessibility by enabling smart retrieval of content, even through keywords or descriptive tags.

The institute employs both commercial and open-source software for automating various library services ensuring the best possible user experience for both physical and digital access.

Table 10.4.1.1: Learning resources available in Library

Sr. No.	Learning Resource	Number/Details
1	Books	24,039
2	E-Journals (K-Hub + DELNET)	3,144
3	E-Books (K-Hub + DELNET)	2,635
4	Print Journals / Magazines	53
5	Newspapers (English & Marathi)	8
6	CDs / DVDs	3,315
7	Digital Platforms Subscribed	Knimbus, K-Hub, DELNET, NDLI
8	Library Management System	KOHA ILMS

B] Accessibility to Students

Our library has been thoughtfully designed to be accessible and inclusive, ensuring all students can benefit from its vast repository of knowledge, whether on campus or from home.

On-Campus Access

Library services are available during the following hours:

- **Monday to Friday**: 8:00 AM to 8:00 PM
- **Saturday**: 8:00 AM to 2:00 PM
- **Sunday and Holiday**: Closed

The extended weekday hours accommodate students with varied schedules, allowing them to engage in academic activities at their own pace.

Remote Access & Connectivity

To ensure continuous learning beyond campus boundaries, our institute has enabled remote access to all major e-resources. Through IP-based authentication and Wi-Fi connectivity across the campus, students can access resources from any device. Remote login features make sure that students have uninterrupted access to journals, e-books and databases from their homes or while on internships and research projects.

C] Support to students forself-learning activities

A qualified and supportive library staff is always available to guide students and faculty in utilizing the resources effectively be it locating a research paper, accessing an e-book, or navigating digital platforms like DELNET, K-Hub, or Knimbus.

10.4.2 Internet (10)

Institute Marks : 10.00

Name of the Internet provider	Gazon Communications India Ltd.
Available band width	300 Mbps
WiFi availability	Yes
Internet access in labs, classrooms, library and offices of all Departments	Internet access in available in all the labs through LAN, classrooms, library and offices of all departments and administrative office.
Security arrangements	Internet usage is monitored and controlled through a Cisco Firewall and Squid Proxy Server, ensuring secure and filtered access. Antivirus software is installed on all computers and laptops of the institute.

Annexure I

(A) PROGRAM OUTCOME (POs)

Engineering Graduates will be able to:

1. **Engineering Knowledge :** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

PSO1	Give techniques and solutions by using acquired knowledge and skills.
PSO2	Design and develop Electronics and Telecommunication-based systems.
PSO3	Create, select and adapt techniques, resources and tools with understanding of associated limitations.
PSO4	Identify and address their own needs in the changing world through lifelong learning.

Declaration

The head of the institution needs to make a declaration as per the format given -

- 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 inforce as on date and the institutes hall 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 willbe initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute

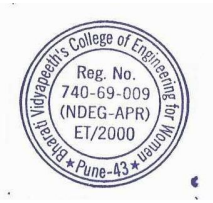
Prof. Dr. Pradeep Vitthal

Name : Jadhav

Designation : Principal

Signature :

Seal of The Institution :



Place : Pune

Date : 28-07-2025 16:05:32