



Sandip Foundation's
SANDIP POLYTECHNIC
Mahiravani, Trimbak Road, Tal & Dist. Nashik-422213
DEPARTMENT OF COMPUTER ENGINEERING
(Academic Year:2025-26)



Criterion 1	Vision and Mission and Program Educational Objectives	50
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1.1 State the Vision and Mission of the Department & Institution (05)

MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION (MSBTE)

- In accordance with the Vision and Mission of Maharashtra State Board of Technical Education, Sandip Polytechnic, Nashik has always strived for academic excellence and scientific temper.

The Vision and Mission of the Maharashtra State Board of Technical Education are as:

VISION

- To ensure that the diploma-level technical education constantly matches the latest requirements of technology and industry and includes the all-round personal development of students, including social concerns, and to become a globally competitive, technology-led organization.

MISSION

- To provide high-quality technical and managerial manpower, information and consultancy services to the industry and community to enable the industry and community to face the challenging technological & environmental challenges.

VISION: To produce skilled technocrats in the field of computer domain to face challenges to serve industry and society.

MISSION:

- M1:To equip students with recent trends in Computer Engineering towards industry requirements.
- M2:To groom students to become professionally competent in pursuing higher education.
- M3:To nurture Interpersonal and Entrepreneurial skills.



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SANDIP FOUNDATION

The Vision and Mission of the Sandip Foundation are as:

VISION

- To mould our youngsters into millennium leaders not only in technological and scientific fields but also to nurture and strengthen the innate goodness and human nature in them.
- To equip them to face the future challenges in technological breakthroughs, information explosions and deliver the bounties of frontier knowledge for the benefit of humanity in general, the downtrodden and the underprivileged in particular.

MISSION

- To build a strong center of excellence in learning & research in engineering and frontier technology.
- To facilitate students to learn and imbibe discipline, culture and spirituality besides encouraging them to assimilate with the latest technological know-how.
- To render a helping hand to the underprivileged, thereby acquiring happiness and imparting the same to others without any reservation whatsoever.
- To emerge into a magnificent and mighty launching pad to turn out technological gains.

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VISION AND MISSION OF THE INSTITUTE

The Vision and Mission of the institute are as:

VISION

- To produce skilled technocrats for serving industry, society and pursue higher education.

MISSION

- **M1:** To provide state-of-the-art infrastructure, qualified and competent teaching faculty.
- **M2:** To provide industry institute interaction, employability, enhancement and higher education.
- **M3:** To provide platform for development of professional, social skills and lifelong learning.

VISION AND MISSION OF THE DEPARTMENT

The Vision and Mission of the department are as:

VISION

- To produce skilled technocrats in the field of computer domain to face challenges to serve industry and society.

MISSION

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

PROGRAM OUTCOMES (POs)

- PO1: Basic and Discipline Specific Knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- PO2: Problem Analysis:** Identify and analyze well-defined engineering problems using codified standard methods.
- PO3: Design/ Development of Solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
- PO4: Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
- PO5: Engineering Practices for Society, Sustainability and Environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
- PO6: Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
- PO7: Life-long Learning:** Ability to analyze individual needs and engage in updating in the context of technological changes.

PROGRAM EDUCATIONAL OUTCOMES (PEOs)

- PEO 1:** Provide socially responsible, environment friendly solutions to Computer Engineering related broad-based problems adapting professional ethics.
- PEO 2:** Adapt state-of-the-art Computer Engineering broad-based technologies to work in multi-disciplinary work environments.
- PEO 3:** Solve broad-based problems individually and as a team member communicating effectively in the world of work.

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PROGRAM SPECIFIC OUTCOME (PSO's)

- **PSO1: Computer Software and Hardware Usage:** Use state-of-the-art technologies for operation and application of computer software and hardware.
- **PSO2: Computer Engineering Maintenance:** Maintain Computer Engineering related software and hardware systems.
- **PSO3:** Apply standard ethical and moral values, management principles and soft skills to develop projects for the Industry and societal needs.

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

1.3.1 Dissemination of Vision, Mission and PEOs (02).

The Vision, Mission and PEOs statements are disseminated as shown in the table 1.3.1.

Table 1.3.1 Dissemination of Vision, Mission and PEOs

Sr. No	Particulars	Internal stakeholder	External stakeholder
1	Institute Website : website url: https://sp.sandipfoundation.org/mission-vision/	Yes	Yes
2	Departmental Website: page url : https://sp.sandipfoundation.org/computer-engineering/mission-vision/ https://sp.sandipfoundation.org/computer-engineering/peopso/	Yes	Yes
3	Departmental Entrance	Yes	Yes
4	Prominent places in Department 1.HOD Cabin 2.Classrooms 3.Laboratories 4.Department Corridor 5.Department Conference Room	Yes	Yes
5	Wallpaper on Department Computers	Yes	
6	Laboratory Manuals / Files	Yes	
7	Departmental News Letter	Yes	Yes
8	Faculty Course File	Yes	
9	E-mail Signature of each staff	Yes	Yes
10	Attendance Register	Yes	

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1.3.2 Process of dissemination of Vision, Mission and PEOs (02).

Process of dissemination among stakeholders is illustrated in the table 1.3.2.

Table 1.3.2Process for dissemination of Vision, Mission and PEOs.

Internal stakeholder	Process
Teaching & Non-Teaching Faculty	<ol style="list-style-type: none">1. Regular meetings are conducted in the department for awareness of Vision, Mission and PEOs.2. Faculty members are informed to mention Vision, Mission and PEOs in their Course File.3. Vision, Mission and PEOs are displayed at various locations in the Department.
Students	<ol style="list-style-type: none">1. Vision Mission and PEOs are displayed in Classrooms, Corridors and Labs.2. Vision, Mission and PEOs are displayed at various locations in the department as well as mentioned in Laboratory Manuals and Files.3. Awareness sessions are conducted at the commencement of academics.
External stakeholder	Process
Employer/Industry	<ol style="list-style-type: none">1. Vision, Mission and PEOs are communicated to various industries during Industrial Visits.
Alumni	<ol style="list-style-type: none">1. Vision, Mission and PEOs are communicated to Alumni during their visit to Department and in Alumni meetings.
Parents	<ol style="list-style-type: none">1. Vision, Mission and PEOs are communicated to parents during Parent-Teacher meetings.
Vision, Mission and PEOs are displayed at various locations in the Department, E-mail Signatures and on the Website.	

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1.3.3 Extent of awareness of Vision, Mission and PEOs among the stakeholders (06).

Stakeholder	Extent of Awareness
Internal Stakeholders	<ol style="list-style-type: none">Various awareness activities are organized for students, like Orientation Programs for the first year students, direct second year students and regular Guardian-Faculty Meetings.Newly joined faculty members are made aware of the Vision and Mission and PEOs by the Head of the Department.
External Stakeholders	<ul style="list-style-type: none">Vision, Mission and PEOs are communicated through different activities conducted by the department throughout the academic year.

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

1.4.1 Process for defining the Vision and Mission of a department (07).

We have involved all the internal stakeholders as Departmental Advisory Committee Members, Faculty, Students and Supporting Staff & external stakeholders as Employers from Industry Persons, Students' Parents and Alumni. We took various inputs from all stakeholders, like Internal and External, in establishing the Vision & Mission of the Department.

The following process is adopted for defining the Vision and Mission of the department.

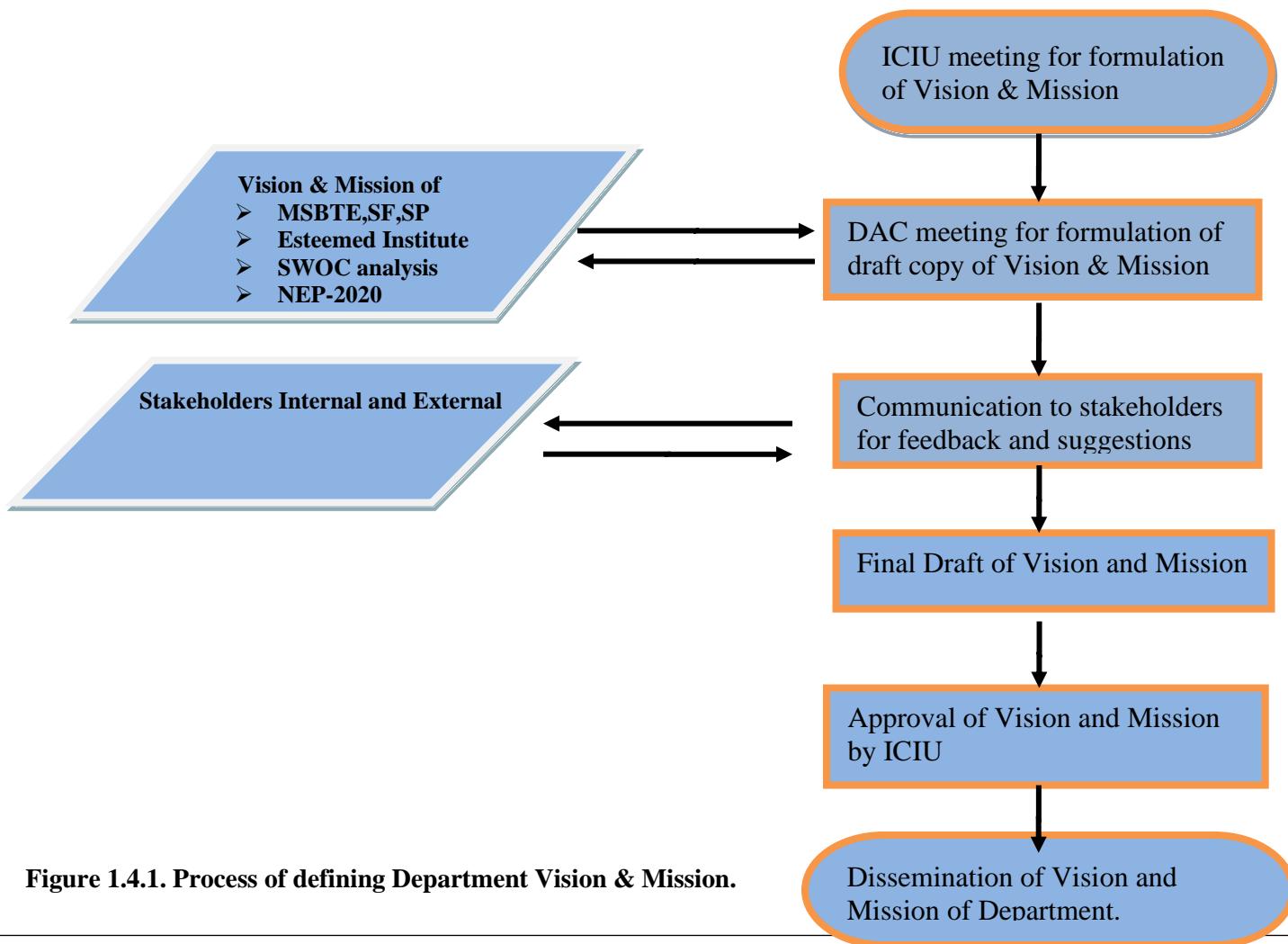


Figure 1.4.1. Process of defining Department Vision & Mission.

VISION: To produce skilled technocrats in the field of computer domain to face challenges to serve industry and society
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1. The process begins with an Institute Level Curriculum Implementation Unit (ICIU) meeting regarding the formulation of the Vision & Mission statements of various programs.
2. Accordingly, the Department Advisory Committee (DAC) conducts meetings regarding discussions on various modes to formulate the Vision & Mission of the department.
3. DAC formulates a draft copy of the Vision & Mission of the department by referring to the Vision & Mission of the Maharashtra State Board of Technical Education, Sandip Foundation, the Institute, SWOC analysis, Vision & Mission of Statutory Bodies & recent Government Policies.
4. The draft copy of Vision & Mission of the department is communicated to internal & external stakeholders to get feedback & suggestions.
5. The draft copy of Vision & Mission is finalized.
6. The finalized Vision & Mission of the department is discussed and approved at the ICIU Meeting.
7. Approved Vision & Mission statements are disseminated and communicated to all stakeholders.
8. Provision is made for review & marginal updates of the Vision & Mission if necessary in accordance with changes in technology and industry needs, preferably after 5 years.

1.4.2 Process for defining Program Educational Objectives (PEOs)(08)

Steps for Defining the Program Educational Objectives:

1. The Sandip Foundations' Sandip Polytechnic follows the curriculum developed by Maharashtra State Board of Technical Education, and PEOs of the program are provided during the curriculum development only.
2. The MSBTE, while framing the curriculum, meets the expectations of Industry and Academia to match global needs. Accordingly, PEOs are formulated.
3. The meeting was conducted for the acceptance or modification of the PEOs as established by MSBTE.
4. The meeting was attended by the Principal, HOD and Faculties of the program. In this meeting it was unanimously decided to adopt the PEOs defined by MSBTE.
5. MSBTE assesses and evaluates the set of Program Educational Objectives periodically in the continuous improvement process.
6. The Principal, HOD and Faculties of the program had a comprehensive analysis of the PEOs provided by MSBTE, and it was decided to adopt the same for the program.
7. Design and implement changes in the curriculum and the teaching learning process, to achieve the Program Educational Objectives.
8. Redefine the PEOs to accommodate the changes that are implemented in step-6 and thereafter repeat from step-1 to step-6.



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

1.5.1 Preparation of matrix of PEOs and elements of Mission statements. (05)

Table 1.5.1 describes the consistency of PEOs with Missions of the department.

Table 1.5.1 Consistency of PEOs with Mission of the department.

❖ MISSIONs ❖ PEOs	M1 • To equip students with recent trends in the Computer Engineering towards industry requirements.	M2 • To groom students to become professionally competent in pursuing higher education	M3 • To nurture Interpersonal and Entrepreneurial skills.
• PEO1 (Provide socially responsible, environment friendly solutions to Computer Engineering related broad-based problems adapting professional ethics)	2	3	3
• PEO2 (Adapt state-of-the-art Computer Engineering broad-based technologies to work in multi-disciplinary work environments.)	3	2	2
• PEO3 (Solve broad-based problems individually and as a team member communicating effectively in the world of work.)	3	2	2

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

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1.5.2 Justification for Consistency of PEOs with Mission of the department (10)

The table 1.5.2 describes the justification of Consistency of PEOs with Mission of the department.

❖ MISSIONs ❖ PEOs	M1 • To equip students with recent trends in the computer engineering towards industry requirements.	M2 • To groom students to become professionally competent in pursuing higher education.	M3 • To nurture Interpersonal and Entrepreneurial skills.
• PEO1 (Provide socially responsible, environment friendly solutions to Computer Engineering related broad-based problems adapting professional ethics.)	2 Arranged Skill Development Program, Implant Training, and Industry Visit, to develop hands-on skill practice.	3 The department has a proficient Faculty, well-equipped Labs and excellent Infrastructure that provide the facilities needed for imparting quality technical knowledge and building technical competence.	3 Personality Development lectures, Seminars, and Industrial Visits organized by the Department help students develop interpersonal and entrepreneurial skills
• PEO2 (Adapt state-of-the-art Computer Engineering broad-based technologies to work in multi disciplinary work environments.)	3 The department invites prominent experts from Industry/Institutes to deliver technical talks on inter-disciplinary topics and associated research so that students remain aware of the latest technologies used in industry.	2 Students are encouraged to learn the use of software available in different laboratories and On-campus Workshops that makes them proficient in the latest technologies.	2 The department organizes Seminars and Workshops on Emerging Trends that appraises the students on the current and evolving global technologies.
• PEO3 (Solve broad-based problems individually and as a team member communicating effectively in the world of work.)	3 The department arranges Industrial Visits for students and Summer Training Programs which encourage professionalism, teamwork and leadership qualities.	2 Students exhibit Professionalism, Ethicality, Team-work and Leadership qualities with the skills developed during Project Work.	2 Students analyze real life problems of society and produce innovative solutions with recent technologies while doing the Project Work.

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CRITERION 2	Program Curriculum and Teaching Learning Processes	200
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2.1 Program Curriculum (40)

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

(State the process details to identify gaps and mention identified curricula gaps. It will include typically relevance of curriculum, frequency and process of revision, weightages to theory-lab tutorial and coverage of curriculum)

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

- Sandip Polytechnic is affiliated with Maharashtra State Board of Technical Education (MSBTE), Mumbai. Maharashtra State Board of Technical Education (MSBTE) is an autonomous board of the Government of Maharashtra established for delivering diploma courses. The entire affiliated Institutes follow a curriculum designed by Maharashtra State Board of Technical Education, Mumbai.
- The curriculum developed by Maharashtra State Board of Technical Education (MSBTE) incorporates innovations and rapid changes in technology. Thereby, it intends to develop manpower compatible to fulfill adherent shifts in industrial demands.
- Accordingly, Maharashtra State Board of Technical Education (MSBTE) possesses a practice of revising and updating the curriculum once, every five years. This update is based on reviews from all its stakeholders like Industries, Alumni, affiliated Institutes and Course Experts.
- Maharashtra State Board of Technical Education (MSBTE) has provided a range of curriculum options under different schemes, such as Scheme - O, R, N, S, A, C, E, G, I and K. Currently, K-scheme has been in place from the academic year 2023-24 up to the academic year 2029-30 for first & second year students. Going forward, the K-scheme curriculum will gradually transit to the upcoming scheme curriculum.
- To support faculty in adapting to new schemes and curricula, Maharashtra State Board of Technical Education (MSBTE) organizes Orientation Workshops across Maharashtra. This ensures faculty familiarity with the curriculum changes, facilitating effective transmission of knowledge to students.
- For effective compliance with the curriculum, we not only conduct academic activities but also focus on Curricular, Co-curricular and Extra-Co-Curricular activities.

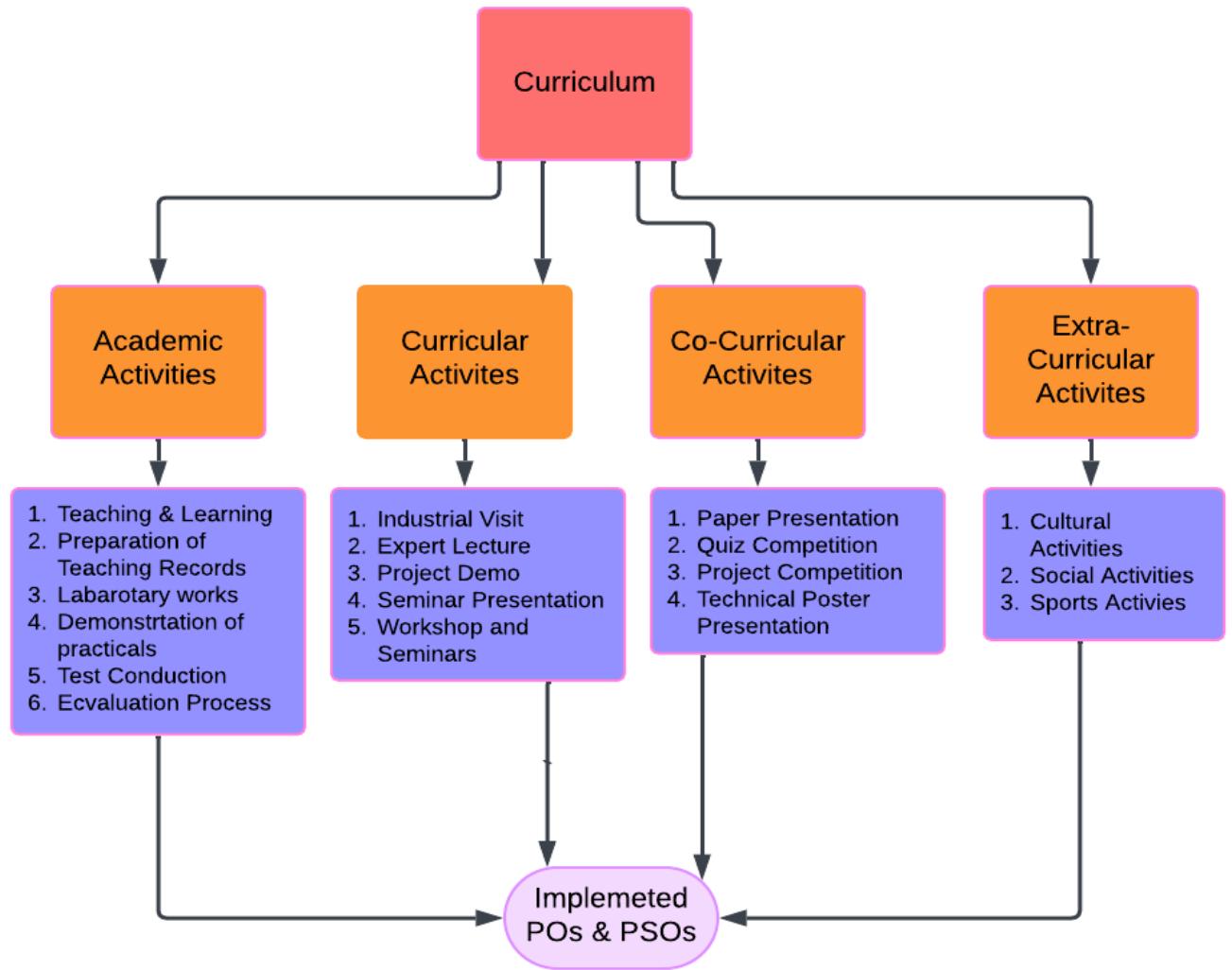


Fig. No.2.1 Process used for compliance of the Board curriculum

- Allotment of the courses is done as per the experience, previous results and FDPs attended by faculty.
- Each faculty member refers Teaching and Examination Scheme and Curriculum provided by the board.
- The course teacher plans theory and practical sessions for attaining course outcomes and PrOs.
- The course teacher analyses and records the course contributions to the respective Program Outcomes and Program-Specific Outcomes with respect to performance indicators given in AICTE exam reforms 2018 and Bloom's Taxonomy.
- The mapping process of course outcomes of each course for the attainment of POs and PSOs is executed in compliance with the board curriculum and findings are presented to IQAC (Internal Quality Assurance Cell) for further rectification and actions.
- During implementation, care is taken by the ICIU (Institute Level Curriculum Implementation Unit) committee to ensure that the curriculum fulfills the compliance for attaining Program Outcomes (POs), given in Annexure-I, as specified by the National Board of Accreditation (NBA).
- Also, the DAC (Department Advisory Committee) itself observes the fulfillment of Program Specific Outcomes (PSOs) for the corresponding programs.

- Following are the POs and PSOs of Computer Engineering department.
- Program Outcomes
- Computer Engineering Program Students will be able to:
 - **PO1 Basic & Discipline Specific Knowledge:** Apply knowledge of basic mathematics, science and basic engineering fundamentals and engineering specialization to solve engineering problems.
 - **PO2 Problem Analysis:** Identify and analyze well-defined engineering problems using codified standard methods.
 - **PO3 Design/Development of Solutions:** Design solutions for well-defined technical problems and assist with design of systems components or processes to meet specified needs.
 - **PO4 Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
 - **PO5 Engineering Practices for Society, Sustainability and Environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
 - **PO6 Project Management:** Use engineering management principles individually, as a team member or leader to manage projects and effectively communicate about well-defined engineering activities.
 - **PO7 Life Long Learning:** Ability to analyze individual needs and engage in updating in the context of technological changes.

- Program Specific Outcomes (PSOs) – Computer Engineering Dept.

- **PSO1 Computer Software and Hardware Usage:** Use state-of-the-art technologies for operation and application of computer software and hardware.
- **PSO2 Computer Engineering Maintenance:** Maintain computer engineering related software and hardware system.
- **PSO3**Provide effective and efficient to computational problems using acquired knowledge in various domains.

A. List the curricular gaps for the attainment of POs & PSOs (10)

- ICIU oversees curriculum review, implementation, assessment, and feedback at the Institute level. This includes reviewing Course Outcomes (COs) and Program Specific Outcomes (PSOs) to assess compliance with the board curriculum in achieving Program Outcomes (POs) and PSOs.
- While designing the curriculum, Maharashtra State Board of Technical Education (MSBTE) attempts to incorporate industrial demands. However, on account of rapidly emergent technology, certain gaps may exist. We have identified such curriculum gaps to fulfill the current needs of industry beyond the Maharashtra State Board of Technical Education (MSBTE) curriculum. Therefore, curricular gaps are discussed in the DAC meeting and are listed below.

- **Identified Gaps:**

Tabel No.2.1 Identified Curriculum Gaps

Sr. No.	Identified Curriculum Gaps
A	Android, IOT, Web Development, and Angular JS.
B	Latest Trends in IT.
C	Interview techniques, and teamwork.

2.1.2 Contents beyond the Syllabus (15)

A. Steps taken to get identified gaps included in the curriculum (eg. Letter to Board) (2)

Table No.2.2 Steps taken to get identified Curriculum Gaps

Sr No	Gap	Action to be taken
A	Android, IOT, Web Development, and Angular JS.	Expert Talk, Value Added Program
B	Latest Trends in IT.	Industrial Visit, Expert Talk
C	Interview techniques, and teamwork.	Expert Talk

B. Delivery details of content beyond syllabus (10)

• Ways to cover Content beyond syllabus:

- In order to meet the institutions Vision, Mission number of programs are organized that supplement the Maharashtra State Board of Technical Education (MSBTE) curriculum and for the coverage of contents beyond the syllabus.
- 1. Expert Talks/Seminars/Training & Workshops on relevant topics are conducted by expert personnel from industries, alumni etc.
- 2. Industrial visits are arranged to make the students familiar with Industrial environment.
- 3. Personality Development & Soft Skill development training programs are conducted for students under the Training and Placement cell.
- 4. Language lab facilities are provided to students to improve their communication skills encouraging students to participation in various District/State and National level events (Paper Presentations, Quiz Competition, Project Competition) in order to introduce identified gaps in curriculum and their overall development.
- 5. A Memorandum Of Understanding (MOU) was signed with different Industries and Institutions to fulfil different needs of students like Industrial Training, Visit, Expert Lectures, etc.

- 6. Participation of students in National, State & District level Competitions (Paper Presentation, Quiz Competition, Project Competition).

C. Mapping of content beyond syllabus with the POs & PSOs (3)

Summary CAY (2022-23)

Table No.2.3 Summary CAY M1 (2022-23)

Sr.No	Action Taken	Identified Gap		
		A	B	C
1	Expert Lecture	2	3	2
2	Industrial Visit	1	-	2
3	Value Added Program/ Skill Development Program	2	-	-

Summary CAY (2023-24)

Table No. 2.4 Summary CAY M2 (2023-24)

Sr.No	Action Taken	Identified Gap		
		A	B	C
1	Expert Lecture	4	0	-
2	Industrial Visit	0	1	-
3	Value Added Program/ Skill Development Program	5	2	2

Summary CAY (2024-25)

Table No. 2.5 Summary CAY (2024-25)

Sr.No	Action Taken	Identified Gap		
		A	B	C
1	Expert Lecture	5	1	2
2	Industrial Visit	5	-	1
3	Value Added Program/ Skill Development Program	-	-	2

CAY (2024-25)

Sr No	Gap	Action Taken	Date/Month/Year	Resource Person with Designation	Mode	No. of Students Present	Relevance to Pos, PSOs
1	A	Expert Talk on Project Guidance	27/07/2024	Mr.Santosh Nikam, Director of Calibers InfoTech,Nashik	Offline	60	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
2	A,C	Expert Talk on AI	24/08/2024	Mr. Vaibhav Desai, HR Profound Edutech,	Offline	70	PO1,PO2,PO3,PO4,PO5,PO6,PO7,P

		& ML		Pvt, Ltd, Nashik			SO1,PSO2,PSO3
3	A,B	Expert Talk on Cyber Awareness	27/09/2024	PI. Subhash Dhawale & Team, Cyber Cell Nashik	Offline	120	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
4	A	Expert Talk on Interview Techniques	27/01/2025	Mr.Abbay Malapure, TPO, Sandip University	Offline	65	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
5	A,C	Expert Talk on Internet Of Thing	01/02/2025	Mr.Prakash Ekhande Nexonica System Pvt.Ltd,Nashik College Road, Thatte Nagar,Nashik	Offline	68	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
6	A	Industrial Visit to Winjit Technology, Nashik	20/08/2024	HR Manager,Winjit Technology, Nashik	Offline	65	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
7	A	Industrial Visit to Exilance Software Nashik	10/09/2024	Manager, Exilance Software, Nashik	Offline	69	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
8	A,C	Campus Visit on Environmental Studies	15/10/2024	SF Sandip Polytechnic,Nashik	Offline	64	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
9	A	Industrial Visit to Eaglebyte Solutions Pvt.Ltd,Nashik	22/2/2025	HR Manager,Eaglebyte Solutions Pvt.Ltd,Nashik	Offline	70	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
10	A	Industrial Visit to Sabedor Software Pvt.Ltd ,Nashik	23/2/2025	HR Manager, Sabedor Software Pvt.Ltd ,Nashik	Offline	63	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
11	C	VAP on Node JS	25/07/2024	Mr. Deepak Shinde, Director Code Drift,Nashik	Offline	68	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
12	C	VAP on Programming with Python	20/01/2025 To 22/01/2025	Mr.Narendra Sardar, Codedrift, Ranrajya 1, Near Bhonsala Military Shool, College Road,	Offline	70	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3

2.2 Teaching – Learning Process (160)

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

A. Adherence to Academic Calendar(3)

Maharashtra State Board of Technical Education (MSBTE) publishes the year wise academic calendar well in advance. The academic activities of the institute as well as the department are organized in line with the academic calendar.

