MAEER's MIT ACADEMY OF ENGINEERING, ALANDI (DEVACHI)

SELF ASSESSMENT REPORT(TIER - I) FOR Civil Engineering

Part A : Institutional Information

1 Name and Address of the Institution

MAEER's MIT ACADEMY OF ENGINEERING, ALANDI (DEVACHI),
DEHU PHATA,ALANDI (DEVACHI)

2 Type of the Institution:

○ Deemed to be University	◉ Autonomous
○ University	○ Non-Autonomous (Affiliated)
○ Institute of National Importance	○ Any Other(Please Specify)

3 Year of establishment of the Institution:

1998

4 Ownership Status:

○ Central Government	☐ Any Other(Please Specify)
○ State Government	
○ Government Aided	
◉ Self financing	

5 Name and Address of Affiliating University(if any)

Savitribai Phule Pune University

Ganesh Khind, Pune-411007

Maharashtra, India

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

Name of Institutions	Year of Establishment	Programs of Study	Location
MIT World Peace University	2017	Engineering, Design, Mana	Kothrud, Pune
MIT Art, Design & Technolo	2016	Engineering, Design, Techn	Loni Kalbhor, Pune
Avantika University	2017	Engineering, Management,	Ujjain
MIT University	2017	Management, Design, Liber	Shillong
MIT Vishwaprayag Universi	2023	Business, Design, Pharmac	Solapur
MIMSR and Shree Yeshwar	1990	Medical Science	Latur
MIMER Medical College an	1995	Medical Science	Talegaon
Maharashtra Institute of Nu	2000	Nursing	Latur
College of Physiotherapy	2006	Physiotherapy	Talegaon
Maharashtra Institute of Ph	2006	Physiotherapy	Latur
MIT Arts, Commerce and S	2007	Arts, Commerce, Science, M	Alandi, Pune

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

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Civil Engineering	UG	2014	2014	60	No	60	Granted accreditation for 3 years for the period (specify period)	2023	2026		4
Computer Engineering	UG	1999	1999	40	Yes	360	Granted accreditation for 3 years for the period (specify period)	2025	2028	0	4

Sanctioned Intake for Last Five Years for the Computer Engineering	
Academic Year	**Sanctioned Intake**
2025-26	360
2024-25	300
2023-24	240
2022-23	180
2021-22	180
2020-21	120

Electronics and Telecommunication Engineering	UG	1999	1999	60	Yes	180	Granted accreditation for 3 years for the period (specify period)	2025	2028	0	4

Sanctioned Intake for Last Five Years for the Electronics and Telecommunication Engineering	
Academic Year	**Sanctioned Intake**
2025-26	180
2024-25	180
2023-24	180
2022-23	120
2021-22	120
2020-21	120

Mechanical Engineering	UG	2006	2006	60	Yes	120	Granted accreditation for 3 years for the period (specify period)	2025	2028	0	4

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Sanctioned Intake for Last Five Years for the Mechanical Engineering											
Academic Year				**Sanctioned Intake**							
2025-26				120							
2024-25				120							
2023-24				120							
2022-23				180							
2021-22				180							
2020-21				180							
Computer Engineering (Software Engineering)	UG	2023	2023	60	Yes	180	Not eligible for accreditation	--	--	0	4
Sanctioned Intake for Last Five Years for the Computer Engineering (Software Engineering)											
Academic Year				**Sanctioned Intake**							
2025-26				180							
2024-25				120							
2023-24				60							
2022-23				0							
2021-22				0							
2020-21				0							
COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)	UG	2024	2024	60	Yes	180	Not eligible for accreditation	--	--	0	4
Sanctioned Intake for Last Five Years for the COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)											
Academic Year				**Sanctioned Intake**							
2025-26				180							
2024-25				60							
2023-24				0							
2022-23				0							
2021-22				0							
2020-21				0							
COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)	UG	2024	2024	60	Yes	120	Not eligible for accreditation	--	--	0	4

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration

Sanctioned Intake for Last Five Years for the COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)	
Academic Year	**Sanctioned Intake**
2025-26	120
2024-25	60
2023-24	0
2022-23	0
2021-22	0
2020-21	0

INFORMATION TECHNOLOGY	UG	2024	2024	60	Yes	180	Not eligible for accreditation	--	--	0	4