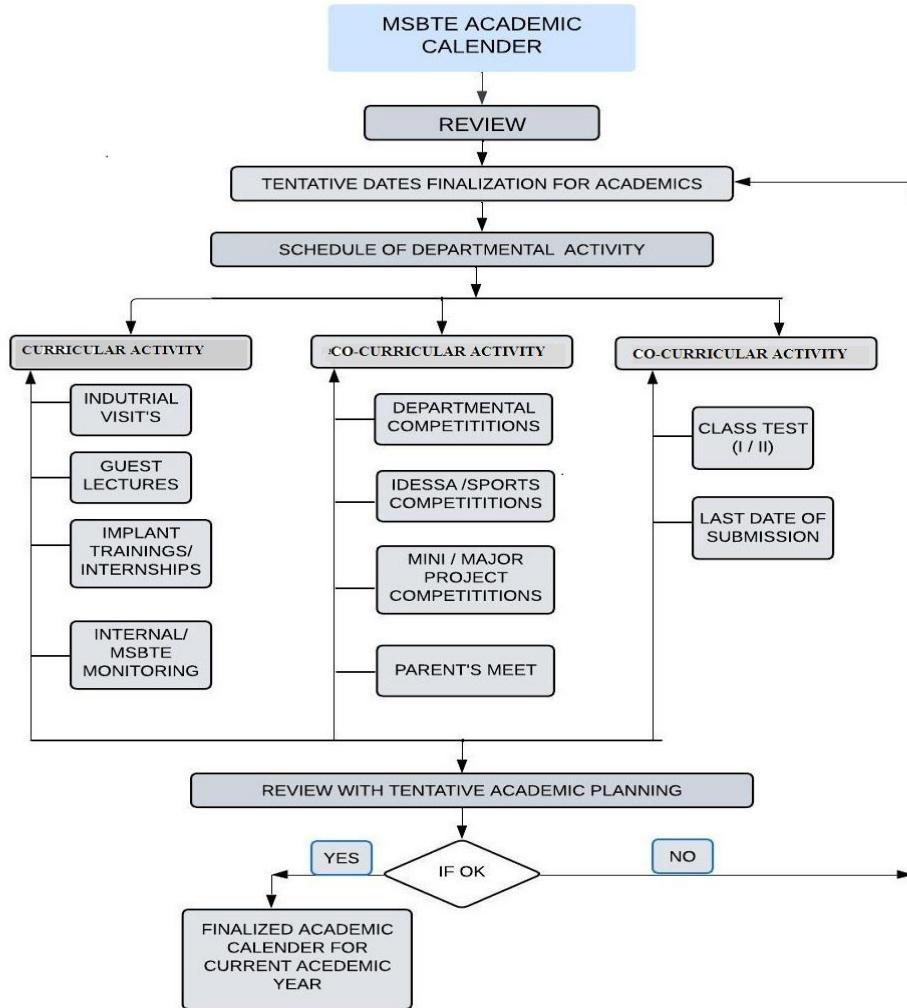


Fig.No. 2.2 PROCESS FLOW CHART OF ADHERANCE TO ACADEMIC CALENDAR

PROCESS

The measures and processes used to develop an academic calendar are on a regular basis, the procedure adopted is mentioned hereafter step by step:

1. The Academic Coordinator is appointed by HOD for the academic year.

2. The tentative academic calendar is prepared by the Academic Coordinator before the start of the semester in accordance with the Maharashtra State Board of Technical Education (MSBTE) academic calendar and CIAAN Norms.
3. The schedule of curricular and co-curricular activities like Industrial Visits, Guest Lectures, and Parent Meetings are planned as per the free slots of industries, and guest speakers, by the faculty members and communicated to the academic coordinator.
4. Once the tentative academic calendar is drafted, it gets circulated among the department faculty members, HOD, and HOI for confirmation/correction, if required.
5. After correction and confirmation from HOI, HOD and concerned faculty members' academic calendar gets finalized with the signature of concerned authorities.
6. The academic calendar is then displayed on the departmental Notice Board, Website and all the prominent places of the Institute.

 <p>MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION (Autonomous) (ISO 9001:2015) (ISO/IEC 27001:2013) 4th Floor, Govt. Polytechnic, Bldg. 49, Kherwadi, Bandra(E), Mumbai-400 051 Tel.No. : 022-62542100 Email:secretary@msbte.com web:www.msbte.org.in</p>					
No. MSBTE/D-40/Academic Calendar/2024/25 Date 22 AUG 2024 A.Y. 2024-25 Academic Calendar (Revised)					
1. Academic Schedule					
A) Academic schedule for Semester Pattern Programme					
S.N.	Activities	Odd Semester		Even Semester	
		Other than 1 st Semester (3, 5)	For 1 st semester	(2,4,6)	
1	Academic Term	15 July – 19 November, 2024	*02 September – 30 November, 2024	01 January, 2025 – 17 April, 2025	
2	First Class Test	28 – 30 August, 2024	23 – 25 October, 2024	10 – 12 February, 2025	
3	Second Class Test	12 – 14 November, 2024	27 – 29 November, 2024	07 – 09 April, 2025	
<small>*Starting with One week orientation programme</small>					
B) Academic schedule for Yearly Pattern Programme					
S.N.	Activities	Yearly Pattern (2,3)	Yearly Pattern (1st Year)	Pharmacy 2 nd Year	Pharmacy 1 st Year
		15 July, 2024 – 17 April 2025	*02 September – 17 April 2025	15 July, 2024 – 17 April 2025	*01 October – 17 April, 2025
2	First Class Test	23 – 25 October, 2024	12 – 14 November, 2024	21 – 25 October, 2024	23 – 28 December, 2024
3	Second Class Test	07 – 09 April, 2025	07 – 09 April, 2025	06 – 10 January, 2025	03 – 08 February, 2025
4	Third Class Test	Not Applicable	Not Applicable	07 – 12 April, 2025	07 – 12 April, 2025
<small>*Starting with One week orientation programme</small>					
2. Examination Form Fill & Confirmation Schedule					
A) Winter 2024 Examination Form Fill & Confirmation Schedule					
S.N.	Activities	Filling Examination forms (Normal Fees)	Filling Examination forms (With Exam form fees + Late fees of Rs. 200/-)	Filling Examination forms (With Exam form fees + Penalty Rs. 1500/-)	
		18 September – 06 October, 2024	08 – 09 October, 2024	11 – 13 October, 2024	
1	Candidate fill	18 September – 06 October, 2024	08 – 09 October, 2024	11 – 13 October, 2024	
2	Institute fill & Confirmation	18 September – 07 October, 2024	08 – 10 October, 2024	11 – 14 October, 2024	
3	RBTE confirmation	15 – 17 October, 2024			
<small>Last date for RBTE confirmation of filled exam form is 17th October, 2024 upto 5:00 PM</small>					
<small>Note: Enrollment schedule for Newly admitted 1st/ Direct Second Year and Yearly pattern students / Pharmacy students and Winter 2024 Exam form schedule for Newly admitted 1st/ Direct Second Year 3rd semester students will be declared by separate circular.</small>					

B) Summer 2025 Examination Form Fill & Confirmation Schedule				
S.N.	Activities	Filling Examination forms (Normal Fees)	Filling Examination forms (With Exam form fees + Late fees of Rs. 200/-)	Filling Examination forms (With Exam form fees + Penalty Rs. 1500/-)
1	Candidate fill	18 February – 02 March, 2025	04 – 06 March, 2025	08 – 09 March, 2025
2	Institute fill & Confirmation	18 February – 03 March, 2025	04 – 07 March, 2025	08 – 10 March, 2025
3	RBTE confirmation			11 – 13 March, 2025

Last date for RBTE confirmation of filled exam form is 13th March, 2025 upto 5:00 PM

3. Examination Schedule				
S.N.	Activities	Winter 2024 Examination		Summer 2025 Examination
		Exam schedule other than 1st Semester	Exam schedule for 1st semester	Examination Schedule
1	Practical Exam	20 – 28 November, 2024	02 – 07 December, 2024	18 – 28 April, 2025
2	Theory Exam	03 – 24 December, 2024	09 – 24 December, 2024	02 – 24 May, 2025
3	Declaration Result	4 th Week of January, 2025 (Tentatively)		4 th Week of June 2025 (Tentatively)

Start of Academic Year 2025-26 from 01st July, 2025

Note:

- Institutes have to take measures to conduct additional instructional days for academic activities if needed.
- Institutes have to conduct additional instructional days to complete the curriculum of 1st semester / 1st Year / Direct Second Year admitted students.
- All type of fees & penalties shall be necessarily deposited to regional office of the Board as per the schedule declared by respective RBTE or MSBTE.
- All Practical & term work shall be completed with continuous assessment as per curriculum till the end of term.
- In unavoidable circumstances, the necessary amendment in the schedule of any activity will be notified through separate circular on MSBTE web portal.
- The enrollment of the candidate shall remain provisional till the approval of merit list of admitted students from Regional Joint Director of Technical Education.


 (Dr. Mahendra R. Chitlange)
 Secretary,
 M. S. Board of Technical Education, Mumbai

Copy to:

- Hon. Director, MSBTE, Mumbai – for information.
- Dy. Secretary, CDC, MSBTE, Mumbai – for information.
- Dy. Secretary, MSBTE Regional Offices, Mumbai, Pune, Nagpur, Chh. Sambajinagar for necessary action.
- Desk Officer D-40, D-42 & D-43 MSBTE, Mumbai - for necessary action.
- Portal Manager, MSBTE, Mumbai to display on the website

Fig.No. 2.3 MSBTE Academic Calender (2024-25)

The Department Academic Calendar is prepared in alignment with the MSBTE academic schedule to ensure timely execution of curricular and co-curricular activities. It outlines key academic events such as commencement of classes, internal assessments, term work submission, and examination schedules. This calendar helps maintain academic discipline and ensures smooth functioning of the teaching-learning process.

PROGRAM ACTIVITY & ACADEMIC CALENDAR

- B. Use of various instructional planning and delivery methods (3)**

PROCESS OF PREPARATION OF TEACHING PLAN

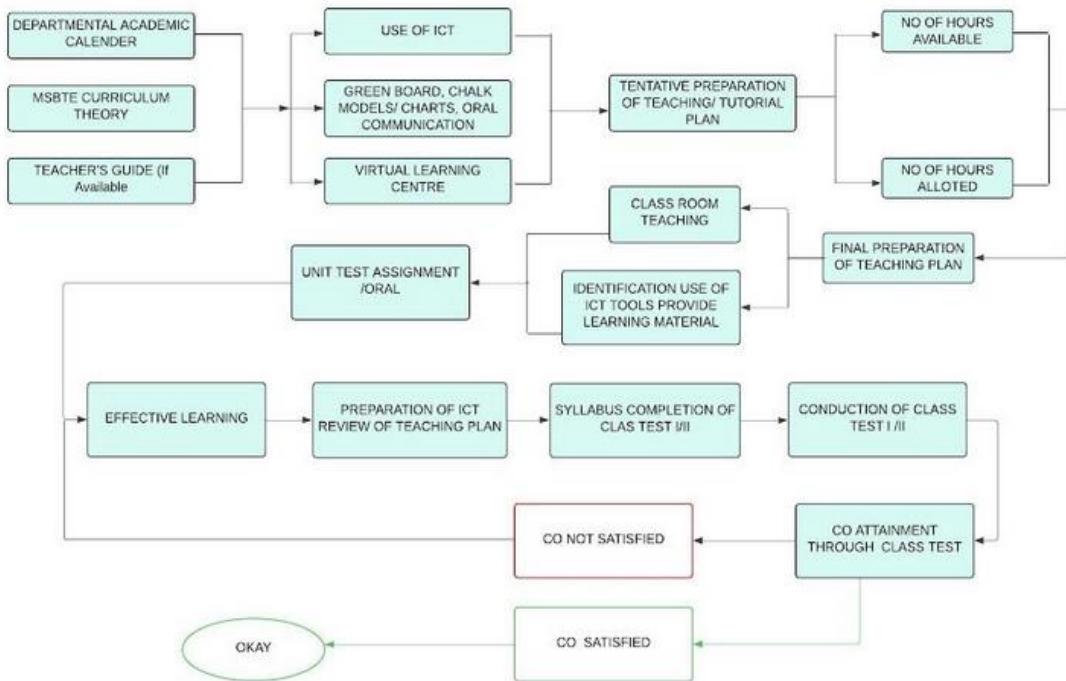


Fig.No. 2.4 Process Flow Chart of Teaching /Tutorial Plan

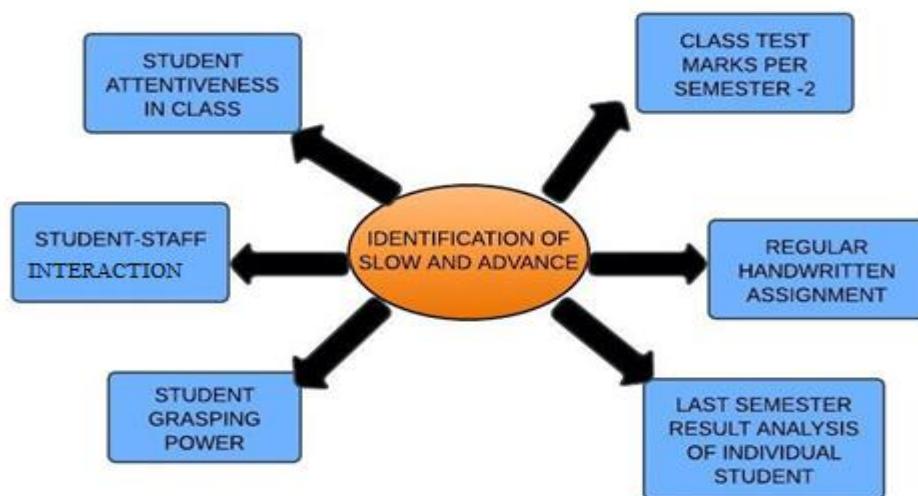
- **PROCESS:**

1. With the review of the Maharashtra State Board of Technical Education (MSBTE), the Departmental academic calendar and the Teacher's Guide if provided by the Maharashtra State Board of Technical Education (MSBTE), faculty plans the teaching activity along with the use of teaching aids for the Compliance of curriculum up to the end of the semester before the academic semester starts.
2. Once the tentative teaching plan has been drafted, the Faculty checks the no. of available hours and allotted no. of hours by the Maharashtra State Board of Technical Education (MSBTE). If there is any discrepancy or lack of hours then faculty plans the extra lectures for the compliance of short of Lecture.
3. Once the academic semester starts faculty delivers the lectures as per the Teaching plan by using various teaching aids like ICT, Green board, Chalk, Oral Communication, Virtual Learning Centre's etc.
4. During the lectures and after the completion of one topic, the faculty provides the learning material to students which will help them with concept understanding, and self-study for examination.
5. Faculty conducts the **ASSIGNMENT/ORAL** after the completion of topics so that it helps faculty to identify the students learning capacity which will help an effective teaching process.
6. Faculty completes the syllabus for Class Test I & II as per the planning in the Teaching plan and faculty sets the question paper of the Class Test in line with the Board Question Paper.
7. Once the Class Test is conducted faculty assesses the answer papers and also calculates the CO attainment through class tests. If the CO attainment through class tests is satisfactory if not then the faculty has to repeat the procedure.

Delivery Methods

1. Class room Lectures:- The main delivery method for the courses is lecture added with discussion. This includes Real life examples Collaborative learning, Interactive classrooms & effective use of projector. This helps in the obtaining a sound understanding of the course fundamentals.
2. Presentations:- It includes power point presentation and videos which gives brief idea about concept.
3. Laboratory Session:- Laboratory work demonstrates how theory can be verified by experiments through interpretation of results. Experiments are normally carried out individually by the students.
4. Project:- Micro project and Final year projects are carried out by a group of students under the guidance of faculty where in students apply the knowledge of all related courses in providing hardware/Software solutions and present demonstrable product.
5. Industrial Visit:- Industrial visit are arranged to get the students acquainted with industrial environment and work ethics.
6. Expert Talk:- Expert talks are arranged in regular academic to give additional information about related course topic.

C.Methodologies to support weak students and encourage bright students (4)



**Fig. No.2.5 Flow Chart of Identification of Slow and Advanced Students
Post identification actions taken**

1. ENCOURAGING BRIGHT STUDENT

Sr. No	Media	Action Taken	Frequency
1	Awarding Students	Bright students are encouraged by giving appreciation certificates and prizes.	Once per year
2	Help students identify their strengths	Teachers help students to identify their strength as well as their area of special interest. Direct & Indirect assessment methods are used to identify student's academic, co-curricular strengths.	Ongoing activity
3	Inspire student creativity	Many extra curricular activities are arranged for showing students creativity.	Min 3-4 activities

		i) Project Competition ii) Poster Making Competition iii) Quiz Competition etc iv) Paper Presentation Competition	per semester
--	--	--	--------------

2. ASSISTING WEAK STUDENT

Ways to track weak students	Media	Action Taken
Performance Based	i) Previous MSBTE Exam result ii) Class Test result iii) Counseling & Induction	i) Taking Remedial Classes and Extra lectures. ii) Mentoring by Teacher and Bright student iii) HOD and Faculty counsel to students for improvement in performance
Attendance Based	i) Monthly attendance report ii) Mentor feedback	i) Parent Teacher Meet ii) Counseling

• PROCESS:

1. Based on last semester result student is identified as a slow and advanced learner.
2. First class test marks are also taken into consideration for the identification of slow and advanced learners.
3. Regular assignment per topic is given to students as per their performance (Weaker and brighter students).
4. Student grasping power is decided by the individual staff for individual subjects based on way of understanding.
5. Based on individual interaction with the student, his class (slow /advanced learner) is decided.
6. Individual VIVA is taken after the completion of each practical and class (slow /advanced learner) is decided accordingly.

D.Quality of classroom teaching (3)

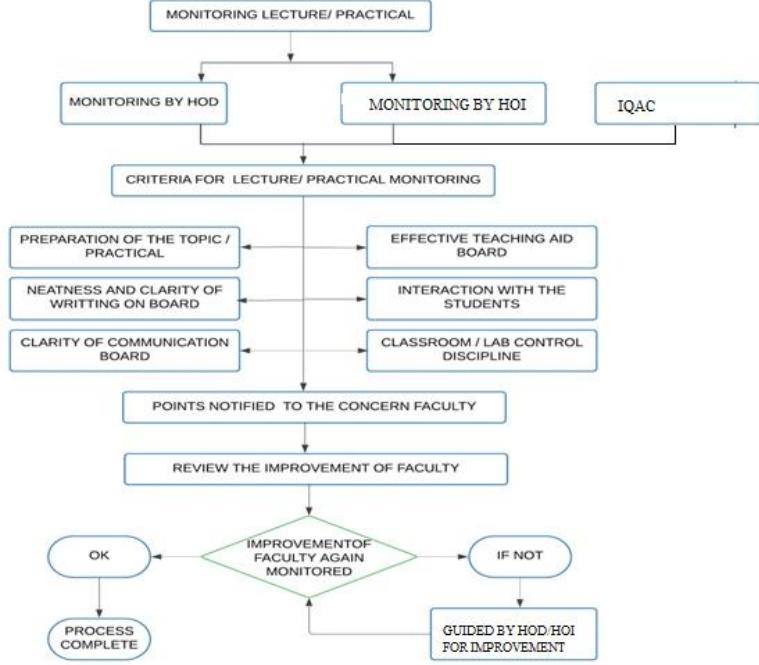


Fig.No. 2.6 Process Flow Chart for Quality of Classroom Teaching

- **PROCESS:**

1. Monitoring of lectures and practicals during the academic semester is done by the IQAC twice in the semester for the better improvement of faculty and the teaching-learning process
2. Monitoring of lectures and practicals is done on the various parameters which are:
 - A. Preparation of the topic/practical.
 - B. Effective teaching aids.
 - C. Neatness & clarity of writing on board.
 - D. Interactions with the students.
 - E. Staff present on time.
 - F. Daily filled attendance register.
3. During the monitoring if the HOD/HOI has notified any kind of improvement/corrections for that concerned faculty; those points are notified and one week is given to implement the same.
4. After one week again the concerned authority will monitor the faculty during the lecture/practical.

Date: 28/01/25

Time:

Staff Name: Prof R.V. Deshpande
 Subject: TPR

Class: FY/SY/Tk/Co

Lecture Delivery Media: Chalk and Board/Projector/Charts/Models.

Delivery language English /proper notes given to students

Sr.No.	Criteria	Observation	Remark
1.	Whether staff present on time?	YES/NO	2.00 pm
2.	Whether staff is having course file?	YES/NO	have notes
3.	Whether lecture is as per time table or adjustment?	Regular/ Adjustment	
4.	Duly filled attendance register.	YES/NO	
5.	No.Of students present/out of	60/72	
6.	Whether staff is in proper uniform?	YES/NO	
7.	OBE followed and conveyed to students.	YES/NO	
8.	Revision of previous lecture taken	YES/NO	

R.V.Deshpande
 SignofStaff

Parvez
 SignofIQACHead

NJ
 SignofPrincipal

Prof.R.V.Deshpande

fig.No. 2.7 IQAC Form Format

E.Conduct of experiments (3)

1. Faculty uses E-sources like videos, power point presentations for effective demonstration of practical.
2. Faculty discuss following points with students before start of practical.
 - a. To know related skills to be developed.
 - b. To understand specifications of algorithm, procedure, logic to know the expected output/result of practical.
3. Faculty explains prior concepts to the students before starting of each practical.
4. Faculty demonstrates the practical to the students.
5. Faculty evolves student's activity at the time of conduct of each practical.
6. Each student perform the practical under the guidance of subject teacher.
7. The output is checked and verified by faculty.

F.Continuous Assessment in the laboratory (3)

1. Continuous assessment of students is carried out by the faculty to ensure the attainment of Course Outcomes (COs).
 2. After the completion of the practical session, faculty members conduct question-and-answer discussions with the students based on the experiments performed.
 3. The continuous assessment of practical work is conducted as per the norms specified in CIAAN-2017, and appropriate grades are awarded accordingly.

Marks Obtained			Dated Sign of Teacher
Process Related (15)	Product Related (10)	Total (25)	

Formative Assessment of Practical

Institute Code and Name :- SANDIP POLYTECHNIC,NASHIK (1167)		Academic Year : 2024-25		Semester : Fourth		Examination :		SUMMER 2025	
Program : Computer Engineering		Course : Prof R.V.Deshpande		Maximum Marks : 25		Course Code :		314317	
Name of Faculty :						Minimum Marks :		10	
Roll No.	Enrollment No	Exam Seat No	Name of Student						
Experiment / Job/ Assignment /Sheet/ Activity of Project (Marks Out of 25 per Experiment)									
5									
1	2	3	4	1	2	3	4	5	6
1	23611780171	488285	MORE LALIT DILIP	42	42	42	42	42	42
2	23611780172	488286	JAGZAP ANIL NANA	46	46	47	46	47	46
3	23611780173	488287	NIKAM NIRANJAN SATISH	44	43	42	42	42	42
4	23611780174	488288	BHAIDAIT VAIBHAV BALASAHEB	44	44	44	44	44	44
5	23611780175	488289	BHAIBAD SANJAK AGADISH	46	46	45	46	46	45
6	23611780176	488290	JADHAV RAHUL DEVENDRA	46	46	47	45	45	45
7	23611780177	488291	SURVE PARTHI YOGESH	40	40	40	40	40	40
8	23611780178	488292	HANDE SALONI PRABHAKAR	46	46	47	47	47	47
9	23611780179	488293	PINGALKAR VAISHNAVI VIJAY	46	46	46	45	45	45
10	23611780180	488294	DEORE SURAJ RAJENDRA	45	45	45	46	45	45
11	23611780181	488295	NETKAR YASHI DIGAMBAR	45	44	44	45	45	45
12	23611780182	488296	MINDE ASHUTOSH SUHASHI	46	47	47	47	47	47
13	23611780183	488297	CHAUDHARI CHIRAG SANJAY	44	43	45	44	45	45
14	23611780184	488298	AHIRRAO SARVESH SUNIL	45	46	44	44	45	45
15	23611780185	488299	SHEJOLE ANSHU SUNIL	47	47	47	47	47	47
16	23611780186	488300	SHAHZI FAIRHEEN HUSSAIN MOHAMMAD	47	47	47	47	48	48
17	23611780187	488301	PURE SHIREYAS SUBHASHI	44	43	43	44	42	43
18	23611780188	488302	GANGURDE HEMANT HARI	44	45	44	45	44	44
19	23611780189	488303	KOR LOKESH SATISH	46	45	45	44	44	44
20	23611780190	488304	DEORE VAISHNAVI DILIP	46	46	47	46	46	46

Fig.No. 2.8 Proforma K3 -Formative Assesment of Practical

G.Student feedback of teaching learning process and action taken (6)

1. In Sandip Polytechnic the student's feedback is taken on the various levels and through following modes.
 - Online Mode
 - Verbal feedback of students
 2. Students feedback is collected about teaching learning process through online mode after conduction of each class test. The frequency of such feedback is twice in semester.

3. Students are randomly called for verbal feedback about teaching learning process twice in semester by the HOD and the HOI.
4. Based on the feedback received from the students, faculty prepare action plan for the improvement.
5. HOD & HOI ensures the improved performance of the concerned faculty as per action plan.

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

A. Process for Internal semester question paper setting and evaluation and effective process implementation (5)

In a semester, two unit tests are conducted as per Maharashtra State Board of Technical Education (MSBTE) schedule, the tests are conducted for maximum 30 marks.

Step I: Course Teacher refers Sample Question Paper provided by Maharashtra State Board of Technical Education (MSBTE) on official website before setting Class Test Question paper.

Step II: Course teacher ensures coverage of theory content (40% to 50%) for Class Test I and remaining (50% to 60 %) for Class Test II.

Step III: Course teacher segregate unit wise question as per Bloom's Taxonomy and due care is taken that all the questions are mapped to the course outcomes at expected level (R- Remember, U- Understand, and A- Application)

Step IV: After finalization of question paper, course teacher prepares detailed solution indicating step-wise weightage assigned to answer.

Step V: Course teacher handovers sealed packet containing question paper to examination coordinator.

Step VI: For evaluation of answer sheet, course teacher follows the model answer.

B. Question paper setting taking into account outcomes/learning levels (5)

1. Course teacher thoroughly understands the Course Outcomes and learning levels associated with course.
 2. Course teacher develops criteria for assessing student understanding at each learning level.
 3. The course teacher selects questions that directly align with the identified course outcomes and learning levels.
 4. Questions are segregated based on learning level.
 5. Questions are put in sample question paper template.
5. Course teacher makes necessary revisions if any, to the questions to enhance their alignment with Course Outcomes and learning levels based on feedback provided by moderator.

C . COs coverage in class test/ mid –term tests and assignments (5)



Instructions:

1. All questions are compulsory.
2. Use of Non-programmable Electronic Pocket Calculator is permissible.

Course Outcomes:

Sr. No.	Course Outcome		Chapter
01	CO317.1	Develop programs using object oriented methodology in java	Basic Syntactical Constructs in java
02	CO317.2	Apply concept of inheritance for concept of reusability.	Inheritance, Interface and packages.
03	CO317.3	Develop programs using multithreading.	Exception Handling and Multithreading.

Question Paper:

Q.	Course Outcome	Questions	Marks	Level
Q. 01		Attempt the following questions. (ANY FIVE)	10	
a	CO317.1	Define term class with syntax.	02	R
b	CO317.1	Describe conditional operators in java.	02	R
c	CO317.1	Define term constructor with syntax.	02	R
d	CO317.2	Define Inheritance and Enlist types of inheritance.	02	R
e	CO317.2	Explain the use of abstract keyword.	02	R
f	CO317.2	Define method overriding in java.	02	R
g	CO317.3	Define types of Error.	02	R
Q.02		Attempt the following questions.(ANY FIVE)	20	
a	CO317.1	Explain any four features of java.	04	U
b	CO317.1	Define term object. Write syntax to create class and object with an example.		A
c	CO317.1	Enlist and explain any four methods of String class.	04	U
d	CO317.2	Explain single inheritance with example.	04	A
e	CO317.2	Differentiate between Class and Interface.(Any 4 pts)	04	U
f	CO317.2	Explain package in java with suitable example.	04	A
g	CO317.3	State and explain types of errors in java.	04	U

Fig.No. 2.9 Class Test Question Paper

2.2.3 Quality of Experiments (15)

A. Experimental Methodologies (5)

1. Class is divided into three batches for the conduction of practicals.
2. Each batch has 25 to 30 students.
3. The course teacher discusses the practical outcomes of the experiment and the safety measures to be followed.
4. During the 2-hour practical session, the faculty explains and demonstrates the procedure to the students.
5. Students perform the practical under the observation of the lab assistant and the course teacher.
6. The program output is compared with the expected output.
7. If bugs or errors occur, they are resolved by the students with the help of the course teacher.
8. After the completion of the practical session, the course teacher conducts question-and-answer discussions with the students based on the experiments performed.

B. Innovative experiments including industry attached practices, virtual labs (5)

Some Experiment conducted by industry attached practices, virtual labs:

Table No. 2.9 Experiments are conducted by industry attached practices, virtual labs

Sr. No	Name of Course	Name of Experiment	Source
1	Programming in 'C'	Pointer	https://cse02-iiith.vlabs.ac.in/exp/pointers/procedure.html
4	Data Structure Using 'C'	Structures	https://cse02-iiith.vlabs.ac.in/exp/structures/
8	Python Programming	functions	https://python-iitk.vlabs.ac.in/exp/built-in-functions/

Springboard certificate



C.Relevance to outcomes (5)

For all experiments relevance to course provided by in each course lab manual which is design by Maharashtra State Board of Technical Education.

PROGRAM: Computer Engineering	
CLASS: Second Year	
COURSE: Java Programming (314317)	
TOOL: Manual	Academic Year: 2024-25
EXPERIMENTS: Relevance to Course Outcomes	
Practical – Course Outcomes Matrix	

Practical /Tutorial / Laboratory Learning Outcome (LLO)	Sr No	Laboratory Experiment /Practical Titles / Tutorial Titles	Number of hrs.	Relevant COs
LLO 1.1 Install any IDE software application.	1	* Setup Java Programming development environment using: • Command prompt.(Classpath and path setup) • Any IDE (Eclipse, Netbeans, VScode, Jcreator etc.).	2	CO1
LLO 2.1 Implement programs to evaluate different types of Expressions.	2	Write programs to evaluate different types of expressions.	2	CO1
LLO 3.1 Develop program to implement different control structures.	3	Write programs to demonstrate use of: • if statements (all forms of if statement • Switch – Case statement • Different types of Loops(for,while and do..while).	2	CO1
LLO 4.1 Develop program to implement different control structures.	4	* Write programs for implementation of different methods of: • String class, • StringBuffer class.	2	CO1
LLO 5.1 Implement array and vectors in Java.	5	* Write programs to demonstrate: • Use of Array. • Use of Vectors .	2	CO1
LLO 6.1 Convert primitive data types into object and vice-versa.	6	Write programs using Wrapper Class : • to convert primitive into object. • to convert object into primitive.	2	CO1
LLO 7.1 Initialize objects using constructors.	7	Develop a program for implementation of different types of constructors.	2	CO1
LLO 8.1 Implement concepts of inheritance for code reusability.	8	Develop program to implement: • Single inheritance, • Multilevel inheritance.	2	CO2
LLO 9.1 Implement multiple inheritance.	9	* Develop program for implementation of interface.	2	CO2
LLO 10.1 Implement packages in Java.	10	*Write programs to demonstrate use of : • Built in packages • User defined packages.	2	CO2
LLO 11.1 Identify the different types of errors using exception handling.	11	Write programs for implementation of try, catch and finally block.	2	CO3
LLO 12.1 Manage different types of user defined exceptions.	12	*Write programs for implementation of throw, throws clause.	2	CO3
LLO 13.1 Execute different processes simultaneously using multithreading.	13	*Write programs using multithreading.	2	CO3
LLO 14.1 Design GUI using different AWT components.	14	* Write program to design any type of form using AWT components.	2	CO4
LLO 15.1 Design GUI using different menu class.	15	Write program to create a menu bar with various menu items and sub menu items.	2	CO4
LLO 16.1 Design GUI using border layout manager.	16	Write program to demonstrate the use of border layout. The layout shows four buttons at four sides with captions “left”, “right”, “top” and “bottom” using Swing Components.	2	CO4
LLO 17.1 Design GUI using grid layout manager.	17	*Write program to design a calculator to demonstrate the use of grid layout using swing components.	2	CO4
LLO 18.1 Implement swing components in a frame.	18	Write program using swing to display a JComboBox in a JFrame .	2	CO4
LLO 19.1 Design tree and table using advanced swing components in a frame.	19	Write program to create JTree and JTable.	2	CO4

Fig. No. 2.10 Relevance to course outcomes

2.2.4 Quality of Students Projects and Report Writing (35)

A. Identification of projects and allocation methodology (3)

•Identification of Projects:

1. The students projects are selected in line with department COs, POs, and PSOs.
2. Projects are identified in the relevant context. The need for the project and the end users of the project are verified for the current context.
3. The problem definition with their requirements and constraints are verified.
4. Students are provided with brief ideas of various fields, viz., real-life problems, and Industrial defects, alternatives to the existing methods, cost-effectiveness, ethics, and theme based ideas for selecting the project.
5. Knowledge, methodology, skill set, and interest of the students to implement the project are considered to undertake the projects.
6. The list of previous year projects is displayed on a notice board which ensures no repetition of project work and also encourages students to enhance the previous works.
7. In consideration of all the above stated steps, the students are asked to choose any 3-4 project ideas.
8. Also, students are asked to perform a literature review survey for the selected topics.

•Project allocation methodology:

1. Each project group has maximum four students.
2. The faculty profile should match the domain of the student's project.
3. Faculties of higher cadres are allocated as guides to guide the student's project.

B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs (5)

• Summary of three years project list:

Table No. 2.10 Summary of Three Years Project List

Sr.no.	Academic Year	Project groups
1	2024-25	19
2	2023-24	14
3	2022-23	14

The following is the list of student projects carried out as part of the curriculum to enhance technical knowledge, practical skills, and problem-solving abilities. These projects are designed to address real-world challenges and promote innovation, teamwork, and application of engineering principles.

- Mapping of final year projects with POs & PSOs for Academic year 2024-25

Table No. 2.11 Mapping of final year projects with POs & PSOs for Academic year 2024-25

Academic Year 2024-25					
Gr. No	Sr. No.	Topic Name	Name of Students	Guide name	Outcomes
1	1	Aerosense	Kumbhar Mrunmai Sandip	Prof. V.B.Ohol	PO1,PO2,PO3, PO4,PO6,PO7, PSO1, PSO2, PSO3
	2		Aher Shubham Arun		
	3		Suraywanshi Dipika Shantaram		
	4		Gole Apurva Anand		
2	5	Crime Management System	Chaudhari Vaishnavi Nitin	Prof. R.V.Deshpande	PO1,PO2,PO3, PO4,PO5,PO6, PO7, PSO1, PSO2, PSO3
	6		Shejwal Sai Devidas		
	7		Kadam Maina Haribhau		
	8		Nathe Vicky Anil		
3	9	Website for self diagnosis and drug recommendation	Patil Mansi Pravin	Prof. R.V.Deshpande	PO1,PO2,PO3, PO4,PO5,PO6, PSO1, PSO2, PSO3
	10		Bharti Anjali Ashok		
	11		Mule Bhakti Vitthal		
	12		Bajaj Gayatri Anil		
4	13	Smart Tourist	Darade Ruchita Nitin	Prof. P.B.Datir	PO1,PO2,PO3, PO4,PO5,PO6, PSO1, PSO2, PSO3
	14		Borse Bhagyashri Sunil		
	15		Zalte Vedika Haribhau		
	16		Pagar Sakshi Shivdas		
5	17	Farmer Equipment Rental Web Application	Gamne Chaitanya Sanjay	Prof. V.B.Ohol	PO1,PO2,PO3, PO4,PO5,PO6, PO7 PSO1, PSO2, PSO3
	18		Jagtap Shradha Suresh		
	19		Mahale Paras Nitin		
	20		Jadhav Omkar Machindra		
6	21	Car Buying Guide	Suryawanshi Vishwajeet Nitin	Prof. Y.D.Jadhav	PO1,PO2,PO3, PO4,PO5,PO6, PO7 PSO1, PSO2, PSO3
	22		Rathore Vaibhav		
	23		Katore Prasad Dattu		
	24		Sanap Kunal Vilas		
	25	Quick Offline Pay	Vende Prajwal Nitin		PO1,PO2,PO3, PO4,PO5,PO6, PO7 PSO1,
	26		Kakulte Om Jagannath		

7	27		Badgujar Gaurav Vijay	Prof. Y.D.Jadhav	PSO2. PSO3
	28		Patil Manas Yuvraj		
8	29	Career Path Finder	Borse Aditya Sharad	Prof. V.B.Ohol	PO1,PO2,PO3, PO4,PO5,PO6, PO7, PSO1, PSO2. PSO3
	30		Tajne Rugved Vijay		
	31		Patil Vaishnavi Hemraj		
9	32	Real time Visitor Tracker Of Goshala To Avoid Accidents	Pagar Ashwini Avinash	Prof.R.S.Thete	PO1,PO2,PO3, PO4,PO5,PO6, PSO1, PSO2.
	33		Jadhav Shubham Abasaheb		
	34		Thakre Manjusha Ashok		
	35		Bhondawe Mayuresh Keshav		
10	36	Mental Health Consulting Website	Dawange Sahil Suresh	Prof.R.V.Deshpande	PO1,PO2,PO3, PO4,PO5,PO6, PO7, PSO1, PSO2. PSO3
	37		Jamdar Sarvesh Jitendra		
	38		Ahire Prajwal Manik		
	39		Koli Snehal Prabhakar		
11	40	Health Care Adviser Application	Rathore Krishna	Prof. Y.D.Jadhav	PO1,PO2,PO3, PO4,PO5,PO6, PO7, PSO1, PSO2. PSO3
	41		Gawali Gananjay Kashinath		
	42		Chaudhari Pushkar Govind		
	43		Shinde Siddharth Santosh		
12	44	Agri Shop For Farmer online Selling And buying Application	Gangurde Kasturi Devaji	Prof.G.P.Bharne	PO1,PO2,PO3, PO4,PO5,PO6, PO7, PSO1, PSO2. PSO3
	45		Bhamre Shruti Prashant		
	46		Zade Tanishka Nandu		
13	47	Smart Street Light System	Patil Kajal Laxman	Prof.G.P.Bharne	PO1,PO2,PO3, PO4,PO5,PO6, PO7 PSO1, PSO2.
	48		Bhandure Vaishnavi Sampat(OTO)		
	49		Halor Kalyani Sanjay		
	50		Gauri Pawar(OTO)		
14	51	E-plastic Waste Management Application	Patil Bhagyashri Nitin	Prof.R.V.Deshpande	PO1,PO2,PO3, PO4,PO5,PO6, PO7 PSO1, PSO2.PSO3
	52		Siddhant Gangurde Kiran		
	53	Rent My Stuff	Borse Sakshi Narayan		PO1,PO2,PO3,

15	54		Chandramore Sanchita Ragnath	Prof.R.K.Ghate	PO4,PO5,PO6, PO7 PSO1, PSO2,PSO3
	55		Rajput Aditi Ramchandra		
	56		Gangurde Pranali Ashok		
16	57	Puzzle Alarm	Khan Rehan Aslam	Prof.P.B.Datir	PO1,PO2,PO3, PO4,PO5,PO6, PSO1,PSO2, PSO3
	58		Chaudhari Aditya Aba		
	59		Mahale Vishwajit Ajabsingh		
	60		Ilag Sanket Ashok		
	61		Bochare Sanchit Sharad		
17	62	Labor Management System	Davane Siddhant Mangesh	Prof.Y.D.Jadhav	PO1,PO2,PO3, PO4,PO5,PO6 PSO1,PSO2, PSO3
	63		Kale Swanand Dnyaeshwar		
	64		Vaydeshkar Aniket Vishal		
	65		Joshi Nisha Jagannath		
18	66	Candidate Assessment Tool	Deore Tanvi Manoj	Prof.G.P.Bharne	PO1,PO2,PO3, PO4,PO5,PO6, PO7, PSO1,PSO2, PSO3
	67		Bagul Reva Namdev		
	68		Sonawane Krishna Bharat		
	69	Cryptography	Wani Anushka Vilas	Prof.R.S.Thete	PO1,PO2,PO3, PO4,PO5,PO6, PO7, PSO1,PSO2, PSO3
19	70		Bhirud Yamini Mohan(OTO)		
	71		Kundalke Shubham Kailas(OTO)		

C.Process for monitoring and evaluation (5)

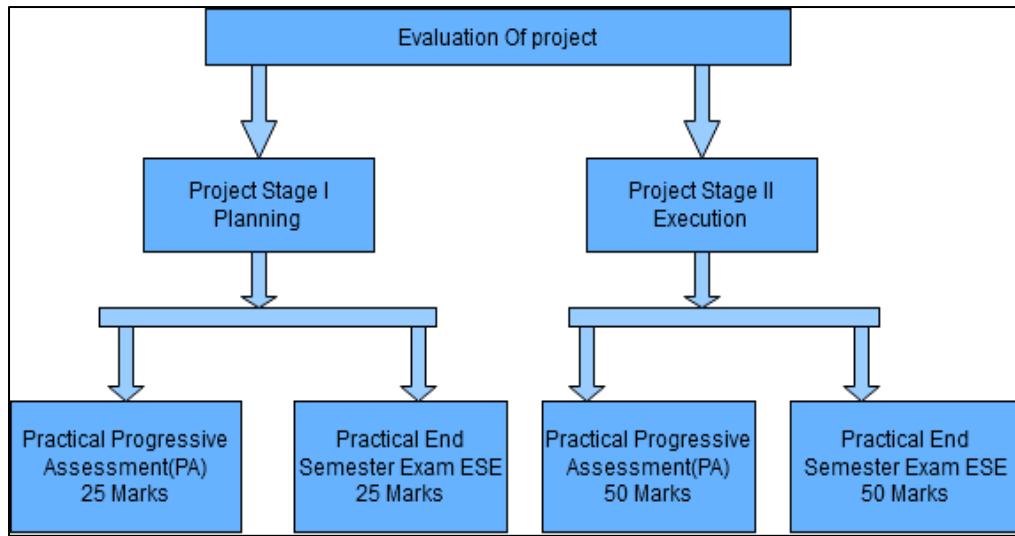


Fig.No. 2.11 Project evaluation process.

1. Once in a week, the project guide will take a review of the allotted project group for the work done by them.
2. Also, he guides them for work to be completed in the next week.
3. The facultys support will be provided with all necessary software and hardware.
4. Every year a project competition is to be organized to the third year students.
5. The faculties encourage students to publish their project work in reputed journals/conferences.
6. More tendencies to showcase their project work in project competition are observed.
7. Along with the industry person (if any) an internal guide will monitor the project group twice in a month till the completion of the project.
8. Evaluation of Project done in two phases (Planning and Execution stages).
9. As per Maharashtra State Board of Technical Education (MSBTE) I- Scheme for Project works having the Total 150 Marks weightage for the whole year.
10. For semester Vth Total marks weightage is 50 Marks i.e. 25 Marks for the End Semester Exam (ESE) and 25 Marks for Progressive Assessment (PA)
11. For semester VIth Total marks weightage is 100 Marks i.e. 50 Marks for the End Semester Exam (ESE) and 50 Marks for Progressive Assessment (PA)

a. Teaching and examination scheme for Vth semester

Teaching Scheme			Credit (L+T+P)	Examination Scheme												
L	T	P		Theory						Practical						
				Paper Hrs.	ESE		PA		Total		ESE		PA		Total	
-	-	2	2	--	--	--	--	--	--	--	25@	10	25	10	50	20

Legends: L-Lecture; T-Tutorial /teacher Guided Theory Practice; P-Practical; C-Credit; ESE-End Semester Examination; PA-Progressive Assessment, @ Internal Assessment, # External Assessment

b. Teaching and examination scheme for VIth semester

Teaching Scheme			Credit (L+T+P)	Examination Scheme												
L	T	P		Theory						Practical						
				Paper Hrs.	ESE		PA		Total		ESE		PA		Total	
-	-	4	4	--	--	--	--	--	--	--	50#	20	50~	20	100	40

Legends: L-Lecture; T-Tutorial /teacher Guided Theory Practice; P-Practical; C-Credit; ESE-End Semester Examination; PA-Progressive Assessment, @ Internal Assessment, # External Assessment, ~ Courses having only Practical Examination

D. Process to assess individual and team performance (5)

Stage-1 Performance assessment (Planning)

1. Each individual and team performance in the project team is assessed as per the Teaching Scheme Guidelines for semester Vth.
2. Individual and team performance is based on weekly Performance as per weekly Diary, Project Proposal, and assessment of the End Semester Exam is based on Viva/Oral and Presentation conduction by internally.

Stage-2 Performance assessment (Execution and Project Writing)

1. Each individual and team performance in the project team is assessed as per the Teaching Scheme Guideline for semester VIth.
2. Individual and team performance is based on weekly Performance assessments as per the weekly Diary and Final Project Report and the assessment of The semester exam is based on Viva/Oral and Presentation conducted in front of External and Internal Examiner.
3. Every student will be assessed individually and as a team by the project guide based on the task allotted in the previous week and the task completed in the next week.
4. After the assessment, feedback is given to the students to improve their project quality.

E. Quality of deliverable, working prototypes (12)

Table No. 2.12 Summary Of Quality of deliverable, working prototypes

Academic Year	Type of Project		
	Industry Sponsored	Application Based	Study Based
CAY (2024-25)	15	3	1
CAY m1 (2023-24)	4	8	2
CAY m2 (2022-23)	3	6	5

Mapping of final year projects with POs & PSOs for Academic year 2024-25

Table No. 2.13 Final year projects with POs & PSOs for Academic year 2024-25

Academic Year 2024-25						
Gr.	Sr.	Topic Name	Name of Students	Type of	Guide name	Outcome
1	1	Aerosense	Kumbhar Mrunmai Sandip	Industry Sponsored	Prof. V.B.Ohol	PO1,PO2, PO3,PO4, PO6,PO7, PSO1,
	2		Aher Shubham Arun			PO1,PO2, PO3,PO4, PO6,PO7, PSO1,
	3		Suraywanshi Dipika			PO1,PO2, PO3,PO4, PO6,PO7, PSO1,
	4		Gole Apurva Anand			PO1,PO2, PO3,PO4, PO6,PO7, PSO1,
2	5	Crime Management System	Chaudhari Vaishnavi Nitin	Industry Sponsored	Prof.R.V.Deshp ande	PO1,PO2, PO3,PO4, PO5,PO6, PO7,
	6		Shejwal Sai Devidas			PO1,PO2, PO3,PO4, PO5,PO6, PO7,
	7		Kadam Maina Haribhau			PO1,PO2, PO3,PO4, PO5,PO6, PO7,
	8		Nathe Vicky Anil			PO1,PO2, PO3,PO4, PO5,PO6, PO7,
3	9	Website for self diagnosis and drug recommendation	Patil Mansi Pravin	Industry Sponsored	Prof.R.V.Deshp ande	PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	10		Bharti Anjali Ashok			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	11		Mule Bhakti Vitthal			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	12		Bajaj Gayatri Anil			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
4	13	Smart Tourist	Darade Ruchita Nitin	Industry Sponsored	Prof.P.B.Datir	PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	14		Borse Bhagyashri Sunil			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	15		Zalte Vedika Haribhau			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	16		Pagar Sakshi Shivdas			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
5	17	Farmer Equipment Rental Web Application	Gamne Chaitanya Sanjay	Industry Sponsored	Prof.V.B.Ohol	PO1,PO2, PO3,PO4, PO5,PO6, PO7
	18		Jagtap Shradha Suresh			PO1,PO2, PO3,PO4, PO5,PO6, PO7
	19		Mahale Paras Nitin			PO1,PO2, PO3,PO4, PO5,PO6, PO7
	20		Jadhav Omkar Machindra			PO1,PO2, PO3,PO4, PO5,PO6, PO7
6	21	Car Buying Guide	Suryawanshi Vishwajeet	Industry Sponsored	Prof.Y.D.Jadha v	PO1,PO2, PO3,PO4, PO5,PO6, PO7
	22		Rathore Vaibhav			PO1,PO2, PO3,PO4, PO5,PO6, PO7
	23		Katore Prasad Dattu			PO1,PO2, PO3,PO4, PO5,PO6, PO7
	24		Sanap Kunal Vilas			PO1,PO2, PO3,PO4, PO5,PO6, PO7
7	25	Quick Offline Pay	Vende Prajwal Nitin	Industry Sponsored	Prof.Y.D.Jadha v	PO1,PO2, PO3,PO4, PO5,PO6, PO7
	26		Kakulte Om Jagannath			PO1,PO2, PO3,PO4, PO5,PO6, PO7
	27		Badgujar Gaurav Vijay			PO1,PO2, PO3,PO4, PO5,PO6, PO7
	28		Patil Manas Yuvraj			PO1,PO2, PO3,PO4, PO5,PO6, PO7
8	29	Career Path Finder	Borse Aditya Sharad	Industry Sponsored	Prof.V.B.Ohol	PO1,PO2, PO3,PO4, PO5,PO6,
	30		Tajne Rugved Vijay			PO1,PO2, PO3,PO4, PO5,PO6,
	31		Patil Vaishnavi Hemraj			PO1,PO2, PO3,PO4, PO5,PO6,
9	33	Real time Visitor Tracker Of Goshala To Avoid Accidents	Pagar Ashwini Avinash	Application Based	Prof.R.S.Thete	PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	34		Jadhav Shubham Abasaheb			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	35		Thakre Manjusha Ashok			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	36		Bhondawe Mayuresh			PO1,PO2, PO3,PO4, PO5,PO6, PSO1,
	37	Mental Health Consulting Website	Dawange Sahil Suresh	Industry Sponsored	Prof.R.V.Deshp ande	PO1,PO2, PO3,PO4, PO5,PO6,
	38		Jamdar Sarvesh Jitendra			PO1,PO2, PO3,PO4, PO5,PO6,
	39		Ahire Prajwal Manik			PO1,PO2, PO3,PO4, PO5,PO6,

10	40		Koli Snehal Prabhakar			PO7,
11	41	Health Care Adviser Application	Rathore Krishna	Indusy Sponsored	Prof.Y.D.Jadha v	PO1,PO2, PO3,PO4, PO5,PO6, PO7,
	42		Gawali Gananjay ashinath			
	43		Chaudhari Pushkar Govind			
	44		Shinde Siddharth Santosh			
12	45	Agri Shop For Farmer online Selling And	Gangurde Kasturi Devaji	Indusy Sponsored	Prof.G.P.Bharn e	PO1,PO2, PO3,PO4, PO5,PO6,
	46		Bhamre Shruti Prashant			
	47		Zade Tanishka Nandu			
13	49	Smart Street Light System	Patil Kajal Laxman	Application Based	Prof.G.P.Bharn	PO1,PO2, PO3,PO4, PO5,PO6, PO7
	50		Bhandure Vaishnavi			
	51		Halor Kalyani Sanjay			
	52		Gauri Pawar(OTO)			
14	53	E-plastic Waste Management	Patil Bhagyashri Nitin	Application Based	Prof.R.V.Deshp ande	PO1,PO2, PO3,PO4,
	54		Siddhant Gangurde Kiran			
15	49	Rent My Stuff	Borse Sakshi Narayan	Indusy Sponsored	Prof.R.K.Ghate	PO1,PO2, PO3,PO4, PO5,PO6, PO7
	50		Chandramore Sanchita			
	51		Rajput Aditi Ramchandra			
	52		Gangurde Pranali Ashok			
16	49	Puzzle Alarm	Khan Rehan Aslam	Indusy Sponsored	Prof.P.B.Datir	PO1,PO2, PO3,PO4, PO5,PO6, PSO1,PS
	50		Chaudhari Aditya Aba			
	51		Mahale Vishwajit			
	52		Ilag Sanket Ashok			
17	49	Labor Management System	Bochare Sanchit Sharad	Indusy Sponsored	Prof.Y.D.Jadha v	PO1,PO2, PO3,PO4, PO5,PO6 PSO1,PS
	50		Davane Siddhant Mangesh			
	51		Kale Swanand Dnyaeshwar			
	52		Vaydeskar Aniket Vishal			
18	49	Candidate Assessment Tool	Joshi Nisha Jagannath	Indusy Sponsored	Prof.G.P.Bharn e	PO1,PO2, PO3,PO4, PO5,PO6, PO7,
	50		Deore Tanvi Manoj			
	51		Bagul Reva Namdev			
	52		Sonawane Krishna Bharat			
19	49	Cryptography	Wani Anushka Vilas	Study Based	Prof.R.S.Thete	PO1,PO2, PO3,PO4, PO5,PO6,
	50		Bhirud Yamini			
	51		Kundalke Shubham			

F. Papers published /Awards/ Recognition received by projects at State/ National level (5)

Table No. 2.14 Summary of Papers published /Awards/ Recognition received by projects at State/ National level

Sr.No	Academic Year	Papers published/Awards Participants/ Winner
1	2024-25	69
2	2023-24	50
3	2022-23	44

- Papers published/Awards received by projects. (A. Y. 2024-25)

Table No. 2.15 Papers published/Awards received by projects. (A. Y. 2024-25)

Sr.No .	Students Name	Department	Level	Venue/Host	Date	Remark
01	Kumbhar Mrunmai Sandip	Computer Engineering	National Level	V.E.S Polytechnic,Chembur, Mumbai	02/03/2025	Finalist
02	Aher Shubham Arun	Computer Engineering	National Level	V.E.S Polytechnic,Chembur, Mumbai	02/03/2025	Finalist
03	Suryawanshi Dipika Shantaram	Computer Engineering	National Level	Sandip University Nashik	22/03/2025	winner
04	Apurva Gole	Computer Engineering	National Level	Sandip Polytechnic,Nashik	22/03/2025	winner
05	Badgujar Gaurav Vijay	Computer Engineering	Institute Level	SITRC, Nashik	28/02/2025	Participation
06	Patil Manas Yuvraj	Computer Engineering	Institute Level	SIEM,Nashik	03/03/2025	Participation
02	Paper Published Certificate					
01	Kumbhar Mrunmai Sandip	Computer Engineering	National Level	IJRPR	02/04/2025	Winner
02	Bhamre Shruti Prashant	Computer Engineering	National Level	IJRPR	25/03/2025	Participation
03	Zade Tanishka Nandu	Computer Engineering	National Level	IJRPR	25/03/2025	Participation
04	Borse Aditya Sharad	Computer Engineering	National Level	IRJMEPS	25/03/2025	Participation

2.2.5 Industry Interaction and Industry Internship/Training (30)

A. Industry supported Labs (2)

Collaboration with industry is always needed to fulfill intersecting needs and establish mutually beneficial relationships. The main goal of industry and institute collaboration is to share resources and manpower.

Table No. 2.16 Industry supported Lab

Sr.No	Name Of Laboratory	Name Of Industry	Support
1	Center Of Excellence	Softcrowd Technologies	<p>1. To train diploma students in service planning with a strong emphasis on Industry practices and tools.</p> <p>2. To prepare students for careers in IT industry by equipping them with the latest IT tools and software, enabling a smooth transition into the IT-enabled services sector.</p>

B. Delivery of appropriate Course work by Industry experts (5) Institute Marks

Delivery of appropriate Course work by Industry experts

Table No. 2.17 Summary of Course work by Industry experts

Sr.No	Academic Year	Details of Expert Lecture
1	CAY (2024-25)	6
2	CAYm1 (2023-24)	6
3	CAYm2 (2022-23)	4

Table No. 2.17 Delivery of appropriate Course work by Industry experts (2024-25)

Expert Lectures 2024-25						
Sr. No.	Details Of Expert	Topic	Date	Class	No. of beneficiaries	Relevance to POs & PSOs
1	Mr.Santosh Nikam, Director of Calibers InfoTech,Nashik	Expert Talk on Project Guidance	27/07/2024	TY	60	PO1,PO2,PO3, PO4,PO5,PO6, PO7,PSO1,PSO 2,PSO3
2	Mr. Vaibhav Desai, HR Profound Edutech, Pvt, Ltd, Nashik	Expert Talk on AI & ML	24/08/2024	SY	200	PO1,PO2,PO3, PO4,PO5,PO6, PO7,PSO1,PSO

						2,PSO3
3	PI. Subhash Dhawale & Team, Cyber Cell Nashik	Expert Talk on Cyber Awareness	27/09/2024	SY	200	PO1,PO2,PO3, PO4,PO5,PO6, PO7,PSO1,PSO 2,PSO3
4	Mr.Narendra Sardar Codedrift, Ranrajya 1, Near Bhonsala Military School, College Road, Nashik	Expert Talk on Programming with Python	20/01/2025	SY	140	PO1,PO2, PO4,PO5, PO6,PO7 PSO1, PSO2, PSO3
5	Mr.Abbay Malapure, TPO, Sandip University	Expert Talk on Interview Techniques	27/01/2025	TY	120	PO1,PO2, PO4,PO5, PO6,PO7 PSO1, PSO2, PSO3
6	Mr.Prakash Ekhande Nexionica System Pvt.Ltd,Nashik College Road, Thatte Nagar,Nashik	Expert Talk on Internet Of Thing	01/02/2025	SY	100	PO1,PO2, PO4,PO5, PO6,PO7 PSO1, PSO2, PSO3

C. Industrial visits/tours for students (3)

Table No. 2.18 Summary of Industrial visits/tours for students

Sr.No	Academic Year	Details of Industrial Visit
1	CAY (2024-25)	5
2	CAYm1 (2023-24)	3
3	CAYm2 (2022-23)	2

- Industrial visits/tours for students (2024-25)

Table No. 2.19 Industrial visits/tours for students (2024-25)

Industry Visits 2024-25						
Sr. No	Details Of Expert	Topic	Date	Class	No. of beneficiaries	Relevance to POs & PSOs

1	HR Manager,Winjit Technology, Nashik	Industrial Visit to Winjit Technology, Nashik	14/10/2024	TY	120	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
2	Manager, Exilance Software, Nashik	Industrial Visit to Exilance Software Nashik	10/09/2024	SY	140	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
3	SF Sandip Polytechnic,Nashik	Campus Visit on Environmental Studies	15/10/2024	TY	120	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2,PSO3
4	HR Manager,Eaglebyte Solutions Pvt.Ltd,Nashik	Industrial Visit to Eaglebyte Solutions Pvt.Ltd,Nashik	22/2/2025	SY	140	PO1,PO2,PO4,PO5,PO6,PO7 PSO1,PSO2,PSO3
5	HR Manager, Sabedor Software Pvt.Ltd ,Nashik	Industrial Visit to Sabedor Software Pvt.Ltd ,Nashik	23/2/2025	TY	100	PO1,PO2,PO4,PO5,PO6,PO7 PSO1,PSO2,PSO3

D. Industrial training/ internship (5)

1. All the students after completing their IV Semester voluntarily undergo 6 Weeks Industrial Training in their Summer Vacation period.
2. After the commencement of the new Semester the students have to prepare Industrial Training Report and Power Point Presentation for Evaluation.
3. The Industrial Training Report is evaluated by the External Industrial Examiner and marks are given according to the Teaching Exam Scheme.
- .

INDUSTRY BASED TRAINING STUDENTS COUNT DETAILS –

Table No. 2.21 Industry Based Traning Students Count Details

Sr.No.	Acedemic	Number	Number of	Total Number of	Percentage
--------	----------	--------	-----------	-----------------	------------

	Year	Company/ Firm	Students done ITR	Students	(%)
1	2024-2025	11	71	71	100
2	2023-2024	13	60	60	100
3	2022-2023	12	60	60	100

E. Post training/ internship Assessment (10)

In I-Scheme total marks allotted for Industrial Training is 150 Marks

- Practical End semester Assessment is done Externally on the basis of Presentation and Viva which is conducted in the presence of Industrial Person and Internal subject Teacher (75 Marks weightage for ESE)
- Practical Assessment is done internally on the basis of submission of Industrial Training work project after successful completion of Training. (75 Marks weightage for PA) Industrial Training assessment

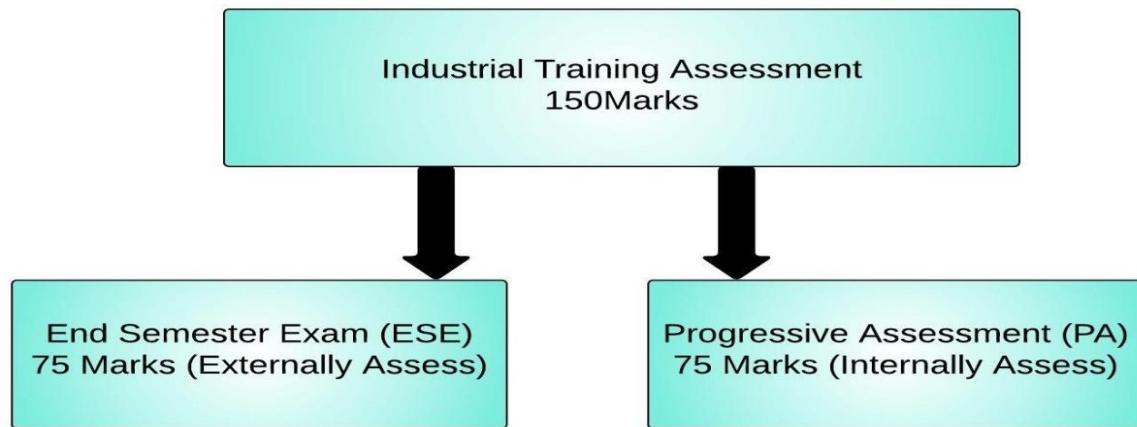


Fig.No. 2.12 Internal training assessment

Table No. 2.20 Assessment Scheme for Industrial Training

Training duration	Progressive Assessment (Weekly report)		End Semester Assessment (Report, Presentation and Viva)		Total Marks	
Six weeks	Max. marks	Min. passing marks	Max. marks	Min. passing marks	Max. marks	Min. passing marks
	# 75	30	*75	30	150	30

assessed by mentor and concern industry supervisor

** Assessed by mentor and external examiner

Format 5

Evaluation Sheet for ESE of Industrial Training by Mentor and Industry Personnel

Name of Student: **Enrollment No.**

Name of Programme:- **Semester:**

Course Title :- Industrial Training **Code:**

Name of Industry:

Course Outcomes Achieved

.....
.....
.....