Sanctioned Intake for Last Five Years for the INFORMATION TECHNOLOGY	
Academic Year	**Sanctioned Intake**
2025-26	180
2024-25	60
2023-24	0
2022-23	0
2021-22	0
2020-21	0

DESIGN	UG	2019	2019	90	Yes	150	Not eligible for accreditation	--	--	0	4

Sanctioned Intake for Last Five Years for the DESIGN	
Academic Year	**Sanctioned Intake**
2025-26	150
2024-25	150
2023-24	90
2022-23	90
2021-22	90
2020-21	90

MECHANICAL ENGINEERING	PG	2014	2014	18	No	18	Eligible but not applied	--	--	0	2

COMPUTER ENGINEERING	PG	2010	2010	18	Yes	9	Eligible but not applied	--	--	0	2

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Sanctioned Intake for Last Five Years for the COMPUTER ENGINEERING											
Academic Year			**Sanctioned Intake**								
2025-26			9								
2024-25			9								
2023-24			9								
2022-23			18								
2021-22			18								
2020-21			18								
Chemical Engineering	UG	1999	1999	40	No	60	Granted accreditation for 3 years for the period (specify period)	2025	2028	No	4

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Civil Engineering

Table No. A8.2

S No	Name of the Department	Name of the Program	Name of Allied Departments/Cluster	Name of Allied Program
No record exist(s)				

9 Total Number of Faculty Members in Various Departments:

ID	Deparment Name	Number of faculty members in the Department (UG and PG)											
		2025-26 (CAY)				2024-25 (CAYm1)				2023-24 (CAYm2)			
		No. of Professors	No. of Associate Professors	No. of Assistant Professors	Total faculty members	No. of Professors	No. of Associate Professors	No. of Assistant Professors	Total faculty members	No. of Professors	No. of Associate Professors	No. of Assistant Professors	Total faculty members
1	Civil Engineering	3	1	16	20	2	1	15	18	2	1	14	17
2	Chemical Engineering	3	1	14	18	3	1	11	15	3	1	11	15
3	Computer Engineering	3	4	37	44	3	4	35	42	3	4	26	33
4	Computer Engineering (Software Engineering)	0	1	9	10	0	1	6	7	0	1	1	2
5	Computer Science & Engineering (Artificial Intelligence and Machine Learning)	0	0	7	7	0	0	5	5	0	0	2	2
6	Computer Science & Engineering (Data Science)	0	1	4	5	0	1	2	3	0	1	1	2
7	Design	1	1	16	18	1	1	17	19	1	1	14	16
8	Electronics and Telecommunication Engineering	2	4	28	34	2	4	32	38	2	1	14	17
9	Electronics Engineering	0	0	3	3	0	0	3	3	0	0	3	3
10	Information Technology	1	0	9	10	1	0	5	6	1	0	3	4
11	Mechanical Engineering	4	6	23	33	4	5	26	35	3	5	25	33
12	Humanities and Engineering Science	0	1	21	22	0	2	21	23	0	2	14	16

10 Total Number of Engineering Students in Various Departments:

ID	Deparment Name	Number of students in the Department (UG and PG)		
		2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)
1	Civil Engineering (UG)	302	265	244
2	Chemical Engineering (UG)	276	266	250
3	Computer Engineering (UG)	1324	1049	908
4	Computer Engineering (Software Engineering) (UG)	441	199	64
5	Computer Science and Engineering (Artificial Intelligence and Machine Learning) (UG)	288	60	0
6	Computer Science and Engineering (Data Science) (UG)	217	60	0
7	Design (UG)	361	297	239
8	Electronics and Telecommunication Engineering (UG)	815	700	635
9	Electronics Engineering (UG)	154	205	241
10	Information Technology (UG)	284	60	82
11	Mechanical Engineering (UG)	647	660	703
12	Computer Engineering (PG)	14	9	5
13	Electronics Engineering (PG)	0	0	0
14	Mechanical Engineering (PG	4	3	2

11 Vision of the Institution:

To be a new-age learning center for holistic development of students into professional engineers, to cater to the changing needs of techno-society.