Industrial Training Report (25 Marks)	Presentation (25 Marks)	Viva (25 Marks)	Total Marks (75 Marks)

Comments/Suggestions about team work/leadership/inter-personal communication (if any)

.....
.....
.....

Signature-

Signature-

Name of the Internal/Mentor

**Name of External Examiner
(Industry Personnel)**

Fig.No. 2.13 (E-2) Evaluation sheet (ESE) for Industrial training.

Distribution of End-Semester-Examination (ESE) marks of Industrial Training

Marks For Industrial Training Report	Marks for Seminar/Presentation	Marks for Oral/Viva	Total ESE Marks
25	25	25	75

Format 4

Evaluation Sheet for PA of Industrial Training

Academic year: - 20 - 20

Name of the industry:

Sr. No	Enrollment Number	Name of student	Marks (5 marks for each week) by Mentor & Industry Supervisor jointly	PA Marks by Industry Supervisor	PA Marks by mentor faculty	Total Marks
			Out of 30 (A)	Out of 25 (B)	Out of 20 (C)	Out of 75 (A)+(B)+(C)

- A) Marks for PA are to be awarded out of 5 for each week considering the level of completeness of activity observed, from the daily diary maintained.
- B) Marks are to be awarded by Industry Supervisor on the basis of General Observation and behavioral aspects of student.
- C) Marks are to be awarded by Mentor faculty on the basis of report, understanding level and work performance of the student.

Signature-

Signature-

Name and designation of the Mentor/faculty Name and designation of the Industry Supervisor

Fig.No. 2.14 Evaluation sheet (PA) for Industrial training.

• **Summary Of Industrial Training**

Table No. 2.22 Summary Of Industrial Training

Academic Year	No.of Industries	No. of Benificieres
CAY (2024-25)	11	71
CAY m1 (2023-24)	13	60
CAY m2 (2022-23)	12	60

Industrial Training Ay A.Y-2024-2025

Sr No.	Name Of Industry	Address	Duration	Purpose Of training	No. of Beneficiaries
1	Spvryan	SPVRYAN Software Solution, Jail Road Nashik Road, Contact	6 weeks		10

		No.7588194657			
2	Calibers InfoTech	Calibers Infotech, College Road Nashik Contact No. 9527247333	6 weeks	The objective of industrial training is to provide to students the feel of the actual working environment and to gain practical knowledge and skills, which in turn will motivate, develop and build their Confidence.	10
3	Soft crowd Technologies	Softcrowd Technologies , Ashok Stambh, Nashik Contact Number:7447444874 02536630299	6 weeks		5
5	Ayam interactive	SkillJyoti, Sinnar,Nashik Contact No. 9970322325	6 weeks		7
6	Innovations Hub	InnovationsHub Services Private Limited 49, Vakratund banglow,Ambaji nagar, Amruthdam, Nashik Mr.Sachin Patil	6 weeks		5
7	R3 SYSTEM	R3 SYSTEMS INDIA PRIVATE LIMITED, Thatte Nagar Nashik Contact No. Gauresh Sir 8600180045	6 weeks		8
8	Sumago pvt limited	Sumago Infotech, Third Floor, Sadashiv Motkari Sankul, Govind Nagar, Nashik Mrs.Sonali Gorade 8408084888	6 weeks		10
9	Cyber Sankar and ESDS	Soham 13A, Niwas Park, Pramod Nagar, Nashik, Maharashtra 422013	6 weeks		10
10	V3 Data Solutions	Ashish Tyres, First Floor, Near Kaka Ka Dhaba, Pethe Nagar. Nashik, Maharashtra 422009			10

F.Contribution to Community related projects/activities (5)

By considering social responsibility department implemented various program every year for community to impart technical, social awareness. Students are motivated to do the projects for the benefits of the community.

- **Industry/Community Beneficial Project:**

Table No. 2.24 Industry/Community Beneficial Project(2024-25)

Sr.No	Academic year	No.of industry/ Community Beneficial Project
1	2024-2025	Aerosense
2		Crime Management System
3		Website for self diagnosis and drug recommendation
4		Smart Tourist
5		Farmer Equipment Rental Web Application
6		Car Buying Guide
7		Quick Offline Pay
8		Career Path Finder
9		Mental Health Consulting Website
10		Health Care Adviser Application

Table No. 2.25 Industry/Community Beneficial Project(2023-24)

Sr.No	Academic year	No.of industry/ Community Beneficial Project
1	2023-2024	CustomIt
2		Recyclable Waste Portal
3		AI Based Exam Tester
4		Price Monitoring App

Table No. 2.26 Industry/Community Beneficial Project(2022-23)

Sr.No	Academic year	No.of industry/ Community Beneficial Project
1	2022-2023	GreenTech Nursery portal
2		Blackspot Identification App
3		Online furniture shop Management system

- **Industry/Community Beneficial Activities**

Table No. 2.27 Industry/Community Beneficial Activities

Sr.No	Name Of The Event	Date
1	Social and Life Skills	01/02/2025
2	Career guidance Program	06/08/2024
3	Orphan visit	13/01/2025

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

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

PROCESS:

1. Prior the start of the semester, the faculty is allotted with Course for the semester teaching.
2. Each faculty has to go through the curriculum and COs of the course allotted.
3. The gap identification is also taken into consideration.
4. Then the faculty identifies/notifies the need, the requirement where to use the ICT tools in the topic for the effective teaching-learning process.
5. Firstly, the faculty has to search for the required available E-resources on internet e.g. YouTube, MOOCs, NDL, and Udemy, NPTEL, SWAYAM portal or any other mode.
6. Preparation of ICT notes for delivery through several modalities such as YouTube channel, e-resources, Power Point Presentation, Audio & Video i.e. Multimedia, SWAYAM portal etc.
7. The planning and practicing of online e-resources in regular teaching, learning time slot must be done by the faculty to check whether the ICT tools will be effective or not within the stipulated time slot of one-hour teaching.
8. Make available online teaching material to students.
9. The faculty practices collaborative learning for the effectiveness of ICT.

Availability of ICT Facilities: For CAYM3 years)

Table No. 2.28 Availability of ICT Facilities: For CAYm3 years)

Sr.No	ICT tools Facility
1	Virtual Lab Center
2	National Digital Library
3	Smart Classroom well equipped with projector and internet connection
4	Springboard
4	Swayam/NPTEL

Use Of ICT Tools:

Table No. 2.29 Use Of ICT Tools

Sr. No.	ICT	Facilities	Utilization
1	Library	<ul style="list-style-type: none"> • Reference Books • Personality Developments Books • Course Notes • Technical Magazines • News Paper 	<ul style="list-style-type: none"> • Specially for students and teachers
2	E- library (Resources)	<ul style="list-style-type: none"> • Curriculum • Question Paper set • Corse wise question bank • Model Answer • E- Books • MCQ Banks • PPTs 	<ul style="list-style-type: none"> • Available in departmental library • Specially for Teachers and students
3	Departmental Library	<ul style="list-style-type: none"> • Reference Books • Course Notes • Sample Question paper • Previous year board examination papers • Model answers Books • Topper Answer Book Photocopies • Project Book of final year project 	Specially for students and teachers
4	Internet browsing session	<ul style="list-style-type: none"> • Information Search • Self-learning • Books' • Technical paper • Digital Library • e- journal 	<ul style="list-style-type: none"> • Specially for students and teachers
5	Digital Library	Delnet Facility Specially for students and teachers	Specially for students and teachers
6	Reprographics Facility	Printing Facility	Specially for students and teachers
7	Industrial Visits	<ul style="list-style-type: none"> • Twice in a semester • Financial support Facility to students 	Specially for students
8	Technical Events	<ul style="list-style-type: none"> • Organized departmental and institu televel events by students 	<ul style="list-style-type: none"> • Specially for students Organized by students under the guidance of teachers • Versatile responsibilities handled by students

Utilization of ICT tools:

Sr.No	Course Name & Code	Class	Date	Use of ICT Timing	Mode of ICT	Topic Delivered
1	MAD(22617)	TYCO	10/02/2025	10:15am to 11:15am	Power Point Presentation	Application Framework
2	DCN(314318)	SYCO	20/01/2025	10:15am to 11:15am	Power Point Presentation	Topology

Student Centric Learning Initiatives & Effective Implementation (5)

Table No. 2.31 Student Centric Learning Initiatives & Effective Implementation

Sr.No	ICT	Facilities/ Materials	Outcomes
1	Classroom	<ul style="list-style-type: none"> • Smart Board • Projector 	<ul style="list-style-type: none"> • Enhance teaching and learning process • Students understand the concept easily • Enjoy the benefits of knowledge sharing • Improves the analytical skills • Improves attentiveness, thinking skill, Communication, confidence level.
2	Laboratories	<ul style="list-style-type: none"> • Poster • Pictures • Brief of bio-data of renowned personalities • Models • Charts 	<ul style="list-style-type: none"> • Improves measuring Skill • Develops intellectual and motor skill • Develops confidence develops interest in the subject
3	e-learning	<ul style="list-style-type: none"> • Spoken tutorial • NPTEL faculty members syllabus presentation 	<ul style="list-style-type: none"> • Awareness of e-learning software tools • Use of latest technologies
4	Notice boards	<ul style="list-style-type: none"> Notices • Curricular and cocurricular activities achievements • Newsletter • MSBTE 	<ul style="list-style-type: none"> • Awareness of various activities

		<p>academic calendar</p> <ul style="list-style-type: none"> • Timetables of examination • Posters of intercollegiate competitions 	<ul style="list-style-type: none"> • Appreciations of succeeded • Awareness of latest technologies
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2.2.7 New Initiatives for embedding Professional Skills (15)

A. Employability skill enhancement Initiatives and effective implementation (8)

Core employability skills are developed by implementing the following programmes for the students.

1. Skill Development Program (SDP): This program is conducted for all students. It improves student's Technical skills, Employability skills, Leadership qualities and Communication skills.
2. Personality Development Programme: This program is conducted for students' long-term guide for improving thoughts, feelings, and behaviours that distinguish individuals from one another. With the help of this program, students can do SWOC analysis.
3. Celebration of Birth Anniversary of eminent personalities and special days: In College, the celebration of Birth Anniversary of eminent personalities like S. Radhakrishnan (Teacher's Day), M. Vishweshwaraiyya (Engineer's Day), Gandhi Jayanti, guidance of faculty members. It helps to improve moral ethics, values and develops Management skills within the students.
4. Industrial Visit, Industry Expert Lectures: These activities are conducted for the students to get them aware of opportunities available in the market and acquire skills to fulfil the needs of industry and society. Industrial visits are arranged for practical exposure to technology.
5. Entrepreneurship Development Programme: This program is conducted for third-year students and helps to gain knowledge about forming firms and companies also it improves entrepreneur skills.

B. Personality development related Initiatives & effective implementation (7)

Personality development helps a person to get positive thoughts, gain confidence, improve behaviour, and learn better communication. Personality development is the development of an organized pattern of behaviours and skills and learning manners. It is achieved in several ways-

- Arranging Guest lectures on Personality Development.
- Guest lectures on Stress Management/Yoga
- Arranging Guest lectures on Motivational speech
- Community Services
- Sandipotsav
- Students club activity

- Technical Quiz

2.2.8 Co-curricular & Extra Curricular Activities (10)

Co-curricular and extra-curricular activities fulfil measured POs and POS at different correlation levels.

- These activities are planned for continuous improvement in attainment.
 - These are included in academic planning and implemented and assessed to verify defined outcomes.

A. Co-Curricular Activities

The following table shows details of co-curricular activities during the academic year.

Summary of Co-Curricular Activities:

Table No. 2.32 Summary of Co-Curricular Activities

SrNo	Academic Year	Name Of Activities
1	2024-25	Poster Designing
		Paper Presentation
		Quiz Competition
		Digital Poster Competition
		One week Skill Development Program on Advanced Excel
		Six days Skill DevelopmentProgram on Basic of C Programming
2	2023-24	Rangoli Competition
		Coding Competition
		Teachers Day Celebration
		SDP on Basic of C Programming
		SDP -Program on -Core java
		Webpage Development Competition
3	2022-23	Rangoli Competition
		Coding Competition
		Teachers Day Celebration
		SDP on Basic of C Programming
		SDP -Program on -Core java
		Webpage Development Competition

Table No. 2.33 Co-Curricular Activities (2024-25)

1	Project Competition	<ul style="list-style-type: none"> 1. Providing a platform for student engagement 2. Encouraging creativity and critical thinking 3. Awarding prizes: Poster competitions may also include prizes for the best posters, which can be a way to recognize and reward participants for their hard work and creativity. 	100	State Level	22/03/2025	PO1,PO2,P O3,PO4,PO 5,PO6,PO7, PSO1,PSO2 ,PSO3
2	Paper Presentation	<ul style="list-style-type: none"> 1. Implement the planned activity individually or as a team and new ideas by challenging participants to think outside the box. 2. Enhance participants' technical, problem-solving, and teamwork skills. 3. Apply theoretical knowledge to real-world challenges, bridging the gap between academia and industry. 4. Improve team work, leadership, time management, and communication skills. 	100	State Level	22/03/2025	PO1,PO2,P O3,PO4,PO 5,PO6,PO7, PSO1,PSO2 ,PSO3
3	Quiz Competition	<ul style="list-style-type: none"> 1. To help students understand the subject better by learning through the project 2. Boost students' ability to think critically and solve problems. 3. Give students a chance to share what they know and what they can do. 4. Create a fun environment where students enjoy the learning process. 	100	State Level	22/03/2025	PO1,PO2,P O3,PO4,PO 5,PO6,PO7, PSO1,PSO2 ,PSO3
4	Digital Poster Competition	<ul style="list-style-type: none"> 1. Provide a platform for active student participation. 2. Foster innovative thinking and problem-solving skills. 3. Recognize and reward top posters with prizes for creativity and effort. 	100	State Level	22/03/2025	PO1,PO2,P O3,PO4,PO 5,PO6,PO7, PSO1,PSO2 ,PSO3

5	Teachers Day Celebration	1. To mark the Birth Anniversary of Dr. Sarvepalli Radhakrishnan. 2. To raise awareness about the role of teachers in playing quality education at all levels. 3. To improve skills of students.	100	Departement level	05/09/2024	PO1,PO2,P O3,PO4,PO 5,PO6,PO7, PSO1,PSO2 ,PSO3
6	Reading Competition	1. Promote Reading Habits – Encourages students to read more regularly and with interest. 2. Boost Confidence – Builds self-esteem through public reading or answering questions.	50	Institute Level	11/01/2025	PO1,PO2,P O3,PO4,PO 6,PO7,PSO 1,PSO2,PS O3

B. Extra-Curricular Activities

To maintain physical fitness as well as to get relief from mental stress various extracurricular activities are organized in Institute.

- Cultural
- Sports
- Social

The following table shows details of Cultural activities during the academic year.

Summary of Extra-Curricular Activities

Table No.34 Summary of Extra-Curricular Activities

SrNo	Academic Year	Name Of Activities
1	2024-25	Navratri Celebration
		Free fire
		Ballon Fun
		IEDSSA Sports Events
		1.Atheletics
		IEDSSA Sports Events PO6, PO7
		2.Kho-kho
2	2023-24	IEDSSA Sports Events
		3. Cricket
		Women's Day
		World Engineer Day (Out of the Box,) (Tic Tac Toe) (Code Dry Run) (Digital poster Making)
		Meri Mati Mera Desh Compaign
		IEDSSA Sports Events
		1.Cricket
		IEDSSA Sports Events PO6, PO7

		2.Kabadi
		IEDSSA Sports Events
		3. Football
3	2022-23	World Engineer Day
		Teachers Day
		Har Ghar Tiranga Website Development Competition

Table No. 2.34 Extra-Curricular Activities (2024-25)

Sr No	Description of activity	Purpose	No of Participants	Level	Date	Relevance to POs and PSOs
Academic Year 2024-25						
1	Navratri Celebration	1. To understand the tradition and culture of Indian festivals. 2. To celebrate the victory of GOOD over EVIL	100	Departement level	05/10/24	P02,PO6,PO7
2	Free fire	1. Entertainment, competitive gaming, and social interaction through fast-paced survival matches. 2. Skill Development: Improves strategic thinking, reflexes, and decision-making.	100	Departement level	18/02/2025	PO1,PO2,PO3,P04,PO6,PO7
3	Ballon Fun	1. Entertainment – Brings joy and excitement, especially for children. 2. Skill Development – Enhances hand-eye coordination, balance, and teamwork. 3. Creativity – Encourages imaginative games and balloon art.	30	Departement level	18/02/2025	PO1,PO2,PO3,P04,PO6,PO7
4	IEDSSA Sports Events 1.Atheletics	1. Sport events promote fitness, entertainment, and community. 2. They bring people together, foster cultural exchange, and boost local Economies.	2	Zonal Level	11/02/2025	PO1, PO2, PO3, PO4,PO6, PO7
	IEDSSA Sports Events PO6, PO7 2.Kho-kho		2	Zonal Level	11/02/2025	PO1, PO2, PO3, PO4,PO6, PO7

	IEDSSA Sports Events 3. Cricket		4	Zonal Level	13/01/2025	PO1, PO2, PO3, PO4, PO6, PO7
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Criterion 3**COURSE OUTCOMES AND
PROGRAM OUTCOMES**

CRITERION 03 | COURSEOUTCOMESANDPROGRAMOUTCOMES | 100**3.1 Establish the Correlation between the courses and the Po&PSOs****20 M****• Program Outcomes of Computer Engineering Department are**

Updated Program Outcomes (POs) applicable from Academic Year: 2019-20 are as follows

- 1. Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- 2. Problem analysis:** Identify and analyze well-defined engineering problems using codified standard methods.
- 3. Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems/components/processes to meet specified needs.
- 4. Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
- 5. Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
- 6. Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
- 7. Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes.

• Program Specific Outcomes of Computer Engineering Department are

PSO1: Computer Software and Hardware Usage: Use state-of-the-art technologies for operation and application of computer software and hardware.

PSO2: Computer Engineering Maintenance: Maintain Computer Engineering related software and hardware systems.

PSO3: Apply standard ethical and moral values, management principles and soft skills to develop projects for the Industry and societal needs.

CRITERION 03,

3.1.1. Course Outcomes (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses) (05)

Course Name: English
Sem. – I

Year of Study: 2021-22
Course code: - 22101 (101)

CO No	Course Outcome
CO101.1	Formulate grammatically correct sentences.
CO101.2	Summarize comprehension passages.
CO101.3	Compose dialogues and paragraphs for different situations.
CO101.4	Use relevant words as per context.
CO101.5	Delivered speeches to express ideas, thoughts and emotions.

Course Name: Programming in C
Sem. – II

Year of Study: 2021-22
Course code: - 22226 (110)

CO No	Course Outcome
CO110.1	Develop flowchart and algorithm to solve problems logically.
CO110.2	Write simple C programs using arithmetic expressions
CO110.3	Develop C programs using control structures
CO110.4	Develop C programs using arrays and structures
CO110.5	Develop/Use functions in C programs for modular programming approach
CO110.6	Develop C programs using pointers

Course Name: Data Structure using C
Sem. – III

Year of Study: 2022-23
Course code: - 22317 (202)

CO No	Course Outcome
CO202.1	Performed basic operation on Array
CO202.2	Apply different searching & sorting techniques
CO202.3	Implement basic operation on stack & queue using Array representation
CO202.4	Implement basic operation on Linked List
CO202.5	Implement program to create & Transverse tree to solve problems.

Course Name: Java Programming
Sem. – IV

Year of Study: 2022-23
Course code: - 22412 (206)

CO No	Course Outcome
CO206.1	Develop program using object oriented methodology in java
CO206.2	Apply concept of Inheritance for code reusability
CO206.3	Develop program using multithreading
CO206.4	Implement exceptional handling
CO206.5	Develop program using graphics & applets
CO206.6	Develop program for handling I/O and file stream

Course Name: Operating System
Sem. – V

Year of Study: 2023-24
Course code: - 22516 (302)

CO No	Course Outcome
CO302.1	Install operating system & configure it.
CO302.2	Use operating system tool to perform various functions.
CO302.3	Execute process commands for performing process management operations.
CO302.4	Apply scheduling algorithms to calculate turnaround time and average waiting time.
CO302.5	Calculate efficiency of different memory management techniques.
CO302.6	Apply file management techniques.

Course Name: Programming with Python
Sem. – VI

Year of Study: 2023-24
Course code: - 22616 (309)

CO No	Course Outcome
CO309.1	Display message on screen using Python Script on IDE.
CO309.2	Develop Python Program to demonstrate use of operators.
CO309.3	Perform operations on Data Structures in Python.
CO309.4	Develop functions for given problem.
CO309.5	Design classes for given problem.
CO309.6	Handle exceptions.

05 M**3.1.2 CO-PO matrices of courses selected in 3.1.1 (5M)****Correlation Levels: High (1), Moderate (2), Low (3), Null (-)**

For the preparation of CO-PO matrices of each courses we are referring the Performance indicator and competencies provided by AICTE in C & PI guidelines.

We are identifying competencies and performance indicator for each PO and form mapping by relating them with the course outcomes of each course from first year to third year “I-Scheme” of Diploma in Computer Engineering provided by the MSBTE.

3.1.3. CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 1stto 6thsemester) (05)**Course code: - CO1I****Subject Name: - English (101)****Subject Code: - 22101**

CO No	PO's							PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO101.1	3	2					3	2	1	2
CO101.2	3	2					3	2	1	2
CO101.3	3	2						2	1	2
CO101.4	3	2					3	2	1	2
CO101.5	3	2					3	2	1	2
Average	3	2					3	2	1	2

Course code: - CO2I**Subject Name: - Programming in C (110)****Subject Code: - 22226**

CO No	PO's							PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO110.1	3	3	3	2	1	2	3	2		2
CO110.2	3	3	3	2	1	2	2	2	1	2
CO110.3	3	3	2	2	1	2	2	2	1	2
CO110.4	3	3	2	2	2	2	2	2	1	2
CO110.5	3	3	2	2	2	2	2	2	1	2
CO110.6	3	3	2	2	2	2	2	2	1	2
Average	3	3	2.33	2	1.5	2	2.17	2	1	2

CRITERION 03,

Course code: - CO3I**Subject Name: - Data Structure using C (202)****Subject Code: - 22317**

CO No	PO's							PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO202.1	3	2	3	2		1	2	2	1	2
CO202.2	3	3	3	2	1	2	2	2		2
CO202.3	3	3	3	2		2	3	2		2
CO202.4	3	3	3	2		2	3	2		2
CO202.5	3	3	3	2		2	3	2		2
Average	3	2.8	3	2	1	1.8	2.6	2	1	2

Course code: - CO4I**Subject Name: - Java Programming (206)****Subject Code: - 22412**

CO No	PO's							PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO206.1	3	3	3	2		2	3	3	1	2
CO206.2	3	3	3	3	1	2	3	3	1	2
CO206.3	3	3	3	2		2	3	3	1	2
CO206.4	3	3	3	2		2	2	3	1	2
CO206.5	3	3	3	2		2	3	3	1	2
CO206.6	3	3	3	2		2	3	3	1	2
Average	3	3	3	2.17	1	2	2.83	3	1	2

Course code: - CO5I**Subject Name: - Operating System (302)****Subject Code: - 22516**

CO No	PO's							PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO302.1	3	2		3	1		3	3	3	2
CO302.2	3	2	2	3	1		2	3	2	1
CO302.3	3	2					2	2	1	2
CO302.4	3	2					2	2	1	2
CO302.5	3	2		2			2	2	1	2
CO302.6	3	2		2			2	2		1
Average	3	2	2	2.5	1		2.17	2.33	1.6	1.67

CO No	PO's							PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO309.1	3	2	1	2	3	1	3	2	1	2
CO309.2						1	2	2	1	2
CO309.3	2	1			2	2		2	1	2
CO309.4	3	2	1	2	3	3	3	2	1	2
CO309.5					1	2	2	2	1	2
CO309.6					1	2	2	2	1	2
Average	2.67	1.67	1.00	2.00	2.00	1.83	2.40	2.00	1.00	2.00

3.1.3 Program level Course-PO matrix of all courses including first yearcourses

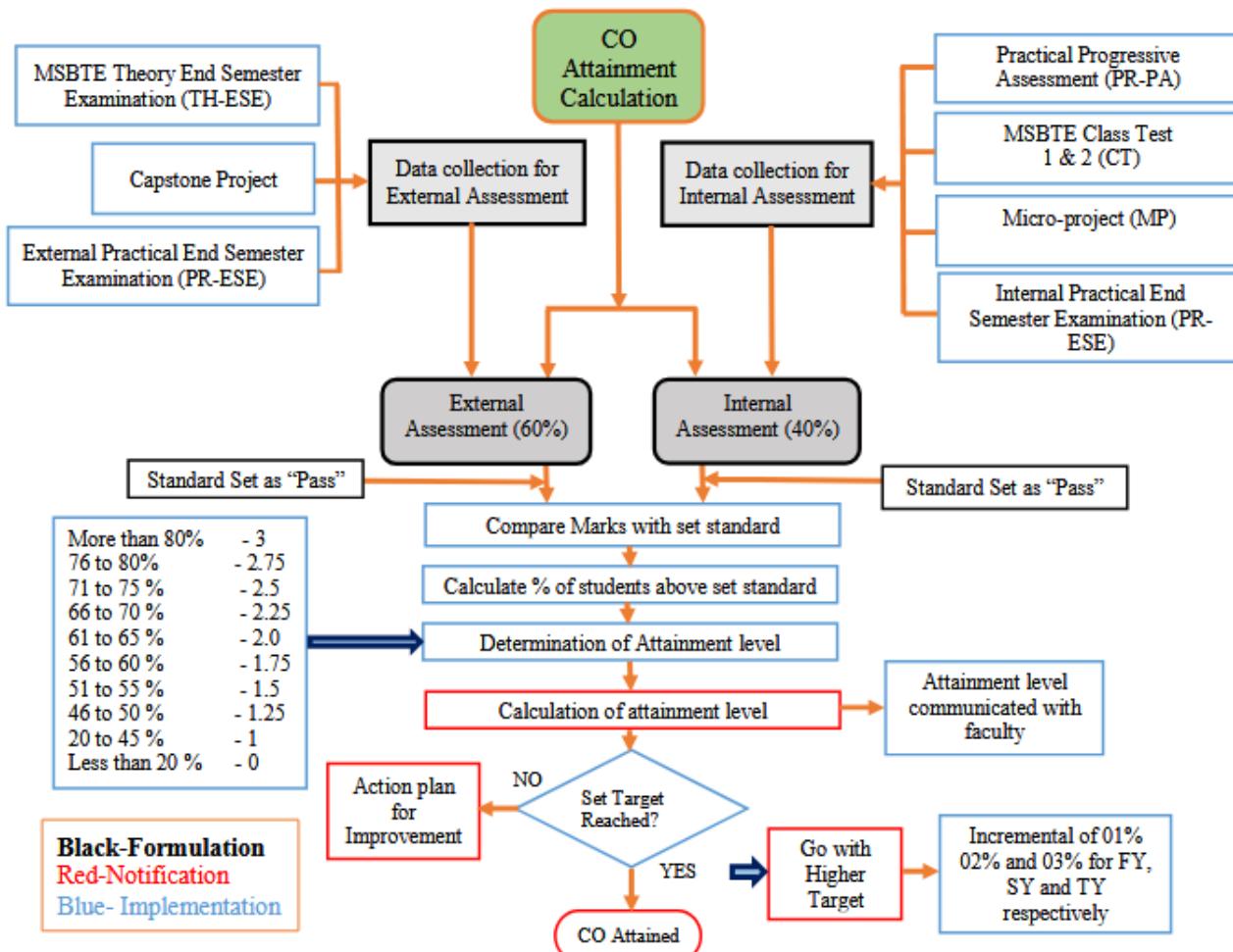
(Correlation Levels: High (1), Moderate (2), Low (3), Null (-))

10 M

Code	Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
C101	ENG-22101	3	2					2.4	2	1	2
C102	BSC-22102	2.8	2	2.5				2			
C103	BMS-22103	3	2	1.5	2	1.7	1	2.3	2.4	2	2
C104	ICT-22001	3	2	2	2.5	1.5	1	3	2	1	2
C105	EGM-22003	2.7	1.7	1	2	2.25	2.2	2.5	2	1	2
C106	WPC-22005	2.4	2	2	2.2	1.6	1	3	2	1	2
C107	EEC-22215	3.0	1.0	1.75	2	2	0	3	1.75	2	1.17
C108	AMI-22224	3	1.83	2.17	3	1.8	2	3		3	2
C109	BEC22225	2.67	1.67	1	2	2.25	2.2	2.5	1.67	1.5	1
C110	PCI-22226	3	3	2.4	2	1.4	2	2.2	2	1	2
C111	BCC-22009	1	2	1	2		3	2	1	1	
C112	CPH-22013	3	2.33	1.75	2.17	2.00	2	2	3	3	2
C113	WPD-22014	3	1.33	2.17	2	1.67	1.5	3	2.17	1.17	2.33
C201	OOP-22316	3	2	2.2	2	1	1.6	2	2	1	2.4
C202	DSU-22317	3	2.8	3	2	1	1.8	2.6	2	1	2
C203	CGR-22318	2.67	2.00	2.00	2.20	3.00	2.33	2.00	2.33		2.00
C204	DMS-22319	3	2.4	3	2	2.5	2	2	2	1	2.2

CRITERION 03,

C205	DTE 22320	3	2.4	2.75	2.25	1	1.75	2.6	2.8	1.2	2.25
C206	JPR-22412	3	3	3	2.2	1	2	2.8	3	1	2
C207	SEN-22413	3	3	1.67	2.2	2.2	2.4	2.4	2	1	2
C208	DCC-22414	3	2.8	3	2.2	2	2	3	3	1.8	2
C209	MIC-22415	3	2.8	3	2.5	1	1.67	2.4	1.8	1	2
C210	GAD-22034	3	2	2.5	2.8	1	1.4	2	3	1	2.6
C301	EST-22447	2	1		2	3		2.2			
C302	OSY-22516	3	2	2	2.67	1		2.2	2.4	1.6	1.8
C303	AJP-22517	3	2.8	2.4	2.8	1	2	3	3	1.25	2
C304	SET-22518	3	2.4	2	2	1.6	2.2	2.8	2	1	2
C305	CSS-22519	3	2.8	3	2.8	1	2	2.6	2.6	1	2
C306	ITR-22518	2.5	2.25	2	2.33	3	2.25	2.5	2	2	2
C307	CPP-22058	3	2.33	2.22	2.38	2	3	2.71	2.71	2.6	2
C308	MGT-22509	1.4	2	2	2	3	2.4	2.4			2
C309	PWP-22616	2.67	1.67	1	2	2	1.83	2.4	2	1	2
C310	MAD-22617	3	3	3	2.6	2	2.2	2.6	3	1	2
C311	ETI-22618	3	2		2	2.2	2	2	3	1	2
C312	WBP-22619	3	3	3	2.8	1.33	1.4	2.4	2	1	2
C313	EDE-22032	2.8	2.4	1.33	2	2.75	2	2.2	2		2
C314	CPE-22060	2.20	2.40	2.14	2.8	2.43	2.14	2.9	2.13	2	1
Average		2.78	2.22	2.16	2.27	1.83	1.89	2.48	2.27	1.38	1.96

3.2 Attainment of Course Outcomes**40 M****3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based****10 M****Fig. no. 3.2.1 Flow chart of Attainment Calculation Process**

The following data collection tools has been undertaken to assess whether the course outcomes have been achieved.

Tools for data collection

Sr. No.	Tool	Assessment	Frequency	Weightage	Base target for Attainment
1	MSBTE Theory Exam	External	Once in Semester	60%	MSBTE Theory Score Index
2	Practical Exam		Once in Semester		Greater than 75%
3	MSBTE Class Test	Internal	Twice in Semester	40 %	MSBTE Theory Score Index
4	Progressive Assessment		Continuous		
5	Practical Exam		Once in Semester		Greater than 75%
6	Micro-project		Once in Semester		

Table 3.2.2 Tools for data collection

- **Maharashtra State Board of Technical Education (MSBTE) End Semester Theory Examination (TH-ESE)**
 - In the Teaching Examinations scheme of MSBTE, the subjects have component namely End Semester Examination (TH-ESE).
 - The marks obtained in theory exam components are added and the attainment level of course outcome is determined by assessing the number of students who have achieved marks as per set target.
 - The question paper in MSBTE theory examinations are set according to the specification table which gives the weightage of the topic and the level of questions that should be asked in that topic as per Bloom's Taxonomy (Revised).
 - The CO attainments are recalculated by considering the Theory Score Index (TSI) that is provided by MSBTE after declaration of the results.
 - Answer paper is accessible by external faculty member of other institute.
 - End Semester Theory Examination (TH-ESE) marks are considered in external assessment with 60 % weightage for CO attainment.
- **MSBTE Class Tests (CT)**
 - Two progressive class tests are conducted in each semester as per academic calendar provided by the MSBTE.
 - Sample question paper suggesting weightage of curriculum to be included in the question paper is made available in the class test document. Question papers are set accordingly.
 - The course outcomes of the subject are taken into consideration while setting the question paper.

CRITERION 03,

- The answer paper is accessed by internal faculty members of department.
- After assessing the test papers of both the tests, course outcomes are assessed by determining the number of students who have achieved marks as per TSI marks of board in the said subject.
- Accordingly, attainment of course outcome is assessed.
- Class testmarksare considered in internal assessment with 40 % weightage for CO attainment.

➤ **Progressive Assessment (PR-PA)**

- In the teaching Examination scheme of MSBTE, the subjects have a component namely Practical progressive assessment (PR-PA) of 25M/50M.
- The marks obtained in this component are added and the attainment level of course outcome is determined by assessing the number of students who have achieved marks as per set target (greater than 75 %marks).
- Term work marks is calculated by accessing students in two domains namely process related and product related.
- Assessment of practical work is done by the faculty members in continuous manner.

Final term work of 25 marks is calculated based on Progressive Assessment for each experiment

Progressive Assessment Marks

$$= ((\text{Total Marks Obtained in P.A.}) / (25 * \text{Total Number of Experiments})) * 25$$

- If course does not have theory component in curriculum, then 60% weightage will be given for practical progressive assessment (PR-PA) work and 40% weightage will be given for micro-project for CO attainment.
- Assessment is done by course faculty.
- Practical progressive assessment (PR-PA) marks are considered in internal assessment with 40% weightage for CO attainment.

➤ **MSBTE End Semester Practical Exam (PR -ESE)**

- In the Teaching Examination scheme of MSBTE, the courses have a component namely End Semester Practical exam (PR-ESE) of 25M/50M.
- The marks obtained in these components are added and the attainment level of course outcome is determined by assessing the number of students who have achieved marks as per set target.
- After completion of course practical's exercises, as per MSBTE schedule, final end semester practical examination is conducted and the performance of the students is evaluated by the external examiner / internal examiner as per guidelines provided by MSBTE and PR-ESE marks are included for the assessment.
- For end semester practical examination, course outcome is assessed by determining the% number of students who have achieved marks more than 75 % marks for first year, second year and third year admitted batches in the said course.
- Assessment is done by the internal faculty/external faculty appointed by MSBTE.
- If End Semester Practical exam (PR-ESE) have external assessment then marks are to be considered in the external assessment with 60 % weightage similarly, if End Semester Practical exam (PR-ESE) having internal assessment then marksare to be considered in the internal assessment with 40 % weightage for CO attainment.

➤ **Micro Projects (MP)**

CRITERION 03,

- In the Teaching Examination scheme of MSBTE, the courses have component namely Micro Project (MP) for 10 marks. Out of 10 marks, 6 marks are assigned to the student on the basis of characteristic indicators such as relevance to the course, literature survey, completion of target as per proposal, analysis of data and representation, quality of prototype/model and report preparation etc. and 4 marks are assigned to the individual student performance in micro project presentation and viva. For the course only having the practical examination, the PA marks should be of 60 % wattage for practical and 40 % wattage for micro project.
- For course micro project (MP), course outcome is assessed by determining the number of students who have achieved marks More than 75 % for first year, second year and third year admitted batches in the said course.
- Micro project (MP) of each course and average marks of two progressive class tests collectively represents Theory Progressive Assessment (TH-PA).
- The students ought to submit micro project by the end of semester to fulfill the Course Outcomes (COs).
- Micro Project (MP) marks are considered in internal assessment with 40 % weightage for CO attainment.

3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels

30 M

- Initial target level for CO attainment of all courses for the batch 2019-20 to 2021-22 is based on average of last three years of MSBTE Theory Score Index (TSI) of that subjects and set initial target.
- Attainment level target for next batches are increased by 0.02, 0.03 and 0.04 for first year, second year and third year courses respectively.
- Overall Attainment is calculated considering 60% weightage for External Assessment and 40% Weightage for Internal Assessment.
- After calculating overall CO attainment, faculty member analyze the data and based on that write points regarding reasons for not achieving set target attainment level. Faculty members also write action proposed points for next year in order to minimize attainment gap
- Following attainment levels set by department for all courses

Attainment Levels set by Department

Sr.N o.	%ofStudentsScored marks	AttainmentLevel
01	Greater than 80	3
02	76 to 80	2.75
03	71 to 75	2.5
04	66 to 70	2.25
05	61 to 65	2.0
06	56 to 60	1.75
07	51 to 55	1.5
08	46 to 50	1.25
09	20 to 45	1
10	Less than 20	0

Table 3.2.2 Attainment Levels set by Department

➤ Measuring CO attainment through MSBTE theory Exam:

MSBTE conducts end semester theory exams per schedule. Question paper covers question based on all course outcomes. Answer paper is accessed by external faculty members and final marks displayed in the mark sheet. After declaration of result and MSBTE TSI, attainment of course outcomes of each course is calculated and recorded for further calculations.

Sample sheet of MSBTE TH-ESE Exam Result



Sandip Polytechnic, Nashik
Department of Computer Engineering
Analysis for Assessment for Academic Year 2023-24

Scheme	CO-5-I	Course	22516
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Roll no	Enrollment no	Name of Student	Theory Marks out of 70
1	2111670125	AHIRE PRATHMESH UTTAM	54
2	2111670126	JAVRE ABHIMAN VIJAY	56
3	2111670127	GAMANE POOJA SANJAY	64
4	2111670128	ADAKE YUVRAJ NANDU	45
5	2111670129	PATIL SALONI NIVRUTTI	64
6	2111670130	THAKARE ASHWINI PRABHAKAR	55
7	2111670131	GAMANE VIVEK SHARAD	49
8	2111670132	SAYSAMINDAR PRADNYA K.	36
9	2111670133	LOHAR ASHWINI SANJAY	44
10	2111670134	PAWAR SNEHA SHANKAR	45
11	2111670137	BORSE HARSHAL CHANDRAKANT	62
12	2111670139	CHOPADKAR TANISHKA KIRAN	50
13	2111670140	DUSING SWAYAM VIJAY	58
14	2111670142	GAMNE SHRAVNI SHANTARAM	54
15	2111670143	CHASKAR RIDDHI D.	65
16	2111670145	SHIRSATH SHIVAM TANAJI	56
17	2111670146	BACHHAV JAYESH KAILAS	47
18	2111670147	JADHAV DEVASHREE BHARAT	46
19	2111670148	GHODELE PRANJAL C.	37
20	2111670151	DHANORKAR NEHA RAJU	29
21	2111670153	TUNGAR PRATIK VILAS	33
22	2111670154	SAPKAL PRITHVIRAJ LAXMAN	60
23	2111670155	DAGALE HARSHDA KRUSHNA	54

24	2111670156	PATIL RUTUJA JITENDRASING	37
25	2111670163	INGLE ANUP	40
26	2111670164	PAWAR KUNAL JYOTIRAO	37
27	2111670168	MESHRAM SHABDAJ M.	55
28	2111670169	DESHMUKH ANISHA AJAY	023*
29	2111670170	PATIL NEERAJ SATISH	48
30	2111670171	GUNJAL VED SAMADHAN	54
31	2111670172	GADEKAR SHREYAS VILAS	44
32	2111670173	PHADE SHUBHAM SANJAY	52
33	2111670175	DANE SIDDHANT SAINATH	45
34	2111670176	SARODE AADITYA VINOD	025*
35	2111670177	DINGAR DARSHAN SANJAY	28
36	2111670178	CHITTE PRATHEMESH M.	41
37	2111670179	AHER RISHIKESH MAHENDRA	28
38	2111670180	KHAN SIMRAN WALIHASSAN	38
39	2111670181	PHADOL YASH SUNIL	60
40	2111670182	WENDOLE PRATHMESH VIJAY	50
41	2111670183	BHATTAD DEVANG JITENDRA	53
42	2111670185	JOSHI SAHIL JAYESH	37
43	2111670186	JHA BHUMI ANIL	58
44	2111670188	NIKAM SNEHAL NITIN	35
45	2111670189	KATHALE NIKHIL ARUN	52
46	2111670190	PATIL MANAS LAXMAN	59
47	2111670191	RAHANE DIVYA DATTATRYA	59
48	2111670192	PANDIT SMIT MUKUND	62
49	2111670193	LANDE HARIOM DNYANESHWAR	45
50	2211670501	CHAVAN KIRTI BHALERO	42
51	2211670502	PATIL BHUPENDRASINGH S.	31
52	2211670503	SARODE TANMAY RAMESH	46
53	2211670505	PATIL NILESH ONKAR	018*
54	2211670506	BIRARI NIRAJ DATTATAREY	55
55	2211670507	ALGAT SWATI SUNIL	019*
56	2211670508	PATIL AKSHAY SATISH	021*
	MSBTE TSI	69.24	48.47
	Number of Students getting more than TSI		26
	Total Students Appeared		56
	% of Student scored more than set target		46.43
	CO Attainment Level		1.25

➤ **Measuring CO attainment through MSBTE Practical Exam:**

For some courses practical exam is conducted as per the MSBTE curriculum. Practical exam may be internal which conducted and accessed by internal faculty member. Practical exam may be external which conducted and accessed by internal as well as Board appointed external faculty member. After declaration of result attainment of course outcome is calculated and recorded for further calculations.

Following figure shows course outcome attainment of course for MSBTE Practical Exam

Sample sheet of MSBTE PR-ESE Exam Result



Sandip Polytechnic, Nashik
Department of Computer Engineering
Analysis for Assessment for Academic Year 2023-24

Scheme	CO-5-I	Course	OSY
Roll no	Enrollment no	Name of Student	ESE-PR Marks out of 25
1	2111670125	AHIRE PRATHMESH UTTAM	23
2	2111670126	JAVRE ABHIMAN VIJAY	22
3	2111670127	GAMANE POOJA SANJAY	23
4	2111670128	ADAKE YUVRAJ NANDU	22
5	2111670129	PATIL SALONI NIRUTTI	23
6	2111670130	THAKARE ASHWINI PRABHAKAR	22
7	2111670131	GAMANE VIVEK SHARAD	23
8	2111670132	SAYSAMINDAR PRADNYA K	22
9	2111670133	LOHAR ASHWINI SANJAY	22
10	2111670134	PAWAR SNEHA SHANKAR	22
11	2111670137	BORSE HARSHAL CHANDRAKANT	21
12	2111670139	CHOPADKAR TANISHKA KIRAN	22
13	2111670140	DUSING SWAYAM VIJAY	23
14	2111670142	GAMNE SHRAVNI SHANTARAM	23
15	2111670143	CHASKAR RIDDHI D.	23
16	2111670145	SHIRSATH SHIVAM TANAJI	21
17	2111670146	BACHHAV JAYESH KAILAS	21
18	2111670147	JADHAV DEVASHREE BHARAT	21
19	2111670148	GHODELE PRANJAL C.	21
20	2111670151	DHANORKAR NEHA RAJU	21
21	2111670153	TUNGAR PRATIK VILAS	21
22	2111670154	SAPKAL PRITHVIRAJ LAXMAN	22
23	2111670155	DAGALE HARSHDA KRUSHNA	22

24	2111670156	PATIL RUTUJA JITENDRASING	21
25	2111670163	INGLE ANUP	22
26	2111670164	PAWAR KUNAL JYOTIRAO	22
27	2111670168	MESHRAM SHABDAJ M.	23
28	2111670169	DESHMUKH ANISHA AJAY	21
29	2111670170	PATIL NEERAJ SATISH	22
30	2111670171	GUNJAL VED SAMADHAN	23
31	2111670172	GADEKAR SHREYAS VILAS	22
32	2111670173	PHADE SHUBHAM SANJAY	21
33	2111670175	DANE SIDDHANT SAINATH	23
34	2111670176	SARODE AADITYA VINOD	21
35	2111670177	DINGAR DARSHAN SANJAY	21
36	2111670178	CHITTE PRATHAMESH M.	21
37	2111670179	AHER RISHIKESH MAHENDRA	21
38	2111670180	KHAN SIMRAN WALIHASSAN	22
39	2111670181	PHADOL YASH SUNIL	21
40	2111670182	WENDOLE PRATHMESH VIJAY	22
41	2111670183	BHATTAD DEVANG JITENDRA	23
42	2111670185	JOSHI SAHIL JAYESH	22
43	2111670186	JHA BHUMI ANIL	23
44	2111670188	NIKAM SNEHAL NITIN	22
45	2111670189	KATHALE NIKHIL ARUN	22
46	2111670190	PATIL MANAS LAXMAN	23
47	2111670191	RAHANE DIVYA DATTATRYA	23
48	2111670192	PANDIT SMIT MUKUND	23
49	2111670193	LANDE HARIOM DNYANESHWAR	21
50	2211670501	CHAVAN KIRTI BHALERAO	21
51	2211670502	PATIL BHUPENDRASINGH S.	21
52	2211670503	SARODE TANMAY RAMESH	22
53	2211670505	PATIL NILESH ONKAR	21
54	2211670506	BIRARI NIRAJ DATTATAREY	22
55	2211670507	ALGAT SWATI SUNIL	22
56	2211670508	PATIL AKSHAY SATISH	21
	Number Students getting more than 75% Marks		56
	Number of Students Appeared		56
	% of Student scored more than set target		100
	CO Attainment Level		3.00

➤ **Measuring CO attainment through Term Work Exam:**

Continuous assessment for course practical is done by faculty member and final marks said after term work is calculated. These marks are shown to student. After declaration of result, Attainment of course outcome is calculated and recorded for further calculations.

Sample sheet of MSBTE PR-PA Marks



Sandip Polytechnic, Nashik
Department of Computer Engineering
Analysis for Assessment for Academic Year 2023-24

Scheme	CO-5-I	Course	22516
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Roll no	Enrollment no	Name of Student	PR-PA Marks out of 25
1	2111670125	AHIRE PRATHMESH UTTAM	23
2	2111670126	JAVRE ABHIMAN VIJAY	21
3	2111670127	GAMANE POOJA SANJAY	23
4	2111670128	ADAKE YUVRAJ NANDU	23
5	2111670129	PATIL SALONI NIVRUTTI	24
6	2111670130	THAKARE ASHWINI PRABHAKAR	23
7	2111670131	GAMANE VIVEK SHARAD	23
8	2111670132	SAYSAMINDAR PRADNYA K.	21
9	2111670133	LOHAR ASHWINI SANJAY	20
10	2111670134	PAWAR SNEHA SHANKAR	21
11	2111670137	BORSE HARSHAL CHANDRAKANT	23
12	2111670139	CHOPADKAR TANISHKA KIRAN	22
13	2111670140	DUSING SWAYAM VIJAY	24
14	2111670142	GAMNE SHRAVNI SHANTARAM	22
15	2111670143	CHASKAR RIDDHI D.	21
16	2111670145	SHIRSATH SHIVAM TANAJI	22
17	2111670146	BACHHAV JAYESH KAILAS	21
18	2111670147	JADHAV DEVASHREE BHARAT	21
19	2111670148	GHODELE PRANJAL C.	21
20	2111670151	DHANORKAR NEHA RAJU	20
21	2111670153	TUNGAR PRATIK VILAS	21
22	2111670154	SAPKAL PRITHVIRAJ LAXMAN	22
23	2111670155	DAGALE HARSHDA KRUSHNA	22

24	2111670156	PATIL RUTUJA JITENDRASING	21
25	2111670163	INGLE ANUP	21
26	2111670164	PAWAR KUNAL JYOTIRAO	21
27	2111670168	MESHRAM SHABDAJ M.	22
28	2111670169	DESHMUKH ANISHA AJAY	22
29	2111670170	PATIL NEERAJ SATISH	22
30	2111670171	GUNJAL VED SAMADHAN	23
31	2111670172	GADEKAR SHREYAS VILAS	22
32	2111670173	PHADE SHUBHAM SANJAY	21
33	2111670175	DANE SIDDHANT SAINATH	23
34	2111670176	SARODE AADITYA VINOD	20
35	2111670177	DINGAR DARSHAN SANJAY	20
36	2111670178	CHITTE PRATHEMESH M.	20
37	2111670179	AHER RISHIKESH MAHENDRA	20
38	2111670180	KHAN SIMRAN WALIHASSAN	21
39	2111670181	PHADOL YASH SUNIL	22
40	2111670182	WENDOLE PRATHMESH VIJAY	22
41	2111670183	BHATTAD DEVANG JITENDRA	22
42	2111670185	JOSHI SAHIL JAYESH	20
43	2111670186	JHA BHUMI ANIL	23
44	2111670188	NIKAM SNEHAL NITIN	21
45	2111670189	KATHALE NIKHIL ARUN	21
46	2111670190	PATIL MANAS LAXMAN	24
47	2111670191	RAHANE DIVYA DATTATRYA	24
48	2111670192	PANDIT SMIT MUKUND	23
49	2111670193	LANDE HARIOM DNYANESHWAR	22
50	2211670501	CHAVAN KIRTI BHALERAO	22
51	2211670502	PATIL BHUPENDRASINGH S.	20
52	2211670503	SARODE TANMAY RAMESH	21
53	2211670505	PATIL NILESH ONKAR	20
54	2211670506	BIRARI NIRAJ DATTATAREY	22
55	2211670507	ALGAT SWATI SUNIL	21
56	2211670508	PATIL AKSHAY SATISH	20
	Number Students getting more than 75% Marks		56
	Number of Students Appeared		56
	% of Student scored more than set target		100
	CO Attainment Level		3.00

➤ **Measuring CO attainment through MSBTE Class Test:**

As per directions of MSBTE, Institute conducts two class test exams per schedule. Question paper covers question based on certain course outcome as per syllabus coverage up to class test. Answer paper assessed by internal faculty member. After declaration of result and TSI, attainment of course outcome is calculated and recorded for further calculations.

Sample Sheet of MSBTE Class Test Marks



Sandip Polytechnic, Nashik
Department of Computer Engineering
Analysis for Assessment for Academic Year 2023-24

Scheme	CO-5-I	Course	OSY	Course Code
Roll no	Enrollment no	Name of Student	Test-I Marks out of 20	Test-II Marks out of 20
1	2111670125	AHIRE PRATHMESH UTTAM	19	16
2	2111670126	JAVRE ABHIMAN VIJAY	19	18
3	2111670127	GAMANE POOJA SANJAY	20	20
4	2111670128	ADAKE YUVRAJ NANDU	18	18
5	2111670129	PATIL SALONI NIRUTTI	20	20
6	2111670130	THAKARE ASHWINI PRABHAKAR	18	20
7	2111670131	GAMANE VIVEK SHARAD	18	18
8	2111670132	SAYSAMINDAR PRADNYA K.	16	15
9	2111670133	LOHAR ASHWINI SANJAY	12	19
10	2111670134	PAWAR SNEHA SHANKAR	14	15
11	2111670137	BORSE HARSHAL CHANDRAKANT	19	20
12	2111670139	CHOPADKAR TANISHKA KIRAN	17	20
13	2111670140	DUSING SWAYAM VIJAY	17	20
14	2111670142	GAMNE SHRAVNI SHANTARAM	17	20
15	2111670143	CHASKAR RIDDHI D.	14	20
16	2111670145	SHIRSATH SHIVAM TANAJ	17	18
17	2111670146	BACHHAV JAYESH KAILAS	14	16
18	2111670147	JADHAV DEVASHREE BHARAT	13	19
19	2111670148	GHODELE PRANJAL C.	13	8
20	2111670151	DHANORKAR NEHA RAJU	10	16
21	2111670153	TUNGAR PRATIK VILAS	13	13
22	2111670154	SAPKAL PRITHVIRAJ LAXMAN	15	15
23	2111670155	DAGALE HARSHDA KRUSHNA	16	14

24	2111670156	PATIL RUTUJA JITENDRASING	14	7
25	2111670163	INGLE ANUP	14	9
26	2111670164	PAWAR KUNAL JYOTIRAO	14	14
27	2111670168	MESHRAM SHABDAJ M.	16	19
28	2111670169	DESHMUKH ANISHA AJAY	15	12
29	2111670170	PATIL NEERAJ SATISH	14	17
30	2111670171	GUNJAL VED SAMADHAN	17	20
31	2111670172	GADEKAR SHREYAS VILAS	15	18
32	2111670173	PHADE SHUBHAM SANJAY	14	12
33	2111670175	DANE SIDDHANT SAINATH	15	16
34	2111670176	SARODE AADITYA VINOD	9	15
35	2111670177	DINGAR DARSHAN SANJAY	11	13
36	2111670178	CHITTE PRATHEMESH M.	11	13
37	2111670179	AHER RISHIKESH MAHENDRA	9	11
38	2111670180	KHAN SIMRAN WALIHAZZAN	13	12
39	2111670181	PHADOL YASH SUNIL	17	17
40	2111670182	WENDOLE PRATHMESH VIJAY	15	15
41	2111670183	BHATTAD DEVANG JITENDRA	15	16
42	2111670185	JOSHI SAHIL JAYESH	9	12
43	2111670186	JHA BHUMI ANIL	19	18
44	2111670188	NIKAM SNEHAL NITIN	11	16
45	2111670189	KATHALE NIKHIL ARUN	15	15
46	2111670190	PATIL MANAS LAXMAN	20	20
47	2111670191	RAHANE DIVYA DATTATRYA	20	20
48	2111670192	PANDIT SMIT MUKUND	17	14
49	2111670193	LANDE HARIOM DNYANESHWAR	15	12
50	2211670501	CHAVAN KIRTI BHALERAO	16	15
51	2211670502	PATIL BHUPENDRASINGH S.	12	12
52	2211670503	SARODE TANMAY RAMESH	16	15
53	2211670505	PATIL NILESH ONKAR	10	12
54	2211670506	BIRARI NIRAJ DATTATAREY	15	16
55	2211670507	ALGAT SWATI SUNIL	12	10
56	2211670508	PATIL AKSHAY SATISH	10	5
	MSBTE TSI	69.24	13.85	13.85
	Number of Students getting more than TSI		40	40
	Total Students Appeared		56	56
	% of Student scored more than set target		71.43	71.43
	CO Attainment Level		2.50	2.50

➤ **Measuring CO attainment through Micro Project (MP):**

As per teaching and examination scheme of MSBTE, group of students must complete their micro projects (MP) for individual course. Assessment of course wise micro projects was done as per the schedule. After declaration of result, attainment of course outcome have been calculated and recorded for further calculations.

Following figure shows course outcome attainment of course for Micro Projects (MP)



Sandip Polytechnic, Nashik
Department of Computer Engineering
Analysis for Assessment for Academic Year 2023-24

Scheme	CO-5-I	Course	Course Code
Roll no	Enrollment no	Name of Student	MicroProject Marks out of 10
1	2111670125	AHIRE PRATHMESH UTTAM	9
2	2111670126	JAVRE ABHIMAN VIJAY	7
3	2111670127	GAMANE POOJA SANJAY	8
4	2111670128	ADAKE YUVRAJ NANDU	8
5	2111670129	PATIL SALONI NIVRUTTI	8
6	2111670130	THAKARE ASHWINI PRABHAKAR	8
7	2111670131	GAMANE VIVEK SHARAD	9
8	2111670132	SAYSAMINDAR PRADNYA K.	9
9	2111670133	LOHAR ASHWINI SANJAY	9
10	2111670134	PAWAR SNEHA SHANKAR	10
11	2111670137	BORSE HARSHAL CHANDRAKANT	9
12	2111670139	CHOPADKAR TANISHKA KIRAN	9
13	2111670140	DUSING SWAYAM VIJAY	9
14	2111670142	GAMNE SHRAVNI SHANTARAM	9
15	2111670143	CHASKAR RIDDHI D.	8
16	2111670145	SHIRSATH SHIVAM TANAJI	9
17	2111670146	BACHHAV JAYESH KAILAS	8
18	2111670147	JADHAV DEVASHREE BHARAT	8
19	2111670148	GHODELE PRANJAL C.	9
20	2111670151	DHANORKAR NEHA RAJU	9
21	2111670153	TUNGAR PRATIK VILAS	8
22	2111670154	SAPKAL PRITHVIRAJ LAXMAN	8
23	2111670155	DAGALE HARSHDA KRUSHNA	8

24	2111670156	PATIL RUTUJA JITENDRASING	9
25	2111670163	INGLE ANUP	9
26	2111670164	PAWAR KUNAL JYOTIRAO	9
27	2111670168	MESHRAM SHABDAJ M.	9
28	2111670169	DESHMUKH ANISHA AJAY	9
29	2111670170	PATIL NEERAJ SATISH	10
30	2111670171	GUNJAL VED SAMADHAN	10
31	2111670172	GADEKAR SHREYAS VILAS	9
32	2111670173	PHADE SHUBHAM SANJAY	8
33	2111670175	DANE SIDDHANT SAINATH	10
34	2111670176	SARODE AADITYA VINOD	7
35	2111670177	DINGAR DARSHAN SANJAY	7
36	2111670178	CHITTE PRATHEMESH M.	8
37	2111670179	AHER RISHIKESH MAHENDRA	8
38	2111670180	KHAN SIMRAN WALIHASSAN	9
39	2111670181	PHADOL YASH SUNIL	8
40	2111670182	WENDOLE PRATHMESH VIJAY	8
41	2111670183	BHATTAD DEVANG JITENDRA	10
42	2111670185	JOSHI SAHIL JAYESH	10
43	2111670186	JHA BHUMI ANIL	10
44	2111670188	NIKAM SNEHAL NITIN	9
45	2111670189	KATHALE NIKHIL ARUN	9
46	2111670190	PATIL MANAS LAXMAN	8
47	2111670191	RAHANE DIVYA DATTATRYA	8
48	2111670192	PANDIT SMIT MUKUND	10
49	2111670193	LANDE HARIOM DNYANESHWAR	9
50	2211670501	CHAVAN KIRTI BHALERAO	9
51	2211670502	PATIL BHUPENDRASINGH S.	8
52	2211670503	SARODE TANMAY RAMESH	10
53	2211670505	PATIL NILESH ONKAR	9
54	2211670506	BIRARI NIRAJ DATTATAREY	9
55	2211670507	ALGAT SWATI SUNIL	8
56	2211670508	PATIL AKSHAY SATISH	9
	Number Students getting more than 75% Marks		55
	Number of Students Appeared		56
	% of Student scored more than set target		98.21
	CO Attainment Level		3.00

- **Consolidated CO Attainment: (60% of External Assessment + 40% of Internal Assessment)**

**Sandip Polytechnic,Nashik
Department of Computer Engineering
CO Attainment**

Scheme	CO-5-I	Course	OSY	Course Code		22516	AY	2023-24				
Course Name: Operating System												
		Internal Assessment				External Assessment						
CO	CT1	CT2	MP	PR-PA	ESE-PR	Avg(I)	ESE-TH	ESE-PR	Avg(B)	.4A(I)+.6A(B) CO Attainment		
CO302.1	2.50	-	3.00	3.00	3.00	2.88	1.25	-	1.25	1.90		
CO302.2	2.50	-	3.00	3.00	3.00	2.88	1.25	-	1.25	1.90		
CO302.3	2.50		3.00	3.00	3.00	2.88	1.25	-	1.25	1.90		
CO302.4	-	2.50	3.00	3.00	3.00	2.88	1.25	-	1.25	1.90		
CO302.5	-	2.50	3.00	3.00	3.00	2.88	1.25	-	1.25	1.90		
CO302.6	-	2.50	3.00	3.00	3.00	2.88	1.25	-	1.25	1.90		
Average Attainment of CO 302									1.90	1.53		
										0.00		

CT1: Class Test 1 CT2: Class Test 2 MP: Micro Project PR: Practical PA: Progressive Assessment ESE: End Semester Examination

- **CO Attainment Analysis Sheet**

After calculating overall CO attainment of respective course, faculty member do analysis of it to write reasons for attainment gap. Faculty member also add action proposed report for next academic year in order to minimize attainment gap.