12 Mission of the Institution:

1. Providing new-age infrastructural facilities blended with skill-based curriculum and activity-based pedagogical approaches to develop competitive engineering professionals to solve real-world problems.
2. Preparing students for lifelong learning by transforming educational practices.
3. Promoting an ethical and moral values by involving students into community services.
4. Inculcating an entrepreneurship and managerial skills by strengthening industry-institute interaction.

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

Head of the Institution	
Name	Dr. Yogesh J. Bhalerao
Designation	Director
Mobile No.	9689907476
Email ID	principal@maepune.ac.in

NBA Coordinator, If Designated

Name	Dr. Suyogkumar V. Taralkar
Designation	Professor and IQAC Coordinat
Mobile No.	9011332500
Email ID	svtaralkar@chem.maepune.ac.

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	OUTCOME-BASED CURRICULUM	120	105.00
2	OUTCOME-BASED TEACHING LEARNING	120	115.00
3	OUTCOME-BASED ASSESSMENT	120	107.00
4	STUDENTS' PERFORMANCE	120	80.80
5	FACULTY INFORMATION	100	96.00
6	FACULTY CONTRIBUTIONS	120	79.00
7	FACILITIES AND TECHNICAL SUPPORT	100	87.00
8	CONTINUOUS IMPROVEMENT	80	66.00
9	STUDENT SUPPORT AND GOVERNANCE	120	117.00
	Total	**1000**	**853**

Part B : Criteria Summary

1 OUTCOME-BASED CURRICULUM (120)

Total Marks 105.00

1.1 Vision, Mission and Program Educational Objectives (PEOs) (35)

Total Marks 35.00

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

Institute Marks : 5.00

Vision of the institute	To be a new-age learning center for holistic development of students into professional engineers, to cater to the changing needs of techno-society.
Mission of the institute	1. Providing new-age infrastructural facilities blended with skill-based curriculum and activity-based pedagogical approaches to develop competitive engineering professionals to solve real-world problems. 2. Preparing students for lifelong learning by transforming educational practices. 3. Promoting an ethical and moral values by involving students into community services. 4. Inculcating an entrepreneurship and managerial skills by strengthening industry-institute interaction.
Vision of the Department	To be a state-of-the-art Department of Civil Engineering dedicated to the holistic development of students by imparting knowledge for ever-changing industrial, ecological & social needs.
Mission of the Department	

Mission No.	Mission Statements
M1	Providing state-of-the-art infrastructure facilities combined with skill-based education and outcome-based pedagogical practices in order to build competent engineering professionals who can address real-world challenges in civil engineering.
M2	Nurturing students for professional growth by transforming civil engineering educational practices, focusing on research aptitude.
M3	Imbibing students for humanitarian efforts in order to elevate moral and ethical responsibilities for society.
M4	Enhancing entrepreneurial and managerial skills by developing industry-institute relations.

1.1.2 State PEOs of the Program (5)

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Apply civil engineering principles and modern tools to design and develop sustainable infrastructure solutions for industrial and societal needs.
PEO2	Demonstrate professional ethics, teamwork, and effective communication while addressing real-world challenges in civil engineering.
PEO3	Engage in lifelong learning, research, and professional development to adapt to emerging technologies and global trends.

1.1.3 Process of Defining Vision, Mission and PEOs (10)

Institute Marks : 10.00

The Civil Engineering Department follows a structured and participative approach to define its Vision, Mission, and Program Educational Objectives (PEOs), ensuring alignment with the Institute's Vision and Mission, compliance with NBA guidelines, and responsiveness to stakeholder expectations. Active stakeholder involvement ensures that the Vision and Mission remain relevant, outcome-oriented, professionally aligned, and responsive to societal and industry needs.