**Sandip Polytechnic, Nashik
Department of Computer Engineering
CO Attainment**

Scheme : CO-5-I	Course : OSY	Course Code : 22516	AY: 2023-24			
CO	CO Attainment	Target	% target achieved	CO Atmnt. Gap	Analysis	Action Proposed Report
CO302	1.90	1.53	124.18	0.00	CO Target is achieved	We will continue with the same performance for the next batch with incremental target.

➤ **CO Attainment:** For the batch A. Y. 2021-22 TO 2023-24

Academic Year	Course	Course Name and code	Target Set	CO Attainment
2021-22	C101	ENG-22101	3.00	2.49
	C102	BSC-22102	2.56	2.55
	C103	BMS-22103	1.69	2.25
	C104	ICT-22001	3.00	3.00
	C105	EGM-22003	3.00	2.50
	C106	WPC-22005	3.00	2.88
	C107	EEC-22215	2.66	2.07
	C108	AMI-22224	2.32	1.80
	C109	BEC22225	2.74	1.53
	C110	PCI-22226	2.81	1.70
	C111	BCC-22009	2.66	2.83
	C112	CPH-22013	3.00	3.00
2022-23	C113	WPD-22014	3.00	2.92
	C201	OOP-22316	2.30	2.79
	C202	DSU-22317	2.66	2.27
	C203	CGR-22318	2.96	1.80
	C204	DMS-22319	2.84	2.62
	C205	DTE 22320	2.60	2.31
	C206	JPR-22412	2.81	2.66
	C207	SEN-22413	2.91	3.00
	C208	DCC-22414	2.86	2.90
	C209	MIC-22415	2.89	2.57
2023-24	C210	GAD-22034	3.00	3.00
	C301	EST-22447	3.00	3.00
	C302	OSY-22516	3.00	1.90
	C303	AJP-22517	3.00	2.78
	C304	SET-22518	3.00	1.92
	C305	CSS-22519	3.00	2.27
	C306	ITR-22518	3.00	3.00
	C307	CPP-22058	3.00	3.00
	C308	MGT-22509	2.10	2.85
	C309	PWP-22616	2.25	3.00
	C310	MAD-22617	2.77	2.85
	C311	ETI-22618	2.66	3.00
	C312	WBP-22619	2.67	2.70
	C313	EDE-22032	3.00	3.00
	C314	CPE-22060	3.00	3.00

3.3 Attainment of Program Outcomes & Program Specific Outcomes

40 M

For the attainment of POs & PSOs the following course delivery methods contribute as given in the table below.

PO&PSO Delivery Methods	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Class room Session	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Laboratory Session	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Assignments	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Projects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
End Semester Practical	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Expert Lectures/Visit / Seminar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E-Learning Resources	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Co-curricular Activities		✓	✓	✓	✓	✓	✓	✓	✓	✓
Extra-Curricular Activities						✓	✓	✓	✓	✓
Industrial Training		✓	✓	✓	✓	✓	✓	✓	✓	✓

3.3.1 Describe Assessment tools and processes used for assessing the attainment of each POs and PSOs as mentioned in Annexure 1

10 M

Assessment Tools:

Type	Assessment Tool
Direct Assessment	MSBTE End Semester Theory Exam
	MSBTE End Semester Practical Exam
	MSBTE Class Test
	Practical Progressive Assessment
	Micro project
	Capstone Project
Indirect Assessment	Exit Student Feedback
	Industry Expert Feedback
	Alumni Feedback
	Curricular/Extra-curricular activities feedback

- Assessment Tools are broadly classified as Direct Assessment Tools and Indirect Assessment Tools.
- **The Direct Assessment** Tools include MSBTE End Semester Examination and MSBTE Class

Tests. The MSBTE End Semester Examinations include three components Theory, Micro Project, End Semester Practical Examination and Practical Progressive Assessment.

- A Practical Progressive Assessment (PR-PA) as per CIAAN (Curriculum Implementation and Assessment) norms of MSBTE includes Practical Conduction. Also, the Micro Project work showing integration of Course Outcomes is assessed at the end of semester. MSBTE end semester examinations are conducted at the end of the semester.
- Two class tests are conducted in each semester, one in the middle of term and other in end term. The questions are set according to the Course Outcomes. Internal practice tests/topic review sessions are conducted, which helps the students to improve their performance in the MSBTE class test 1 and 2. These MSBTE class test marks of all the courses contribute for the “Theory-Progressive Assessment (TH-PA)” component of MSBTE exam.
- Micro project of each course is assigned to students in groups and is assessed as a part of continuous assessment in Theory Progressive Assessment (TH-PA). It will help students in improving soft skills and industry problem solving skills. Micro project marks and average marks of class tests of all the courses contribute for the “Theory-Progressive Assessment” component.
- **Indirect Assessment** tools include feedback from various stakeholders like current passing out students and Industry experts. Co-curricular activities, extra-curricular activities also act as component which can be added for consider as indirect assessment tool. These feedbacks are taken after the completion of scheduled task.
- **AttainmentProcess:**

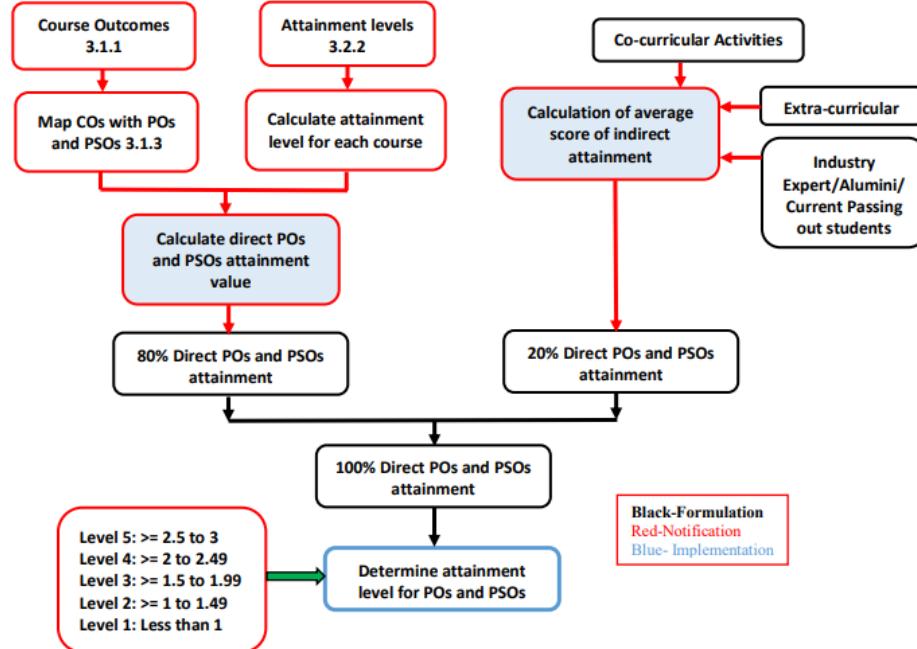


Fig 3.3.1 PO Attainment Calculation Process

- Course outcomes are given in the MSBTE curriculum.
- Course Outcomes are then mapped with the Program Outcomes & Program SpecificOutcomes. CorrelationlevelsareenteredandtheoverallCourseOutcomeis calculated.

- All the Outcomes of various Courses are mapped with the Pos and PSOs & correlation levels are entered in CO-PO/CO-PSO Matrix.
- The Course Outcomes are measured through MSBTE Board Examinations by setting standards and calculating the number of students scoring above the set standard. The Course Outcomes are also measured through Progressive Tests. These are considered as Direct Attainment.
- 80% of the direct attainment levels are recalculated.
- For Indirect Attainment, the average scores of the feedback taken from various stakeholders are taken.
- 20% of the Indirect Attainment score is considered for calculation of Attainment Levels.
- The Direct & Indirect attainment levels of Pos & PSOs are added and Attainment Levels are calculated.

PO Attainment Level

Overall PO attainment obtained from direct and indirect attainment, PO Attainment Level has been decided as below:

Level No.	Level	PO Attainment Range	Score
5	Very High	2.50 to 3	3
4	High	2 to 2.49	2.5
3	Medium	1.5 to 1.99	2
2	Low	1 to 1.49	1.5
1	Very Low	Less than 1	1

(PO Value of corresponded CO-PO Matrix)*(Overall CO attainment value of Course)

3 (Maximum Attainment Level)

30 M

3.3.2 Provide results of evaluation of each PO & PSO (30)

Formula for PO attainment: (PO Value of corresponded CO-PO Matrix) * (Overall CO attainment value of Course)

3 (Maximum Attainment Level)

The overall PO and PSO attainment as described in 3.3.1 are recorded as below

Attainment for 2021-22 to 2023-24

Course		CO Attainment	PO-PSO Attainment									
Course Index	Course Abbr.		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
C101	ENG-22101	2.49	2.49	1.66	0.00	0.00	0.00	0.00	1.99	1.66	0.83	1.66
C102	BSC-22102	2.55	2.41	1.70	2.13	0.00	0.00	0.00	1.70	0.00	0.00	0.00
C103	BMS-22103	2.25	2.25	1.50	1.13	1.50	1.25	0.75	1.75	1.80	1.50	1.50
C104	ICT-22001	3.00	3.00	2.00	2.00	2.50	1.50	1.00	3.00	2.00	1.00	2.00
C105	EGM-22003	2.50	2.22	1.39	0.83	1.67	1.88	1.83	2.08	1.67	0.83	1.67
C106	WPC-22005	2.88	2.30	1.92	1.92	2.11	1.54	0.96	2.88	1.92	0.96	1.92
C107	EEC-22215	2.07	2.07	0.69	1.21	1.38	1.38	0.00	2.07	1.21	1.38	0.81
C108	AMI-22224	1.80	1.80	1.10	1.30	1.80	1.08	1.20	1.80	0.00	1.80	1.20
C109	BEC22225	1.53	1.36	0.85	0.51	1.02	1.15	1.12	1.28	0.85	0.77	0.51
C110	PCI-22226	1.70	1.70	1.70	1.36	1.13	0.79	1.13	1.25	1.13	0.57	1.13
C111	BCC-22009	2.83	0.94	1.89	0.94	1.89	0.00	2.83	1.89	0.94	0.94	0.00
C112	CPH-22013	3.00	3.00	2.33	1.75	2.17	2.00	2.00	2.00	3.00	3.00	2.00
C113	WPD-22014	2.92	2.92	1.30	2.11	1.95	1.62	1.46	2.92	2.11	1.14	2.27
C201	OOP-22316	2.79	2.79	1.86	2.05	1.86	0.93	1.49	1.86	1.86	0.93	2.23
C202	DSU-22317	2.27	2.27	2.12	2.27	1.51	0.76	1.36	1.97	1.51	0.76	1.51
C203	CGR-22318	1.8	1.60	1.20	1.20	1.32	1.80	1.40	1.20	1.40	0.00	1.20
C204	DMS-22319	2.62	2.62	2.10	2.62	1.75	2.18	1.75	1.75	1.75	0.87	1.92
C205	DTE 22320	2.31	2.31	1.85	2.12	1.73	0.77	1.35	2.00	2.16	0.92	1.73

C206	JPR-22412	2.66	2.66	2.66	2.66	1.95	0.89	1.77	2.48	2.66	0.89	1.77
C207	SEN-22413	3	3.00	3.00	1.67	2.20	2.20	2.40	2.40	2.00	1.00	2.00
C208	DCC-22414	2.9	2.90	2.71	2.90	2.13	1.93	1.93	2.90	2.90	1.74	1.93
C209	MIC-22415	2.57	2.57	2.40	2.57	2.14	0.86	1.43	2.06	1.54	0.86	1.71
C210	GAD-22034	3	3.00	2.00	2.50	2.80	1.00	1.40	2.00	3.00	1.00	2.60
C301	EST-22447	3	2.00	1.00	0.00	2.00	3.00	0.00	2.20	0.00	0.00	0.00
C302	OSY-22516	1.9	1.90	1.27	1.27	1.69	0.63	0.00	1.39	1.52	1.01	1.14
C303	AJP-22517	2.78	2.78	2.59	2.22	2.59	0.93	1.85	2.78	2.78	1.16	1.85
C304	SET-22518	1.92	1.92	1.54	1.28	1.28	1.02	1.41	1.79	1.28	0.64	1.28
C305	CSS-22519	2.27	2.27	2.12	2.27	2.12	0.76	1.51	1.97	1.97	0.76	1.51
C306	ITR-22518	3	2.50	2.25	2.00	2.33	3.00	2.25	2.50	2.00	2.00	2.00
C307	CPP-22058	3	3.00	2.33	2.22	2.38	2.00	3.00	2.71	2.71	2.60	2.00
C308	MGT-22509	2.85	1.33	1.90	1.90	1.90	2.85	2.28	2.28	0.00	0.00	1.90
C309	PWP-22616	3	2.67	1.67	1.00	2.00	2.00	1.83	2.40	2.00	1.00	2.00
C310	MAD-22617	2.85	2.85	2.85	2.85	2.47	1.90	2.09	2.47	2.85	0.95	1.90
C311	ETI-22618	3	3.00	2.00	0.00	2.00	2.20	2.00	2.00	3.00	1.00	2.00
C312	WBP-22619	2.7	2.70	2.70	2.70	2.52	1.20	1.26	2.16	1.80	0.90	1.80
C313	EDE-22032	3	2.80	2.40	1.33	2.00	2.75	2.00	2.20	2.00	0.00	2.00
C314	CPE-22060	3	2.20	2.40	2.14	2.80	2.43	2.14	2.88	2.13	2.00	1.00
Average			2.38	1.92	1.70	1.85	1.46	1.46	2.13	1.76	1.07	1.56
Direct Attainment			1.30	1.32	1.26	1.38	1.27	1.31	1.36	1.30	1.16	1.17
80% of Direct Attainment			1.90	1.53	1.36	1.48	1.17	1.17	1.71	1.41	0.82	1.25
Indirect Attainment			2.78	3	2.92	3	3	3	2.89	3	3	3
20 % of Indirect Attainment			0.56	0.60	0.58	0.60	0.60	0.60	0.58	0.60	0.60	0.60
PO Attainment			2.46	2.14	1.94	2.08	1.77	1.77	2.28	2.01	1.42	1.85

Attainment Level	4	4	3	4	3	3	4	4	2	3
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Criterion 4

Students Performance

Intake Information:

Item	Academic Year									
	CAY (2024-25)	CAY m1 (2023-24)	CAY m2 (2022-23)	CAY m3 (2021-22)	CAY m4 (2020-21)	CAY m5 (2019-20)				
Sanctioned intake strength of the program (N)	CAP	120	CAP	60	CAP	60	CAP	60	CAP	60
	EWS	12	EWS	6	EWS	6	EWS	6	EWS	-
	TFWS	6	TFWS	3	TFWS	3	TFWS	3	TFWS	3
		138		69		69		69		63
Total number of students, admitted through state level counseling (N1)	CAP	98	CAP	43	CAP	45	CAP	50	CAP	54
	A CAP	12	A CAP	5	A CAP	3	A CAP	7	A CAP	3
	EWS	3	EWS	4	EWS	5	EWS	6	EWS	-
	TFWS	6	TFWS	3	TFWS	3	TFWS	3	TFWS	3
		119		55		56		66		60
										51
Number of students, admitted through Institute level quota (N2)		10		12		12		03		02
										07
Number of students, admitted through lateral entry (N3) (Direct Second Year)	CAP		CAP	07	CAP	13	CAP	09	CAP	06
	EWS		EWS	0	EWS	01	EWS	00	EWS	0
	Admission in 2025 - 26		07	Admission taken 2024-25	14	Admission taken 2023-24	09	Admission taken 2022-23	06	Admission taken 2021-22
										09
Total number of students admitted in the Program (N1 + N2 + N3)	129 + DSY (25-26)		67 + 07 (DSY)		68 + 14 (DSY)		69 + 09 (DSY)		62 + 06 (DSY)	
										58 + 09 (DSY)
Total			74		82		78		68	67

1.1 Number of students passed with backlogs in stipulated year of study

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully passed with backlogs in any year of study		
		I Year	II Year	III Year
CAY (2024-25)	129			
CAY m1 (2023-24)	74[67 + 7 (DSY)]	65		
CAY m2 (2022-23)	82[68 + 14 (DSY)]	54	(53+13DSY)=66	
CAY m3 (2021-22) LYG	78[69 + 9 (DSY)]	62	(55+8DSY)=63	(53+8 DSY) =61
CAY m4 (2020-21) LYG m1	68[62 + 6 (DSY)]	62	(46+2 DSY)=48	(42+2 DSY)=44
CAY m5 (2019-20) LYG m2	67[58 + 9 (DSY)]	57	(57+8 DSY)=65	(37+3 DSY)=40

1.2 Number of students passed without backlogs in stipulated year of study

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully passed without backlogs in any year of study		
		I Year	II Year	III Year
CAY (2024-25)	129			
CAY m1 (2023-24)	74[67 + 7 (DSY)]	47		
CAY m2 (2022-23)	82[68 + 14 (DSY)]	33	(32+10 DSY)=42	
CAY m3 (2021-22) LYG	78[69 + 9 (DSY)]	28	(28+2 DSY)=30	(27+2 DSY)=29
CAY m4 (2020-21) LYG m1	68[62 + 6 (DSY)]	52	(30+2 DSY)=32	(28+2 DSY)=30
CAY m5 (2019-20) LYG m2	67[58 + 9 (DSY)]	47	(45+6 DSY)=51	(33+3 DSY)=36

LYG: Last Year Graduate

LYGm1: Last Year Graduate minus 1

LYGm2: Last Year Graduate minus

4.1 Enrolment Ratio (20)

$$\text{Enrolment Ratio} = \frac{(N_1+N_2)}{N}$$

SA Score -20

Item (Students enrolled at the First Year Level on average basis during the previous three academic years including the current academic year)	No of students		
	CAY (2024-25)	CAY (2023-24)	CAY m1 (2022-23)
N	120	60	60
N1	119	55	56
N2	10	12	12
Total (N1+N2)	129	67	68
Enrollment Ratio ((N1+N2)/N)*100	107.50	111.67	113.33
Average Enrollment	110.83		

Table No. 4.1.1 : Average Enrolment Ratio

Item (Students enrolled at the First Year Level on average basis during the previous three academic years including the current academic year)	Marks
>=90% Students	20
>=80% Students	18
>=70% Students	16
>=60% Students	12
>=50% Students	8
<50% Students	0

Table No. 4.1.2 : Enrolment Ratio

4.2 Success Rate in the stipulated period of the program (60)

SA Score – 40

4.2.1. Success rate without backlogs in any year of study (40)

$$SI = \frac{\text{Number of students who have passed from the program without backlog}}{\text{No. of students admitted in the first year of that batch} + \text{actual admitted in 2nd year via lateral entry}}$$

Average SI = Mean of success index (SI) for past three batches

Success rate without backlogs in any year of study = $40 \times \text{Average SI}$

Following Table No. 4.2.1 shows success rate without backlogs in any year of study.

Item	Last Year Graduate (LYG) 2021-22	Last Year Graduate (LYG m1) 2020-21	Last Year Graduate (LYG m2) 2019-20
Total number of students (admitted through state level counseling + admitted through Institute on level quota + admitted through lateral entry) (N1+N2+N3)	78(69+09(DSY))	68(62+6(DSY))	67(58+09 (DSY))
Number of students who have passed without backlogs in the stipulated period	29(27+2(DSY))	30(28+2(DSY))	36(33+3(DSY))
Success index (SI)	0.37	0.44	0.54
Average SI		0.45	
Success Rate		$40 \times 0.45 = 18$	

Table No. 4.2.1 : Success rate without backlogs in any year of study

$$\begin{aligned} \text{Success rate without backlogs in any year of study} &= 40 \times \text{Average SI} \\ &= 40 \times 0.45 \end{aligned}$$

$$\text{Success Rate} = 18$$

4.2.2. Success rate with backlog in stipulated period of study (20)

SA Score – 20

Number of students who have passed from the program in the stipulated period of course duration

$$SI = \frac{\text{Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry}}{\text{Number of students admitted in the first year of that batch}}$$

Average SI= Mean of success index (SI) for past three batches

Success rate = 20 × Average SI

Following Table No. 4.2.2 shows success rate with backlogs in any year of study.

Item	Last Year Graduate (LYG) 2021-22	Last Year Graduate (LYG m1) 2020-21	Last Year Graduate (LYG m2) 2019-20
Total number of students (admitted through state level counseling + admitted through Institute on level quota + admitted through lateral entry) (N1+N2+N3)	78(69+09(DSY))	68(62+6(DSY))	67(58+09(DSY))
Number of students who have passed with backlogs in the stipulated period	61(53+8)	44(42+2)	40(37+3)
Success index (SI)	0.78	0.65	0.60
Average SI	0.6766 ≈ 0.68		
Success Rate	20 * 0.6766= 13.53		

Table No. 4.2.2 : Success rate with backlogs in stipulated period of study

Success rate	=	$20 \times \text{Average SI}$
	=	20×0.6766
Success rate	=	13.53

4.3. Academic Performance in First Year (25)

Academic Performance Level = $2.5 * \text{Average API}$ (*Academic Performance Index*)

SA Score – 25

$$API = \frac{\text{Mean of the percentage of marks of all successful students in First year}}{10} * \frac{\text{Successful students}}{\text{no. of students appeared in the examination}}$$

Successful students are those who are permitted to proceed to the second year

Following table 4.3.1 shows academic performance in first year.

Academic Performance	CAY m1 (2023-24)	CAY m2 (2022-23)	CAY m3 (2021-22)
Mean of CGPA or Mean Percentage of all successful students (X)	$((4965.412/65)/10) = 7.64$	$((3944.455/54)/10) = 7.304$	$((4482.545/62)/10) = 7.22$
Total no. of successful students (Y)	65	54	62
Total no. of students appeared in the examination (Z)	67	68	69
API = $x * (Y/Z)$	AP1	AP2	AP3
	$7.64 * (65/67) = 7.411$	$7.304 * (54/68) = 5.800$	$7.22 * (62/69) = 6.49$
Average API = $(AP1 + AP2 + AP3)/3$	6.57		

Table No. 4.3.1 : Academic Performance in first year

$$\begin{aligned}\text{Academic Performance Level} &= 2.5 * \text{Average API} \\ &= 2.5 * 6.57\end{aligned}$$

$$\text{Academic Performance Level} = 16.42$$

4.4. Academic Performance in Second Year (20)

Academic Performance Level = $2.0 * \text{Average API}$ (Academic Performance Index)

SA Score – 20

$$API = \frac{\text{Mean of the percentage of marks of all successful students in Second year}}{10} \times \frac{\text{Successful students}}{\text{no. of students appeared in the examination}}$$

Successful students are those who are permitted to proceed to the Final year

Following table 4.4.1 shows academic performance in second year.

Academic Performance	CAY m1 (2022-23)	CAY m2 (2021-22)	CAY m3 (2020-21)
Mean of CGPA or Mean Percentage of all successful students (X)	$((4891.6/66)/10) = 7.411$	$((4404.133/63)/10) = 6.990$	$((3644.7333/48)/10) = 7.59$
Total no. of successful students (Y)	66(53+13)	63(55+8)	48(46+2)
Total no. of students appeared in the examination (Z)	68(54+14)	71(62+9)	68(62+6)
API = $x * (Y/Z)$	AP1 $7.411 * (66/68) = 7.19$	AP2 $6.99 * (63/71) = 6.20$	AP3 $7.59 * (48/68) = 5.36$
Average API = $(AP1 + AP2 + AP3)/3$	6.25		
Academic Performance Level	12.50		

Table No. 4.4.1 : Academic performance in second year

$$\begin{aligned} \text{Academic Performance Level} &= 2.0 * \text{Average API} \\ &= 2.0 \times 6.25 \end{aligned}$$

$$\text{Academic Performance Level} = 12.50$$

4.5. Academic Performance in Final Year (15)

SA Score – 15

Academic Performance Level=1.5*Average API (Academic Performance (Index))

API = Mean of Final Year Grade Point Average of all successful students on a 10 point scale

OR

$$API = \frac{\text{Mean of the percentage of marks of all successful students in Final year}}{10} * \frac{\text{Successful students}}{\text{no. of students appeared in the examination}}$$

Successful students are those who passed in all the final year courses

Following Table No. 4.5.1 shows academic performance in final year.

Academic Performance	Last Year Graduate (LYG) 2021-22	Last Year Graduate (LYG m1) 2020-21	Last Year Graduate (LYG m2) 2019-20
Mean of CGPA or Mean Percentage of all successful students (X)	$((4966.1961/61)/10)=8.14$	$((3384.0817/44)/10)=7.69$	$((3132.86601/40)/10)=7.83$
Total no. of successful students (Y)	61(53+8)	44(42+2)	40(37+3)
Total no. of students appeared in the examination (Z)	63(55+8)	48(46+2)	65(57+8)
API = $x * (Y/Z)$	API1 $8.14 * (61/63) = 7.88$	API2 $7.69 * (44/48) = 7.05$	API3 $7.83 * (40/65) = 4.82$
Average API = $(AP1 + AP2 + AP3)/3$	6.58		
Academic Performance Level	9.88		

Table No. 4.5.1 : Academic Performance in final year

$$\begin{aligned}\text{Academic Performance Level} &= 1.5 * \text{Average API} \\ &= 1.5 \times 6.58\end{aligned}$$

$$\text{Academic Performance Level} = 9.88$$

4.6. Placement and Higher Studies (40)

SA Score – 40

Assessment Points = 40 X Average placement where,

X = No. of students placed in companies/Government sector through on/off campus recruitment

Y = Number of students admitted to higher studies, **N** = Total number of final year students
Following table 4.6.1 shows details of Placement and Higher studies.

Item	Last Year Graduate (2021-22)	Last Year Graduate (2020-21)	Last Year Graduate (2019-20)
Total No. of Final Year Students (N)	63	48	65
No. of students placed in companies or Government Sector (X)	1	1	1
No. of students admitted to higher studies (Y)	52	42	37
No. of students turned entrepreneur in the respective field of engineering/technology (Z)	1	0	0
Placement Index (P) : $(1.25X + Y + Z)/N$	0.86	0.90	0.59
Average Placement= (P1 + P2 + P3)/3	0.78		

Table No. 4.6.1 : Placement and Higher studies

$$\text{Placement and Higher Studies} = 40 * \text{Average PI}$$

$$= 40 \times 0.78$$

$$\text{Placement and Higher Studies} = 31.2$$

4.6. a. Placement data

CAY m1 (2023-24)				
Sr. No.	Name of the student placed	Enrollment no.	Name of the Employe	Appointment No
1	JAVRE ABHIMAN VIJAY	2111670126	FireFist Solutions	
CAY m2 (2022-23)				
Sr. No.	Name of the student placed	Enrollment no.	Name of the Employe	Appointment No
1	Gangurde Aditi Bhausaheb	2011670431	Dynographics Solutions	

CAY m3 (2021-22)				
Sr. No.	Name of the student placed	Enrollment no.	Name of the Employe	Appointment No
1	Bedarkar Dhanashree Neelkanth	1911670234	V3 Data Solution	

Table No. 4.6.a : Placement data assessment year wise

4.7. Professional Activities (20)

4.7.1. Professional societies / student chapters and organizing technical events (15)

A. Availability of Professional Societies/Chapters & Relevant activities(05)

The Institution has become member of IEI (*Institution of Engineers (India)*) and ISTE (*Indian Society for Technical Education*).The institute is rewarded with following Awards.

1. ISTE National award for Best Clean and Green Campus
2. ISTE Best Student Chapter Award
3. ISTE Narsee-Monjee Award for Best Overall Performance
4. ISTE Narsee-Monjee Award for Best Project work
5. Dr. Amitabh Bhattacharyya Memorial Trophy by IEI

CO Department organizing different activities with the vision of promoting talent of students in curricular and extra-curricular activities.

List of Curricular activities

Technical Paper presentation

Digital poster presentation

Project competition

Poster designing

Coding competition

List of Extra- Curricular Activities:

Sports Competitions

Rangoli competition

Teachers day celebration

Engineers Day

Meri Mati Mera Desh
Compaign

B. Number, quality of engineering events(05)

Following table shows the Engineering Events organized by Department.

CAY 2024-25				
Sr. No.	Event Name	Number of Event	Details	Professional Society
1.	Expert Talk	08	<ul style="list-style-type: none"> - Project Guidance - Career Orientation - Object Oriented Programming - AI & ML - on Cyber Awareness - Interview Techniques - Internet Of Thing - Cyber Security and Ethical Hacking 	IEI
2.	Industrial Visit	07	<ul style="list-style-type: none"> - Visit to Winjit Technology, Nashik - Visit to Exilance Software Nashik - Visit on Environmental Studies - Visit to Gargoti Museum Sinnar - Visit to Eaglebyte Solutions Pvt. Ltd, Nashik - Visit to Sabedor Software Pvt. Ltd, Nashik - Visit to Nexionica Pvt Ltd, Nashik 	IEI
3.	Value Added Program	03	<ul style="list-style-type: none"> - VAP on Node JS - VAP on HTML & CSS - VAP on Programming with Python 	IEI
4.	State Level Technical Event TECHFEST-2025	01	<ul style="list-style-type: none"> - Project Competition, - Paper Presentation - Quiz competition - Digital Poster Competition 	ISTE
5.	Teachers Day Celebration	01	<ul style="list-style-type: none"> - Celebration of Teachers day 	IEI
6.	Reading Competition	01	<ul style="list-style-type: none"> - Promote Reading Habits 	IEI
7.	Navratri Celebration	01	<ul style="list-style-type: none"> - To understand the tradition and culture of Indian festivals. 	IEI
8.	Free fire	01	<ul style="list-style-type: none"> - Improves strategic thinking, reflexes, and decision-making 	IEI
9.	Ballon Fun	01	<ul style="list-style-type: none"> - Enhances hand-eye coordination, balance, and teamwork 	IEI

CAY m1 (2023-24)

Sr. No.	Event Name	Number of Event	Details	Professional Society
1	Expert Talk	07	<ul style="list-style-type: none"> - Opportunities & Prospective Space Technology - IOT & Its Application - Career Opportunities - LinkedIn - Youth united Program - Personality Development - Be Financially Self Reliant 	IEI
2	Industrial Visit	06	<ul style="list-style-type: none"> - Visit to Soft crowd Technologies, Nashik - Visit on Environmental Studies - Visit to Sahyadri Farm, Nashik - Visit to Divya Marathi Nashik Press Volholi - visit to Eaglebyte Solution Pvt Ltd, Nashik - Visit to ESDS Software solution Ltd, Nashik 	IEI
3	Skill Development Program	02	<ul style="list-style-type: none"> - One week SDP on Advanced Excel - Six days SDP on Basic of C Program 	IEI
4	Teachers Day	01	<ul style="list-style-type: none"> - Celebration of Teachers day 	IEI
5	Women's Day	01	<ul style="list-style-type: none"> - Celebration of Women's Day 	IEI
6	World Engineer Day	01	<ul style="list-style-type: none"> - Out of the Box, Tic Tac Toe, Code Dry Run, Digital poster Making. 	IEI
7	Meri Mati Mera Desh Compaign	01	<ul style="list-style-type: none"> - Engage citizens at village and community levels 	IEI

CAY m2 (2022-23)

Sr. No.	Event Name	Number of Event	Details	Professional Society
1.	Expert Talk	06	<ul style="list-style-type: none"> - Resume Making - Full Stack Development - Project Development 	IEI

			<ul style="list-style-type: none"> - Cyber Crime & its awareness - Personality Development in Motivation & Goal Setting - Cyber Security 	
2.	Industrial Visit	04	<ul style="list-style-type: none"> - Visit on R3 System Pvt Ltd, Nashik - Visit on Sumago Infotech Pvt Ltd, Nashik - Visit to Nashik City NMSCDCL, Nashik - Visit to Technocarft Solution Pvt Ltd, Nashik 	IEI
3.	Skill Development Program	02	<ul style="list-style-type: none"> - SDP on Basic of C Programming - SDP on Core Java 	IEI
4.	Rangoli Competition	01	<ul style="list-style-type: none"> - Students should express their ideas in colors on the floor 	IEI
5.	Coding Competition	01	<ul style="list-style-type: none"> - Participants improve their problem-solving abilities and logical thinking. 	IEI
6.	Teachers Day Celebration	01	<ul style="list-style-type: none"> - Celebration of Teachers day 	IEI
7.	Webpage Development Competition	01	<ul style="list-style-type: none"> - Students will gain hands-on experience in creating structured web pages. 	IEI

Table No. 4.7.1 : Professional societies

4.7.2. Publication of technical magazines, newsletters, etc. (05)

List of Publications

- College E- Magazines
- Departmental News letter

Publication Description	Year of Publication	Issue No.	Editor/Author
Spectrum College Magazines	JAN-MAY 2025	3	Prof. R. K. Ghate Prof. P. B. Datir
Spectrum College Magazines	JAN-MAY 2024	2	Prof. R. C. Mahajan Prof. B. D. Bhujang
Spectrum College Magazines	JAN-MAY 2023	1	Prof. R. V Deshpande Prof.G. P. Bharne
Departmental Newsletter	JAN-APR 2025	6	Prof. R. K. Ghate
Departmental Newsletter	July- Nov 2024	5	Prof. P. B. Datir

Departmental Newsletter	JAN-APR 2024	4	Prof. B. D. Bhujang
Departmental Newsletter	July- Nov 2023	3	Prof. R. C. Mahajan
Departmental Newsletter	Feb- May 2023	2	Prof. B. D. Bhujang
Departmental Newsletter	Aug -Dec 2022	1	Prof. Suvrna Kale

Table No. 4.7.2.(a) : Publication of technical magazines, newsletter

4.7.2 Participation of Students from the program (2)

Publication Description	Year of Publication	Name of Students Participation
Spectrum College Magazines	JAN-MAY 2025	1.Mrunmai Sandip Kumbhar 2.Shubham Arun Aher
Spectrum College Magazines	JAN-MAY 2024	1.Prathmesh Uttam Ahire 2.Dusing Swayam Vijay
Spectrum College Magazines	JAN-MAY 2023	1.Shirvi Mohit Alpesh 2.Haral Pranjal Satish
Departmental Newsletter	JAN-APR 2025	Mrunmai Sandip Kumbhar
Departmental Newsletter	July- Nov 2024	Shubham Arun Aher
Departmental Newsletter	JAN-APR 2024	Prathmesh Uttam Ahire
Departmental Newsletter	July- Nov 2023	Dusing Swayam Vijay
Departmental Newsletter	Feb- May 2023	Shirvi Mohit Alpesh
Departmental Newsletter	Aug -Dec 2022	Haral Pranjal Satish

Table No. 4.7.2.(b) :

4.7.3 Participation in inter-institute/state/national events by students of the program of study (05)

CAY (2024-25)							
Sr. No .	Type of Event / Activity	Date	Organizing Institute	No of Students Participated	Winner / Participant	Level	Relevance to Pos , PEOs
1	Project Competition	22/02/2025	Jawhar Institute of Technology, Management and Research, Nashik.	3	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
2		28/02/2025	Sandip University Nashik	1	1 st prize winner	National Level 1	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
3		28/02/2025	Sandip Institute of Technology and Reasearch center , Nashik	5	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
4		21/03/2025	V.S Polytechnic, Chembur,Mumbai	2	1 st prize winner	National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
5		01/03/2025	Loknete Gopinathji Munde Institute of Engineering Education & Research Nashik	3	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
6		03/03/2025	Sandip Institute of Engineering and Management , Nashik	2	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
7		22/03/2025	Sandip Polytechnic, Nashik	1	1st prize winner	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.

8		22/03/2025	SandipPolytechnic, Nashik	3	Participation	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
9	Paper Publication	25/03/2025	Inter National Level IJRPR	6	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
10		25/03/2025	Inter National Level IRJMEPS	5	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
11	Paper Presentation	02/04/2025	MET'S Institute of Technology-Polytechnic, Nashik	2	1 st prize winner	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
12		22/03/2025	Sandip Polytechnic, Nashik	2	2nd Prize Runner up	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
13		22/03/2025	Sandip Polytechnic, Nashik	1	Participation	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
14	Blind C Coding	03/03/2025	Sandip institute of Engineering And Management	8	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
15	Technical Quiz Competition	18/03/2025	Rajashri Shahu Maharaj Polytechnic, Nashik	7	Participation	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
16	Sports	Jan-2025	IDESSA	17	Participation	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.

CAY m1 (2023-24)

1	Project Competition	16-02-24	Sandip Institute of Engineering and Management , Nashik	6	Participation	National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
2		20/01/24	KK Wagh Institute of Engineering and Education and Research	1	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
3		20/02/24	Sandip TBI innovation hackathon	1	Participation	Institute	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.

4	Project Competition	24-02-24	Jawhar Institute of Technology, Management and Research, Nashik.	4	Participation	National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
5		24/02/24	JES Institute of Technology, Nashik	1	Participation	National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
6		29/02/24	Guru gobind Singh Engineering & Research Center	1	Participation	Institute	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
7	Paper Published	01/01/2024	Inter National Level IJSART	1	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
8		01/01/2024	Inter National Level IJPREMS	2	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
9		10/01/2024	Inter National Level IRJET	1	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
10		16-03-2024	Sandip Polytechnic, Nashik	1	Winner	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
11	Paper Presentation	16-03-2024	Sandip Polytechnic, Nashik	1	2 nd Runner Up	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
12		16-03-2024	Sandip Polytechnic, Nashik	1	Participation	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
13		24-02-2024	Jawhar Institute of Technology, Management and Research, Nashik	1	Participation	National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
14	Blind C Coding	16-02-2024	Sandip Institute of Engineering and Management , Nashik	1	2 nd Runner Up	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
15	Treasure Hunt	16-02-2024	Sandip Institute of Engineering	2	Participation	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.

			and Management , Nashik				
16	Quiz competition	20-02-2024	Dr. M.S. Gosavi Polytechnic	2	Participation	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
17	Sports	Jan-2024	IDESSA	15	Participation	State Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.

CAY m2 (2022-23)

1	Project Competition	21/02/2023	Jawhar Institute of Technology, Management and Research, Nashik.	29	Participation	National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
2		31/03/2023	Lokneta Gopinathji Munde Institute of Engineering Education & Research Nashik	28	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
3		12/04/2023	Lokneta Gopinathji Munde Institute of Engineering Education & Research Nashik	10	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
4		21/04/2023	Sandip University	13	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
5		27/04/2023	Sandip Institute of Engineering & Management	6	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
6	Paper Published	07/03/2023	Inter National Level IRJMETS	9	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
7		15-03-23	Inter National Level IJSRCSEIT	4	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.

8		04/04/2023	Inter National Level IJSDR	9	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
9		24/04/2023	Inter National Level IJRPR	17	Participation	Inter National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
10	Paper Presentation	21/02/2023	Jawhar Institute of Technology, Management and Research, Nashik	2	Participation	National Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
11		02-10-2022	Sandip Institute of Engineering and Management , Nashik	2	Participation	college level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
12	Quiz competition	02-10-2022	Sandip Institute of Engineering and Management , Nashik	1	Participation	college level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
13	Counter Strike	31/03/2023	Lokneta Gopinathji Munde Institute of Engineering Education & Research Nashik	1	Participation	Institute Level	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.
14	Sports (Badminton)	Jan-2023	IDESSA	1	Runner up	Zonal	PO1, PO2, PO5, PO7, PSO1, PSO2, PSO3.

Table No. 4.7.3. : Participation in inter-institute/state/national events by students

5 FACULTY INFORMATION AND CONTRIBUTIONS (150)

ACADEMIC YEAR 2024-25

Name	PAN No.	Qualification And Area of Specialization	Designation	Date of Joining	24-25 Load in % Yearly			Currently Associated (Y/N)	Nature of Association (Regular/Contract)	In case of contractual (Mention Fulltime or Part	Date of Leaving (Incase Currently Associated is "No")
OHOL VISHAL BHANUDAS	AAYPO2004N	M.E/M.Tech	HOD	01-07-2017	100	0	0	Y	Regular	NA	NA
DESHPANDE RASHMI VILAS	DSIPD5379E	B.E/B.Tech(Computer Engg)	LECTURER	14-08-2023	100	0	0	Y	Regular	NA	NA
BHARANE GAYATRI PANDURANG	FLHPB9690E	B.E/B.Tech (Computer Engg)	LECTURER	01-08-2023	100	0	0	Y	Regular	NA	NA
PATIL JAGRUTI NINAD	CYVPP6215M	M.E/M.Tech (Computer Engg)	LECTURER	17-08-2023	100	0	0	Y	Regular	NA	NA
THETE ROHINI SAGAR	BJPPN4886C	B.E/B.Tech (Computer Engg)	LECTURER	03-01-2024	100	0	0	Y	Regular	NA	NA
JADHAV YUVRAJ NARENDRA	ARSPJ8526F	B.E/B.Tech (Computer Engg)	LECTURER	26-08-2023	100	0	0	Y	Regular	NA	NA
JAGTAP KAJAL MOHAN	BELPJ9052H	B.E/B.Tech (Computer Engg)	LECTURER	06-01-2023	100	0	0	Y	Regular	NA	NA
ASHWIN SINGH	RZZPS4260K	B.E/B.Tech (Computer Engg)	LECTURER	27-11-2023	100	0	0	Y	Regular	NA	NA
PATHAK NILESH GIRISH	AZAPP5978P	B.E/B.Tech (Computer Engg)	LECTURER	01-08-2023	0	25	0	Y	Regular	NA	NA
BHALERAO	FKFPB3171	M.Sc (Math)	LECTURE	26-08-2024	0	67	0	Y	Regular	NA	NA

JAYSHREE RAVSAHEB	R		R								
PAWAR SWATI ARUN	ATSPG9444 P	MA (English)	LECTURE R	01-08-2022	0	15	0	Y	Regular	NA	NA
PATIL APARNA JAGDISH	BBMPP9337 H	MA (English)	LECTURE R	21-08-2024	62	0	39	Y	Regular	NA	NA
PAWAR DIPALI RAMDAS	HVAPP5227 G	M.Sc.(Chem)	Lecturer	01-08-2024	0	34	0	Y	Regular	NA	NA
KULKARNI NIRANJAN RAVINDRA	DLBPK9196 N	MSc(Physics)	LECTURE R	14-08-2024	34	0	17	Y	Regular	NA	NA
PATIL SANDIP		M.P.Ed (Physical Education)	LECTURE R	01-06-2024	0	5	0	Y	Regular	NA	NA
BAKSHI CHANDRAKIRAN	AKGPB2347 B	B.E/B.Tech(M echanical Engg)	LECTURE R	01-08-2024	0	18	0	Y	Regular	NA	NA
SHIRPURKAR VAIBHAV VASANT	BYUPS5538 N	B.E/B.Tech(M echanical Engg)	LECTURE R	01-08-2023	0	17	0	Y	Regular	NA	NA
KHADE PRIYANKA RAGHUNATH	EDWPK9280 D	M.E/M.Tech(E lectrical Engg)	LECTURE R	01-08-2024	0	34	0	Y	Regular	NA	NA
LENGARE BALASAHEB RAMCHANDRA	AETPL3659 M	B.E/B.Tech (Computer Engg)	LECTURE R	02-12-2017	100	0	0	Y	Regular	NA	NA
SFR = 12.11											

Year	N	F	SFR=N/F
2024-25(CAY)	261	12.11	21.55

ACADEMIC YEAR 2023-24

Sr No	Name	PAN No.	Qualification And Area of Specialization	Designation	Date of Joining	23-24 Load in % Yearly			Currently Associated (Y/N)	Nature of Association (Regular/Contract)	In case of contractual (Mention Fulltime or Part)	Date of Leaving (Incase Currentl y Associate dis“No”)
1	OHOL VISHAL BHANUDAS	AAYPO2004N	M.E/M.Tech	HOD	01-07-2017	100	0	0	Y	Regular	NA	NA
2	DESHPANDE RASHMI VILAS	DSIPD5379E	B.E/B.Tech(Computer Engg)	LECTURE R	14-08-2023	100	0	0	Y	Regular	NA	NA
3	BHARANE GAYATRI PANDURANG	FLHPB9690E	B.E/B.Tech (Computer Engg)	LECTURE R	01-08-2023	100	0	0	Y	Regular	NA	NA
4	PATIL JAGRUTI NINAD	CYVPP6215M	M.E/M.Tech (Computer Engg)	LECTURE R	17-08-2023	100	0	0	Y	Regular	NA	NA
5	PAWAR SWATI ARUN	ATSPG9444P	MA (English)	LECTURE R	01-08-2022	0	15	0	Y	Regular	NA	NA
6	JADHAV YUVRAJ NARENDRA	ARSPJ8526F	B.E/B.Tech (Computer Engg)	LECTURE R	26-08-2023	100	0	0	Y	Regular	NA	NA
7	JAGTAP KAJAL MOHAN	BELPJ9052H	B.E/B.Tech (Computer Engg)	LECTURE R	06-01-2023	100	0	0	Y	Regular	NA	NA
8	MAHAJAN REEKITA CHANGDEO	BMPPM5671 R	M.E/M.Tech (Computer Engg)	LECTURE R	10-08-2022	100	0	0	N	Regular	NA	30-06-2024
9	BHUJANG BHAGSHREE DATTATRY	BEWPB5618C	B.E/B.Tech (Computer Engg)	LECTURE R	06-01-2023	100	0	0	N	Regular	NA	31-05-2024
10	SANAP MIHIR SANTOSH	NYNPS9566P	B.E/B.Tech (Computer Engg)	LECTURE R	14-08-2023	100	0	0	N	Regular	NA	31-05-2024

11	LENGARE BALASAHEB RAMCHANDRA A	AETPL3659M	B.E/B.Tech (Computer Engg)	LECTURE R	02-12- 2017	100	0	0	Y	Regular	NA	NA
12	PATIL MAYURI PRAMOD	HAWPP4316R	M.Sc (Maths)	LECTURE R	01-08- 2023	0	39	0	Y	Regular	NA	NA
13	SHIMPI MAHESH SHANTARM	BXEPS4369E	MA (English)	LECTURE R	01-07- 2010	0	15	0	Y	Regular	NA	NA
14	PAWAR SHUBHAM SANDIP	GIUPP27681	M.Sc.(Chemist ry)	LECTURE R	20-02- 2022	0	17	0	Y	Regular	NA	NA
15	VINAYAK ABAJI PARVE		M.P.Ed (Physical Education)	LECTURE R		0	7	7	N	Regular	NA	31-05- 2024
16	CHAUDHARI PALLAVI CHHAGANRA O	BDZPC7864D	M.E/M.Tech(T hermal Engg)	LECTURE R	08-01- 2022	0	19	0	N	Regular	NA	31-12- 2024
SFR = 18.27												

Year	N	F	SFR=N/F
2023- 24(CAYm1)	203	11.11	18.27

ACADEMIC YEAR 2022-23

Sr No	Name	PAN No.	Qualification And Area of Specialization	Designation		Date of Joining	22-23 Load in % Yearly			Currently Associated (Y/N)	Nature of Association (Regular/Contract)	In case of contractual (Mention Fulltime or Part	Date of Leaving (Incase Currently Associate dis "No")
1	OHOL VISHAL BHANUDAS	AAYPO2004N	M.E/M.Tech (Computer Engg)	HOD		01-07-2017	100	0	0	Y	Regular	NA	NA
2	GAIKWAD GANESH KESHAV	ASHPG8022B	M.E/M.Tech (Computer Engg)	LECTURER		28-08-2020	100	0	0	N	Regular	NA	30-11-2023
3	MAHAJAN REEKITA CHANGDEO	BMPPM5671R	M.E/M.Tech (Computer Engg)	LECTURER		10-08-2022	100	0	0	N	Regular	NA	30-06-2024
4	LENGARE BALASAHEB RAMCHANDRA	AETPL3659M	B.E/B.Tech (Computer Engg)	LECTURER		02-12-2017	100	0	0	Y	Regular	NA	NA
5	SHIMPI MAHESH SHANTARM	BXEPS4369E	MA (English)	LECTURER		01-07-2010	0	15	0	Y	Regular	NA	NA
6	PAWAR SHUBHAM SANDIP	GIUPP27681	M.Sc.(Chemistry)	LECTURER		20-02-2022	0	17	0	Y	Regular	NA	NA

7	CHAUDHARI PALLAVI CHHAGANRAO	BDZPC7864D	M.E/M.Tech(Thermal Engg)	LECTUR ER	08-01- 2022	0	19	0	N	Regular	NA	31-12- 2024
8	KALE SUVARNA PRASHANT	CTNPK7373N	M.E/M.Tech (Computer Engg)	LECTUR ER	29-07- 2019	100	0	0	N	Regular	NA	12-08- 2023
9	NIMBALKAR SONALI VISHAL	BNJPN9087K	M.E/M.Tech (Computer Engg)	LECTUR ER	01-08- 2022	0	25	0	N	Regular	NA	31-05- 2024
10	AMLE SUVARNA ASHOK	DDDPA0620 M	B.E/B.Tech (Computer Engg)	LECTUR ER	01-08- 2022	0	25	0	N	Regular	NA	01-05- 2024
11	MUTRAK BAGHYSHREE ASHISH	FZXPM8916C	B.E/B.Tech (Computer Engg)	LECTUR ER	31-07- 2021	100	0	0	N	Regular	NA	30-06- 2023
12	BHAMARE AVIN SAHEBRAO	AWTPB4526 H	MA (English)	LECTUR ER	23-08- 2011	0	21	0	Y	Regular	NA	NA
13	KANTHE GAURAV	BEOPK8628H	MSC(Physics)	LECTUR ER	01-08- 2021	0	25	0	N	Regular	NA	30-06- 2023
14	SONAWANE MOHINI CHINDU	GMQPS4453F	B.E/B.Tech (Computer Engg)	LECTUR ER	15-11- 2022	0	25	0	Y	Regular	NA	31-05- 2024
15	KALYANKAR SHITAL		B.E/B.Tech (Computer Engg)	LECTUR ER	01-08- 2022	100	0	0	N	Regular	NA	31-05- 2023

SFR=8.7

Year	N	F	SFR=N/F
2022-23(CAYm2)	195	8.7	22.41

Combine Three Year:

Year	N	F	SFR=N/F
2024-25(CAY)	261	12.11	21.55
2023-24(CAYm1)	203	11.11	18.27
2022-23(CAYm2)	195	8.70	22.41
		Average SFR	20.74

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
2024-25(CAY)	18	0
2023-24(CAYm1)	14	0
2022-23(CAYm2)	14	0

5.2. Faculty Qualification (25)

5.2.1 Faculty Qualification Index (20)

$FQ = 2.0 * (10x + 7y) / F$ where x is no. of faculty with M.Tech. (in case of humanities and science M.Phil./Ph.D.) and y is no. of faculty with B.Tech. (In case of humanities and science MA/M.sc), F is no. of faculty required to comply 1:25 Faculty Student Ratio.

	X	Y	F	$FQ = 2 * [(10X + 7Y) / F]$
2024-25	2.00	10.00	10.00	18.00
2023-24	2.00	7.00	8.00	17.25
2022-23	4.00	4.00	8.00	17.00
Average Assessment : 17.42				

Faculty Qualification Index			
Qualification	Academic Year		
	2024-25	2023-24	2022-23
ME/M-tech (X)	OHOL VISHAL BHANUDAS	OHOL VISHAL BHANUDAS	OHOL VISHAL BHANUDAS
	PATIL JAGRUTI NINAD	PATIL JAGRUTI NINAD	GAIKWAD GANESH KESHAV
		MAHAJAN REEKITA CHANGDEO	MAHAJAN REEKITA CHANGDEO
			KALE SUVARNA PRASHANT
Count	2	3	4
BE/B-tech (Y)	DESHPANDE RASHMI VILAS	DESHPANDE RASHMI VILAS	LENGARE BALASAHEB RAMCHANDRA
	BHARANE GAYATRI PANDURANG	BHARANE GAYATRI PANDURANG	MUTRAK BAGHYSHREE ASHISH
	THETE ROHINI SAGAR	JADHAV YUVRAJ NARENDRA	KALYANKAR SHITAL
	JADHAV YUVRAJ NARENDRA	JAGTAP KAJAL MOHAN	
	JAGTAP KAJAL MOHAN	BHUJANG BHAGSHREE DATTATRY	
	ASHWIN SINGH	SANAP MIHIR SANTOSH	

PATIL APARNA JAGDISH	LENGARE BALASAHEB RAMCHANDRA	
KULKARNI NIRANJAN RAVINDRA		
LENGARE BALASAHEB RAMCHANDRA		
Count	9	7
Total Count	11	10
		3
		7

5.2.2 Availability of Faculty/principal of that discipline with PhD. Qualification

= NO

Prof.Vishal Bhanudas Ohol
PhD (Pursuing in Computer Science & Engineering)

5.3. Faculty Retention (20)

Description	2023-24 (CAYm1)	2024-25 (CAY)
No of Faculty Retained	8	4
Total No of Faculty	9	9
% of Faculty Retained	89	44

Academic Year	CAYm1 2023-24	CAY 2024-25
Name of Faculty	OHOL VISHAL BHANUDAS	OHOL VISHAL BHANUDAS
	PATIL JAGRUTI NINAD	PATIL JAGRUTI NINAD
	DESHPANDE RASHMI VILAS	DESHPANDE RASHMI VILAS
	BHARANE GAYATRI PANDURANG	BHARANE GAYATRI PANDURANG
	LENGARE BALASAHEB RAMCHANDRA	LENGARE BALASAHEB RAMCHANDRA
	JADHAV YUVRAJ NARENDRA	JADHAV YUVRAJ NARENDRA
	JAGTAP KAJAL MOHAN	JAGTAP KAJAL MOHAN
	BHUJANG BHAGSHREE DATTATRY	ASHWIN SINGH
	SANAP MIHIR SANTOSH	PATIL APARNA JAGDISH
	MAHAJAN REEKITA CHANGDEO	KULKARNI NIRANJAN RAVINDRA
		BHARANE GAYATRI PANDURANG
		THETE ROHINI SAGAR

5.4 Faculty as participants in Faculty development/training activities conducted by other organizations (30)

A Faculty scores maximum five points for participation

Participant in 1 to 2 days Faculty/faculty development program: 1 Points

Participant in 3 to 5 days Faculty/faculty development program: 2 Points

Participant > 5 days Faculty/faculty development program: 5 points

Name of the faculty	Max 5 Per Faculty		
	2021-22 (CAYm3)	2022-23 (CAYm2)	2023-2024 (CAYm1)
OHOL VISHAL BHANUDAS	5	5	4
DESHPANDE RASHMI VILAS			5
BHARANE GAYATRI PANDURANG			2
PATIL JAGRUTI NINAD			5
THETE ROHINI SAGAR			2
JADHAV YUVRAJ NARENDRA			
DATIR POOJA BAJIRAO			
GHATE ROHINI KIRAN			
JAGTAP KAJAL MOHAN			
BAKSHI CHANDRAKIRAN			
ASHWIN SINGH			
PATHAK NILESH GIRISH			2
BHALERAO JAYSHREE RAVSAHEB			
PAWAR SWATI ARUN			5
PATIL APARNA JAGDISH			
PAWAR DIPALI RAMDAS			
KULKARNI NIRANJAN RAVINDRA			
GAIKWAD GANESH KESHAV	5		
MAHAJAN REEKITA CHANGDEO		5	5
BHUJANG BHAGSHREE DATTATRY			4
SANAP MIHIR SANTOSH			
LENGARE BALASAHEB RAMCHANDRA		2	
PATIL MAYURI PRAMOD			5
BHALERAO JAYSHREE RAVSAHEB			
SHIMPI MAHESH SHANTARM			
RAYATE VIKAS ARUN			
DOKE KISHOR EKNATH			
BADHAN HARSHALI RAVINDRA			
PAWAR SHUBHAM SANDIP			
VINAYAK ABAJI PARVE			
CHAUDHARI PALLAVI CHHAGANRAO		5	
KALE SUVARNA PRASHANT	5	4	
NIMBALKAR SONALI VISHAL			4
AMLE SUVARNA ASHOK		3	
BHAMARE AVIN SAHEBRAO			5
KALYANKAR SHITAL			
KANTHE GAURAV			

SONAWANE MOHINI CHINDU		5	
KHADE PRIYANKA RAGHUNATH			
JOSHI SHWETA DIPAK			
TAMBAT URMILA RAHUL			5
CHAVAN DYNESHWAR VAMAN		5	
CHAUDHARI BHUSHAN SHIRISH	5		
KHALANE SUSHMITA	5		
WADNERE DHANASHRI GOPAL	5		
GORDE SNEHAL HOUSHIRAM	5		
SUM	35	34	53
RF = Number of Faculty required to comply with 25:1 SF	7.8	8.12	10.44
Assessment [6*(Sum / 0.5RF)](Marks limited to 30)	30	30	30
Average assessment over 3 years (Marks limited to 30):		30	

5.4.2. Organized/ Conducted FDPs and STTP by this department at State / National Level (12)

- Minimum 2 day's program
- 2 points per program (max. up to 12 marks)

Sr. No	Academic Year	Name of FDP	Resource Person	State/ National Level	Duration
1	2024-25	Data Analytics	Mr. Hiralal Solanki, SOCSE,SUN, Nashik Mr. Vijay Gaikwad, Soft Crowd Technologies, Nashik	State	2 Days
2	2023-24	Be Financial Self- Reliant	Ms. Mili Paul, SEBI Empaneled Trainer, Mumbai	State	2Days
3	2022-23	Cloud Computing With AWS	Mr. Santosh Ugale Lead Solution Architect, ESDS Software Solution Limited,Nashik Dr. Ram Kumar Solanki, SOCSE,SUN, Nashik	State	2 Days
4	2021-22	Basic of AWS for Software as a Service(SaaS)	Mr.Yogesh Dusane, Lead Solution Architect, ESDS Software Solutions, Nashik Prof.Yogesh Bhalerao, SOCSE,SUN, Nashik	State	2 Days

Academic Year	No. of FDP Conducted	marks	Obtained Marks
2024-25	1	2	8
2023-24	1	2	
2022-23	1	2	
2021-22	1	2	

5.5 Product development, Consultancy, Manufacturing contracts, testing contracts (8)

Sr. No.	Name of Product	Remark
Academic Year 2023-24		
1	Sandip Foundation's Website	Support/Design and Developed by Our Faculty
2	Trainer in FDP	Our Faculty train the faculties in FDP on Mobile Application Development
Academic Year 2024-25		
1	Sandip Foundation's Website	Support/Design and Developed by Our Faculty
2	Sandip Foundation's ERP	Design and Developed by Our Faculty

5.6- Faculty Performance Appraisal and Development System (FPADS) (30)

a) Faculty Performance Appraisal

Sandip Foundation's Sandip Polytechnic has a well defined Performance appraisal system (Academic Performance Indicators-API) for teaching and non-teaching staff. It is carried out annually.

At the end of every academic year, the performance of all the faculties is collected through a well structured self-appraisal form (API). The API form of faculties has below mentioned parameters.

- Teaching, learning and evaluation related activities.
- Co-curricular activities and professional development.
- Department and institute level responsibilities.
- Research, publications and patents.
- Contribution in students support & development.
- Contribution in admission process.
- Contribution to society.
- Product development/consultancy/manufacturing/testing contracts.

Along with these key parameters contribution to Sandip Foundation and behavioural attitude is also noted throughout the year and relevant remarks are noted in the appraisal form

B. Its implementation and effectiveness (15)

At the end of every academic year faculty submits the self appraisal form (API) to head of the department. Head of the department collects and submits the self appraisal form (API) of all faculties along with all necessary documents to the head of the institute.

Head of the Institute forms a scrutiny committee at institute level to evaluate the self-evaluation report (API). The evaluation is done on the following basis.