Process to Define Vision and Mission of the Department

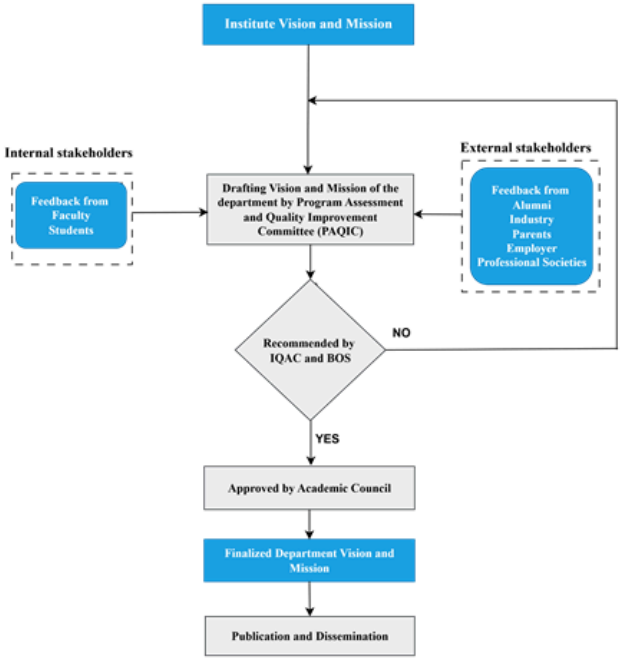


Fig 1.1.3a. Process of defining vision and mission of the department

The steps are as follows based on the Fig. 1.1.3a:

- The Vision and Mission of the Civil Engineering Department are defined through a systematic, participative, and well-documented process, aligned with the Institute Vision and Mission.
- Inputs are obtained from internal stakeholders (faculty and students) and external stakeholders (alumni, industry experts, employers, and parents).
- Inputs from professional bodies are incorporated from reputed organizations such as the Indian Geotechnical Society (IGS), the Indian Concrete Institute (ICI), and the Pune Construction Engineering Research Foundation (PCERF) to ensure professional relevance and industry alignment.
- Based on consolidated stakeholder feedback, the Vision and Mission are drafted by the Program Assessment and Quality Improvement Committee (PAQIC).
- The draft statements are reviewed and recommended by the Internal Quality Assurance Cell (IQAC) and the Board of Studies (BOS).
- Upon recommendation, the Vision and Mission are approved by the Academic Council.
- The finalized Vision and Mission are published and widely disseminated through multiple channels, including the department website, handbook, notice boards, Learning Management System (LMS), brochures, student induction programs, presentations, and stakeholder interactions, to ensure effective visibility and awareness among all stakeholders.
- This structured process ensures that the Vision and Mission are stakeholder-driven, professionally aligned, periodically reviewed, and supportive of Outcome-Based Education (OBE).

Process to Define Program Educational Objectives (PEOs) of the Department

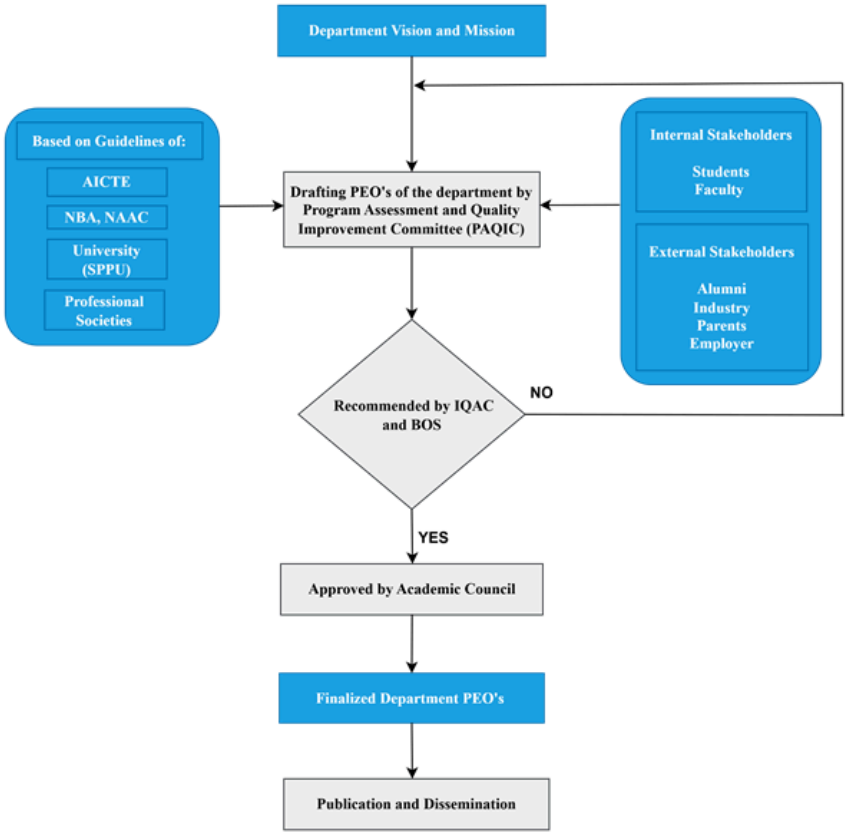


Fig 1.1.3b. Process for defining PEO's of department

The Civil Engineering Department follows a systematic, structured, and participative approach for defining and periodically reviewing its Program Educational Objectives (PEO's).