Sr. No.	CRITERIA	API Score Verified by Screening Committee
I	TEACHING, LEARNING AND EVALUATION RELATED ACTIVITIES Total Score Of Category – I (Out of 12)	12
II	CO-CURRICULAR ACTIVITIES AND PROFESSIONAL DEVELOPMENT Total Score Of Category-II(Out of 20)	20
III	DEPARTMENT AND INSTITUTE LEVEL RESPONSIBILITIES	
III(A)	Departmental Activities(Max credit:10)	
III(B)	Institute Activities(Max Credit10)	
	Total Score Of Category-III(A+B)(Out of:20)	20
IV	RESEARCH AND PUBLICAIONS Total Score Of Category-IV(Out of 14)	14

V	CONTRIBUTION IN STUDENTS SUPPORT & DEVELOPMENT	
	Total Score Of Category-V(Out of 10)	10
VI	CONTRIBUTION IN ADMISSION PROCESS	
	Total Score Of Category-VI(Out of 08)	08
VII	CONTRIBUTION TO SOCIETY	
	Total Score Of Category-VII(Out of 08)	08
VIII	PRODUCT DEVELOPMENT/CONSULTANCY/MANUFACTURING/TESTING CONTRACTS	
	Total Score Of Category-VIII(Out of 08)	08
	<i>Total Score Of Category-I+II+III+IV+V+VI+VII+VIII(Out of 100)</i>	

OVERALL EVALUATION						
OUTSTANDING	EXCELLENT	VERYGOOD	GOOD	SATISFACTORY	MARGINAL	POOR

GUIDELINES FOR COMPUTATION OF OVERALL EVALUATION

Remarks	Max. Range 100	%
Outstanding	90 and above	90 % above
Excellent	80 to 89	80% to 89
Very Good	70 to 79	70% to 79%
Good	60 to 69	60% to 69%
Satisfactory	50 to 59	50% to 59%
Marginal	40 to 49	40% to 49%
Poor	Less than 40	Less than 40%

Recommendations of the scrutiny committee are submitted to Hon. Management of the Sandip Foundation for further processing and approval. Based on the approval and recommendations of management faculties are entitled with following benefits/ incentives.

- Salary increments.
- Performance Incentives
- Concession in the higher education at sister institutes/ Sandip University.
- Sponsorship for attending FDP Programs/SWAYAM/NPTEL courses.
- Promotions in academic positions like HOD, Officer In-charge (Exam, RAC, DC, RRAC etc)
- On duty leave, TADA and registration charges for attending national and international level seminars/conferences, Training, workshops etc

b) Details of qualification up-gradation of faculty (10)

Faculties of Computer Engineering program of Sandip Polytechnic are encouraged to upgrade their qualifications and skills. This will enable them to improve the Classroom / Laboratory performance as well as competency levels. The faculty members approach the HOD/Principal at the start of academic year with their interest for enrolment to the PG/PHD/FDP programs. The list of faculty members who are upgrading their qualification in the last five years is included in the table.

List of the Faculty Member for qualification Upgradation:

Sr. No.	Name of Faculty	Year of Admission	Qualification/ Certification	Year of Completion
1	OHOL VISHAL BHANUDAS	2024-25	PHD	Pursuing
2	DESHPANDE RASHMI VILAS	2024-25	M.E/M.Tech	Pursuing
3	BHARANE GAYATRI PANDURANG	2024-25	M.E/M.Tech	Pursuing
4	THETE ROHINI SAGAR	2024-25	M.E/M.Tech	2016

6.1. Availability of adequate, well-equipped classrooms to meet the curriculum requirements (10)

- Department has sufficient number of classrooms with adequate capacity to accommodate students.
- Classrooms have good ventilation with sufficient natural & artificial light.
- All classrooms are provided with modern furniture, good ambiance and exit facility.
- Each class room equipped with LCD projector, Green board, Computer and internet connection.
- Overall ambience is good.

Sr. No.	Room Description	Room No	Shared/ Exclusive	Size & Area	Capacity	Available Facility
1	Class Room/Smart Classroom	SYCO-A 305	Exclusive	6.91X10.12m (69.92 Sq.m)	80	Green board, Benches, Podium, Computer with internet facility, Fans, Lights, Projector, Projector Screen, Benches
		SYCO-B 306	Exclusive	6.91X10.12m (69.92 Sq.m)	80	Green board, Benches, Podium, Computer with internet facility, Fans, Lights, Projector, Projector Screen, Benches
		TYCO 307	Exclusive	6.91X10.12m (69.92 Sq.m)	80	Green board, Benches, Podium, Computer with internet facility, Fans, Lights, Projector, Projector Screen, Benches
2	Tutorial Room	SYCO & TYCO 304	Shared	6.91X10.12m (69.92 Sq.m)	80	Green board, Benches, Podium, Computer with internet facility, Fans, Lights, Projector, Projector Screen
3	Seminar Hall		403	Shared 10.13x28.20 m (285.66 sq.m)	350	Computer, Chairs, AC, Projector with Screen, Sound System, Wall mount Speakers, Internet, Wi-Fi, Laser Pointer, White Board Marker, Duster etc.

6.2. Availability of adequate and well-equipped workshops, Laboratories and Technical manpower to meet the curriculum requirements (40)

A. Adequacy (10)

- **Equipment Availability:** The necessary equipment and tools are available for conducting experiments and practical sessions related to meet the curriculum requirements.
- **Quality of Equipment:** The equipment and instruments up-to-date and in good working condition.
- **Lab Infrastructure:** The laboratory space sufficient to accommodate all students and facilitate hands-on learning activities.

Sr. No	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the important equipment (costing more than Rs. 30,000)	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Technical Man-power support	Designation	Qualification
1	Programming Lab	24	Desktop Computers in LAN with Internet facility, 24+08 Port switch, Switch Rack, Patch Pannel, Dot Matrix Printer, White Board, Chairs	Approx. 24 Hrs	Mrs. B. M. Rane	Technical Assistant	Diploma In Computer Engineering

2	Netwok / Internet Lab	24	Desktop Computers in LAN with Internet facility , 24+08 Port switch, Switch Rack, Patch Pannel, Dot Matrix Printer, White Board, Chairs	Approx. 24 Hrs	Mrs. B. M. Rane	Technical Assistant	Diploma In Computer Engineering
3	Multime-dia Lab	24	Desktop Computers in LAN with Internet facility , 24+08 Port switch, Switch Rack, Patch Pannel, Dot Matrix Printer, White Board, Chairs	Approx. 24 Hrs	Mrs. B. M. Rane	Technical Assistant	Diploma In Computer Engineering
4	Microprocessor Lab	24	Desktop Computers in LAN with Internet facility , 24+08 Port switch, Switch Rack, Patch Pannel, Dot Matrix Printer, White Board, Chairs	Approx. 24 Hrs	Mr.Amit Kumar Dubey	Technical Assistant	Diploma In Computer Engineering
5	Center of Excellence	24	Desktop Computers in LAN with Internet facility , 24+08 Port switch, Switch Rack, Patch Pannel, Dot Matrix Printer, White Board, Chairs	Approx. 24 Hrs	Mr.Amit Kumar Dubey	Technical Assistant	Diploma In Computer Engineering
6	Basic Workshop	14	PIV Motherboard with processor and cpu fan, Hard disc (IDE)80 GB,VGA Display adaptor, TV Tunner Card, Lan Cards, CD writer/DVD Writer, Internal Modem, Flopy Disc Drive, Keyboard PS2 Regular, Optical Mouse, CRT 15" Monitor, Scanner A4 Size,Printer DOT matrix 132 col., Laser Jet 30 rpm 16 MB RAM, Network card	Approx. 12 Hrs	Mr.Amit Kumar Dubey	Technical Assistant	Diploma In Computer Engineering
7	Digital Techniques	10	7 Segment . Display interfacing card, Verify R.S F.F Using NAND GATE AND MSJK F.F Using 7474,4 bit R-2R DAC, Verify T.T of Logic Gate,7-seg Decoder Driver, Universal Shift Register, Half and Full adder and Subtractor, 3-Bit Synchronous Counter, Decode Counter using 7490	Approx. 08 Hrs	Mr.Amit Kumar Dubey	Technical Assistant	Diploma In Computer Engineering

Table 6.2.a Availability of adequate and well-equipped workshops, Laboratories and Technical manpower

B. Quality of Labs/workshop (20)

- Well Equipped, Adequate and having good environment (light, ventilation, Acoustics) workshop is available to meet the curriculum requirements.

Sr. No.	Name of the Laboratory	Area
1	Programming Lab	10.00mX7.05m= 70.05m ²
2	Network/ Internet Lab	10.00mX6.6m=66.00m ²
3	Multimedia Lab	10.01mX6.7m=67.06m ²
4	Microprocessor Lab	10.4mX6.75m=70.20m ²
5	Center of Excellence	10.5mX6.5m=68.24m ²
6	Basic Workshop	10.02mX6.8m=68.13m ²
7	Digital Techniques	10.02mX6.2m=62.12m ²

Table: 6.2.B. Availability of workshop facility

C. Technical Manpower support –Eligible and Adequate (10)

- Technical Support:** There adequate technical support available to assist students and faculty with equipment operation, troubleshooting, and maintenance.
- The laboratories are equipped with state of art instruments and are sufficient to conduct the experiments as per the curriculum of Maharashtra State Board of Technical Education. Each lab can accommodate a batch of 20 to 25 students. Laboratory sessions are conducted to ensure the attainment of program outcomes.
- Department has adequate number of qualified technical supporting staff for program specific laboratories. Technical staff assists teaching faculties for preparation and arrangement of practical setup.
- Technical staff looks after the minor maintenance of department equipment.

Sr. No.	Name of the Laboratory	Technical Manpower support		
		Name of the Technical staff	Designation	Qualification
1	Programming Lab	Mrs. B. M. Rane	Technical Assistant	Diploma In Computer Engineering
2	Network/ Internet Lab	Mrs. B. M. Rane	Technical Assistant	Diploma In Computer Engineering
3	Multimedia Lab	Mrs. B. M. Rane	Technical Assistant	Diploma In Computer Engineering
4	Microprocessor Lab	Mr.Amit Kumar Dubey	Technical Assistant	Diploma In Computer Engineering
5	Center of Excellence	Mr.Amit Kumar Dubey	Technical Assistant	Diploma In Computer Engineering
6	Basic Workshop	Mr.Amit Kumar Dubey	Technical Assistant	Diploma In Computer Engineering
7	Digital Techniques	Mr.Amit Kumar Dubey	Technical Assistant	Diploma In Computer Engineering

Table 6.2.C Shows Technical Manpower support details

6.3. Additional facilities created for improving the quality of learning experience in laboratories.

A. Facilities (10)

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	
						POs	PSOs
1	Language Lab	English, BCC	Effective teaching learning for said subject and effective English communication	BCC practical and Tutorial hours/Each Semester	Communication Skills	PO5, PO6, PO7	PSO3
2	Internet facility	100 mbps dedicated leased line Light broad and 50 mbps dedicated leased line Jio.	Keep in touch with latest technology, surfing on internet for a specific problem	Conduct online Exams, Professional practices, Assignment/ Each Semester	Information search for project, seminar and other academic work	PO1 - PO7,	PSO1, PSO2, PSO3

3	Digital Library	E books, E Magazines, NPTEL Videos	Deep knowledge of concept	During CPR, EDP, EST, ETI, BCC/ Each Semester	E books, E Magazines, NPTEL Videos, Question papers, Model answers, Syllabus, Published Papers in national and international journals,	PO1 - PO7,	PSO1, PSO2, PSO3
4	Spoken Tutorial/ Virtual Lab/ Infosys Spring-board	C,C++, JAVA, Linux, ICT, Android/ PHP	Deep knowledge of concept w.r.t. theory and practical, Interdisciplinary knowledge enhancement.	During practical sessions/ Each Semester	All Subjects	PO1 - PO7	PSO1, PSO2, PSO3
5	QR Code	For All Subjects	Enhancing laboratory learning with QR code integration	Students could easily scan the QR codes using their smartphones or tablets, accessing the information anytime after their lab session, fostering a self-paced and personalized learning experience	For All Subjects	PO1 - PO7	PSO1, PSO2, PSO3

Table 6.3.A Additional facilities created for learning

Sr. No	Facility Name	Details
1	Internet Facility	155 MBPS line by light broad band.
2	Digital Library	DEL NET institutional membership
3	Departmental Library.	Approximate 40 nos of textbook.
4	Spring board	Infosys.
5	Educational Charts	Charts available in all Lab
6	Chart/Model	Chart/Model prepared by students
7	QR Code	Enhancing laboratory learning with QR code integration

B. Effective Utilization (5)

Sr. No	Facility Name	Details Reason(s) for creating facility	Utilization	Areas in which Students are expected to have enhanced learning
1	Internet Facility	To keep the students in touch with latest technology, surfing to identify the solutions for specific problem.	Every semester	All subjects

2	Digital Library	To access the digital books, digital journals etc.	Every semester	All subjects
3	Departmental Library.	Making Availability of Books for students.	Every semester	All subjects
4	Spring board	To enhance the interdisciplinary knowledge of students.	Every Semester at least One certification course completion.	Interdisciplinary knowledge enhancement.
5	QR Code	Students could easily scan the QR codes using their smartphones or tablets, accessing the information anytime after their lab session, fostering a self-paced and personalized learning experience	Every semester	All subjects

Table 6.3.B Effective Utilization of Additional facilities created for learning

Sr. No	Facility Name	Details	Details Reason(s) for creating facility	Utilization	Areas in which Students are expected to have enhanced learning	Relevance to POs/PSOs
1	Internet Facility	155 MBPS line by light broad band.	To keep the students in touch with latest technology, surfing to identify the solutions for specific problem	Every semester	All subjects	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2, PSO3
2	Digital Library	DEL NET institutional membership	To access the digital books, digital journals etc.	Every semester	All subjects	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2, PSO3
3	Departmental Library	45 nos of textbook	Making Availability of Books for students.	Every semester	All subjects	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2, PSO3
4	Spring board	Infosys	To enhance the interdisciplinary knowledge of students	Every Semester at least two certification course completion	Interdisciplinary knowledge enhancement	PO4, PO5, PO7, PSO1, PSO2, PSO3
5	QR Code	Virtual Lab	Students could easily scan the QR codes using their smartphones or tablets, accessing the information anytime after their lab session, fostering a self-paced and personalized learning experience	Every semester	All subjects	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2, PSO3

Table 6.3.C Relevance to POs/PSOs of Additional facilities created for learning

6.4. Additional facilities created for improving the quality of learning experience in laboratories (20)

1. One Teaching faculty and a Lab Assistant are in-charge of the overall functioning/ maintenance of each lab. A dead stock register is maintained with all equipment details recorded timely.
2. Student register is maintained to record student entry and usage in the Laboratory.
3. Issue register is maintained to record the issue details of equipment's/ facilities in and out of the Laboratories.
4. Regular maintenance of computers/equipment is carried out as and when required and also at the end of every semester. As per requirement minor repairs are carried out by the Lab assistant & Faculty Members.
5. Maintenance register is maintained in the laboratories.
6. Major repairs are done by the Campus Server Room technicians by following the procedure of the institute.
7. Installation of the licensed software, Open source and proper Antivirus software are updated regularly overall ambiance. All laboratories are well equipped to meet the requirements of curriculum.
8. Laboratory manuals provided by MSBTE is followed strictly for achieving Course Outcomes, POs, & PSOs. All laboratories are well furnished and have sufficient light, good ventilation and fan arrangement.

6.5 Availability of computing facility in the department (10)

Sr. No	No Of Computer terminals	Students Computer Ratio	Details of Legal Software	Details of Networking	Details of Printers, Scanners etc.
1	125	1:2 (Per Computer Two Students)	Windows, Microsoft Office, Oracle, Borland Java, Visual Studio, Quick Heal Antivirus, Xamp, Wireshark, Eclipse, Python.	All Computers are in Network with 155 MBPS line by light broad band. , WiFi etc	1-Printer , 1 Scanner

Table 6.5.1 Availability of computing facility in the department

6.6 Language lab (10)

Sr. No	Language Laboratory	No of students	Software Used	Types of Experiments	List of Instruments	Guidance
1	Available	25 students can use the lab.	Linguaphone L21 with eye speak.	Students are trained on their Reading, Listening, Speaking and Writing skills	PC's (25), LCD Projector (1 No), Head Phones (25),	One faculty Member is involved in helping students to use the lab, Apart from the guidance given in the subject there are two lab instructors to take care of the technical aspect of the lab.

Table 6.6.1 details of Language lab

CRITERION7	ContinuousImprovement	75
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Actions taken based on the results of evaluation of each of the Pos & PSOs (25).

Identify the areas of weaknesses in the program based on the analysis of evaluation of POs & PSOs attainment levels. Measures identified and implemented to improve Pos & PSOs attainment levels for the assessment years.

**POs & PSOs Attainment Levels and Actions for improvement
(23-24)**

POs	Target Level	Attainment Level	Observations
PO 1: Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems			
PO 1	3	4	It is observed that target level is achieved

By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action1: Extra classes as well as practice sessions are conducted for the subjects having poor results in previous academic years.

Action2: Personal attention is given and counseling is done for weak students to uplift their confidence through mentoring systems

POs	Target Level	Attainment Level	Observations
PO 2:Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods			
PO 2	3	4	It is observed that target level is achieved

By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action 1: Faculty members are advised to encourage students to identify and observe problem, and think of possible approaches/solutions to these problems in regular classes.

Action 2: Arranged Workshops, Expert Talks, Industrial visit to gain knowledge on complex engineering problems & its solution.

POs	Target Level	Attainment Level	Observations
PO 3:Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet Specified needs.			
PO 3	3	3	It is observed that target level is achieved

By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action1: Skill development program, VAP is arranged for student for getting hands On experience.

Action2:: Conducted various industrial visits to explain industrial processes and use of various modern computer tools in industry

Action3: Arranged expert talks for students so they will be able to design the solution for various technical problems related to processes to meet specified needs.

POs	Target Level	Attainment Level	Observations
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PO 4: Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements

PO 4	3	4	It is observed that target level is achieved
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By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action1: Skill development program arranged for gaining hands on skill knowledge.

Action 2: Conduct various industrial visits to explain industrial processes and use of various modern tools used in industry.

POs	Target Level	Attainment Level	Observations
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PO 5: Engineering practices for society, sustainability and environment: Apply appropriate Technology in context of society, sustainability, environment and ethical practices.

PO 5	3	3	It is observed that target level is achieved
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By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action1: Visits Arranged at Water Dam, Mahiravani

Action2: students are encouraged to do projects related to environment and sustainable Development.

POs	Target Level	Attainment Level	Observations
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PO 6: Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

PO 6	3	3	It is observed that target level is achieved
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By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action 1: Various workshops were conducted like personality development And Entrepreneurship development by professional trainers.

Action 2: Students were encouraged to attend more seminars and technical events to increase their stage confidence and public speaking.

POs	Target Level	Attainment Level	Observations
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PO 7: Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes

PO 7	3	4	It is observed that target level is achieved
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By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action 1: Awareness on latest technologies and trends will be created through expert lectures, Workshops and Industrial visits.

Action 2: Expert lectures are on Personality development by professional trainers.
Action 3: Students are encouraged to enroll for training / certification courses.

PSOs	Target Level	Attainment Level	Observations
PSO1: Computer Software and Hardware Usage: Use state-of-the-art technologies for operation and application of computer software and hardware.			
PSO 1	3	4	It is observed that target level is Achieved.
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions. Action 1: Value added programs are arranged to acquire knowledge. Action 2: Skill development program arranged for gaining hands on skill knowledge. Action 3: Deputation of students for industrial training.			
POs	Target Level	Attainment Level	Observations
PSO2: Computer Engineering Maintenance: Maintain Computer Engineering related software and hardware systems.			
PSO 2	3	2	It is observed that target level is not achieved.
By adding the actions listed below and performing the corresponding activities, we aim to achieve the target. Action 1: Value added programs are arranged to acquire knowledge. Action 2: Skill development program arranged for gaining hands on skill knowledge. Action 3: Deputation of students for industrial training.			
POs	Target Level	Attainment Level	Observations
PSO3: Apply standard ethical and moral values, management principles and soft skills to develop projects for the Industry and societal needs.			
PSO 3	3	3	It is observed that target level is Achieved.
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with some additional actions. Action 1: Arranged Skill Development Program Action 2: Deputation of students for industrial training.			

POs & PSOs Attainment Levels and Actions for improvement (22-23)

POs	Target Level	Attainment Level	Observations
PO 1:Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems			
PO 1	3	4	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
Action1: Extra classes as well as practice sessions are conducted for the subjects having poor results in previous academic years. Action2: Personal attention is given and counseling is done for weak students to uplift their confidence through mentoring systems			
POs	Target Level	Attainment Level	Observations
PO 2:Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods			
PO 2	3	4	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
Action 1: Faculty members are advised to encourage students to identify and observe problem, and think of possible approaches / solutions to these problems in regular classes. Action2: Use of various teaching aids for better understanding of concepts. Action3: Arranged Workshops, Expert Talks, Industrial visit to gain knowledge on complex engineering problems & its solution.			
POs	Target Level	Attainment Level	Observations
PO 3:Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet Specified needs.			
PO 3	3	3	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
Action1: Skill development program, VAP is arranged for student forgetting hands on experience. Action2: Conducted various industrial visits to explain industrial processes and use of various modern machines used in industry Action3: Arranged expert talks for students so they will be able to design the solution for various technical problems related to processes to meet specified needs.			
POs	Target Level	Attainment Level	Observations
PO 4:Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements			
PO 4	3	4	It is observed that target level is achieved

By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action1: Skill development program arranged for gaining hands on skill knowledge.

Action 2: Conduct various industrial visits to explain industrial processes and use of various modern machines used in industry

Action3: Workshop arranged on 'Industrial Automation'

POs	Target Level	Attainment Level	Observations
PO 5: Engineering practices for society, sustainability and environment: Apply appropriate Technology in context of society, sustainability, environment and ethical practices.			
PO 5	3	3	It is observed that target level is achieved

By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action 1: Students are encouraged to do projects related to environment and sustainable Development..

Action 2: Events related to environmental issues are organized on college level like Blood donation, Health checkup & vaccination camp are arranged for all faculties, students

POs	Target Level	Attainment Level	Observations
PO 6: Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.			
PO 6	3	3	It is observed that target level is achieved

By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action1: Encourage the students to do projects on different circuits as an individual or a Teamwork.

Action 2: Various workshops were conducted like personality development And Entrepreneurship development by professional trainers.

Action3: Students were encouraged to attend more seminars and technical events to increase their stage confidence and public speaking.

POs	Target Level	Attainment Level	Observations
PO 7: Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes			
PO 7	3	4	It is observed that target level is achieved

By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action 1: Awareness on latest technologies and trends will be created through expert lectures, Workshops and Industrial visits.

Action 2: Expert lectures are on Personality development by professional trainers.

Action 3: Students are encouraged to enroll for training / certification courses.

PSOs	Target Level	Attainment Level	Observations
PSO1: Computer Software and Hardware Usage: Use state-of-the-art technologies for operation and application of computer software and hardware.			

PSO 1	3	3	It is observed that target level is Achieved.
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
Action1: Value added programs are arranged to acquire knowledge.			
Action2: Skill development program arranged for gaining hands-on skill knowledge.			
Action3: Deputation of students for industrial training.			
POs	Target Level	Attainment Level	Observations
PSO2: Computer Engineering Maintenance: Maintain Computer Engineering related software and hardware systems.			
PSO 2	3	2	It is observed that target level is not achieved.
By adding the actions listed below and performing the corresponding activities, we aim to achieve the target.			
Action1: Value added programs are rearranged to acquire knowledge.			
Action2: Skill development program arranged for gaining hands-on skill knowledge.			
Action3: Deputation of students for industrial training.			
POs	Target Level	Attainment Level	Observations
PSO3: Apply standard ethical and moral values, management principles and soft skills to develop projects for the Industry and societal needs.			
PSO 3	3	3	It is observed that target level is Achieved.
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
Action1: Arranged Skill Development Program			
Action2: Deputation of students for industrial training.			

POs & PSOs Attainment Levels and Actions for improvement (21-22)

POs	Target Level	Attainment Level	Observations
PO 1: Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems			
PO 1	3	4	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
<p>Action 1: Providing model answer papers/ Multiple Choice Questions (MCQ) and discussion on previous years question paper of MSBTE.</p> <p>Action 2: Conduction of additional and remedial classes of subjects having poor results in previous academic years.</p> <p>Action 3: Workbook for courses like Physics, Chemistry, English and Mathematics for 1st year students developed by teaching faculties.</p>			
POs	Target Level	Attainment Level	Observations
PO 2: Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods			
PO 2	3	4	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
<p>Action 1: Arranged expert talks and industrial visits for students.</p> <p>Action 2: Use of e-learning platforms.</p>			
POs	Target Level	Attainment Level	Observations
PO 3: Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet Specified needs.			
PO 3	3	3	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
<p>Action 1: Conducted various industrial visits to explain industrial processes and use of various modern technologies used in industry</p> <p>Action 2: Arranged expert talks for students so they will be able to design the solution for various technical problems related to processes to meet specified needs.</p>			

POs	Target Level	Attainment Level	Observations
PO 4:Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements			
PO 4	3	4	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
<p>Action 1: Arranged expert talks on latest tools and technologies.</p> <p>Action 3: Up gradation of existing lab by adding new software's</p> <p>Action 4: Arranged Industrial Training in area of computer software.</p>			
POs	Target Level	Attainment Level	Observations
PO 5:Engineering practices for society, sustainability and environment: Apply appropriate Technology in context of society, sustainability, environment and ethical practices.			
PO 5	3	3	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
<p>Action 1: Conduction of Expert lectures on various society issues and environment related issues and remedial actions for the same.</p> <p>Action 2: Various social and environment stability related activities conducted.</p> <p>Action 3: Undertaken students Projects related to the environment and sustainable development.</p>			
POs	Target Level	Attainment Level	Observations
PO 6: Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.			
PO 6	3	3	It is observed that target level is achieved
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
<p>Action 1: Various workshops were conducted like personality development and Entrepreneurship development by professional trainers.</p> <p>Action 2: Students were encouraged to attend more seminars and technical events to increase their stage confidence and public speaking.</p>			
POs	Target Level	Attainment Level	Observations
PO 7:Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes			
PO 7	3	4	It is observed that target level is achieved

By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.

Action 1: Expert lectures, industrial visits, seminars and training are conducted.

Action 2: Entrepreneurship development programs are regularly conducted.

Action 3: Students are encouraged to read technical magazines to get aware of the latest technologies.

PSOs	Target Level	Attainment Level	Observations
PSO1: Computer Software and Hardware Usage: Use state-of-the-art technologies for operation and application of computer software and hardware.			
PSO 1	3	3	Identified as a Curriculum Gap. So in Next academic year will take appropriate action.
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
Action 1: Arranged Expert Talks and Seminar for Carrier Guidance.			
POs	Target Level	Attainment Level	Observations
PSO2: Computer Engineering Maintenance: Maintain Computer Engineering related software and hardware systems			
PSO 2	3	2	It is observed that target level is not achieved.
By adding the actions listed below and performing the corresponding activities, we aim to achieve the target.			
Action 1: Deputation of students for industrial training.			
Action 2: Arranged entrepreneurship development programs to give an insight on commercial aspects of product development.			
.			
POs	Target Level	Attainment Level	Observations
PSO3: Apply standard ethical and moral values, management principles and soft skills to develop projects for the Industry and societal needs.			
PSO 3	3	3	It is observed that target level is Achieved.
By raising the Target Level, we aimed to achieve the higher target by maintaining the same performance along with following actions.			
Action1: Deputation of students for online training program.			

POandPSOAttainmentActiontaken

- **Industryvisits,ImplantTraining**
- **Training,Seminar,Workshopsandguidancesessionsbyexperts**
- **Encouragementformicro projects**
- **PromotingtheuseofE-resources**
- **Remedialclasses**
- **Extraclassesforweakstudents.**

- **Useoftechnologies andtoolsinTeachingLearning**
- **AcademicauditbyInternalAcademicMonitoring**
- **SkillDevelopmentprogram**
- **StudentsParticipationinCompetitions**

ImprovementinSuccessIndexofStudentswithoutthebacklog(10)

SI= (Number of students who have passed from the program in the stipulated period of coursesduration)/(Numberofstudentsadmittedinthefirstyear ofthatbatchandadmitted in2ndyearvia lateralentry)

Assessmentshallbebasedonimprovementtrendsinsuccessindices.Marksareawardedaccordingly.

Items	LYG* 23-24	LYG m12022- 23	LYG m22021- 22
Success index (from 4.2.1)	0.37	0.44	0.54

*Lastyeargraduateandm1& m2indicate minusoneyearandMinus2years respectively

ImprovementinPlacementandHigherStudies(10)

Placement Index = ((1.25* Number of students placed in companies or Government sectorthrough on/off campusRecruitment) + Number of students admitted to higher studies + No.ofstudentsturnedentrepreneurinthe respective fieldofengineering/technology))/Totalnumberoffinalyearstudents.

Assessmentisbasedonimprovementin:

- Placements: Number, qualityplacement,coreindustry, paypackagesetc.
- Higherstudies:admissionsinpremierinstitutes

Items	LYG* 2023-24	LYGm1 2022-23	LYG m2021- 22
Placement index(fromcriteria4.6)	0.86	0.90	0.59

ImprovementinAcademicPerformanceinFinalYear(10)

Academic Performance Index=(MeanofFinalYearGradePointAverageofallsuccessfulStudentson a10pointscale)or(Meanofthepercentageof markssofarllsuccessfultudentsinFinal Year/10) x (successful students/number of students appeared in the examination)Assessmentis based onimprovementin:

Items	LYG* 2022-23	LYG m12021 -22	LYG m22020 -21
Academic Performance Index (from criteria 4.5)	7.88	7.05	4.82

InternalAcademicAuditsto reviewCompleteAcademics&to implementCorrectiveActionsonContinuousBasis(10)

FollowingtableshowsInternalAcademicAudits(innumbers)

Items	CAYm1 2022-23	CAYm2 2021-22	CAYm3 2020-21
InternalAcademicAudit s	2	2	2

Aninternalmonitoringcommitteeconsistingofheadsofdepartmentandseniorfaculty isappointedbytheprincipalalongwiththeacademiccoordinator.Thiscommitteecloselyscrutinizes the Teaching Learning process, Adherence to the academic calendar, continuousassessment of students, assignments given to students and planning of various activities likeGuest Lectures, Industrial Visits, and value added courses. The student feedback is also taken intoconsideration. This kind of monitoring helps in the smooth functioning of the department. TheInternalacademicauditis performed2timesin semester.

NewFacilitycreatedintheprogram(10)

Items	CAYm1 2023-24	CAYm2 2022-23	CAYm3 2021-22
New FacilityCrea ted	QR Code,Chart/Model,Industry supportedlaboratory –CentreofExcellence	Spring board,,SkillDevelopmentProgram	Departmental Library., E-Learning materialslike PPTs, OnlineVideos, MCQs, E-Notes for variouscourses developed byFaculties