The process ensures as per figure no. 1.1.3b;

- Alignment with the Institute's and Department's Vision and Mission.
- Compliance with AICTE, NBA, NAAC, affiliating university, and professional society guidelines.
- Incorporation of stakeholder expectations and long-term professional outcomes of graduates.
- The Program Assessment and Quality Improvement Committee (PAQIC) initiates the formulation of PEOs by referring to the Institute's and Department's Vision and Mission to ensure strategic and academic alignment.

Stakeholder involvement is essential as it ensures (Refer Table 1.1.3a):

- Faculty inputs maintain academic rigor and curriculum feasibility.
- Students highlight learning experiences, skill gaps, and career aspirations
- Alumni contribute insights on professional preparedness, career progression, and real-world applicability of engineering knowledge.
- Industry professionals and employers ensure alignment with current and emerging industry requirements.
- Parents emphasize ethical conduct, social responsibility, and sustainable career development.
- Professional societies guide the inclusion of engineering ethics, professional responsibility, and global engineering standards.

- While drafting the PEOs, the PAQIC ensures adherence to the guidelines and requirements of AICTE, NBA, NAAC, the affiliating university, and relevant professional bodies.
- The drafted PEOs are presented to the Internal Quality Assurance Cell (IQAC) and the Board of Studies (BoS) for review and recommendation:
- If revisions are suggested, the draft is refined by the PAQIC and resubmitted.
- Upon recommendation, the PEOs proceed to the approval stage.
- The recommended PEOs are submitted to the Academic Council (AC) for final approval.

After approval from Academic Council :

- The finalized PEOs are formally documented.
- Alignment with the Department's Vision and Mission is ensured.
- The PEO formulation and review process is conducted once every 5–6 years, or earlier if mandated by regulatory bodies such as AICTE or NBA, to ensure continued relevance.
- The approved PEOs are published and disseminated widely among all stakeholders through departmental websites, brochures, induction programs, and presentations to ensure visibility among all stakeholders.

Table 1.1.3a: Stakeholders Input Matrix

Sr. No	Stakeholder	Mode of Input	Key Expectations / Inputs	Role in Formulation & Review of Vision, Mission & PEOs
1	Institute Leadership	Strategic meetings, policy documents	Institutional goals, quality benchmarks	Ensures alignment with Institute Vision, Mission and long-term strategic direction
2	Industry Experts / Employers	Industry interaction, surveys, MoUs	Employability skills, industry readiness, emerging technologies	PEOs emphasize practical exposure, industry relevance and career preparedness
3	Alumni	Alumni meets, feedback forms	Professional preparedness, global competitiveness	PEOs promote lifelong learning, adaptability and professional growth
4	Faculty Members	Department meetings, workshops	Academic rigor, OBE implementation, research orientation	Vision and Mission reflect academic excellence, innovation and outcome-based education
5	Regulatory / Accreditation Bodies	Manuals, NBA guidelines	OBE framework, PEO-PO mapping, Continuous Quality Improvement (CQI) processes	Ensures OBE orientation, compliance and continual improvement
6	Students	Feedback forms, student council	Quality education, skills, career development	Mission focuses on student-centric learning and holistic development
7	Professional Bodies (IGS, ICI, PCERF)	Memberships, conferences, guidelines	Ethics, sustainability, global best practices	Vision and Mission emphasize ethical responsibility and global standards

8	Society (NGOs, Local Bodies)	Community projects, outreach programs	Sustainable development, societal impact	Vision and Mission include social responsibility and sustainable engineering

1.1.4 Dissemination of Vision, Mission and PEOs (5)

Institute Marks : 5.00

The Civil Engineering Department ensures that the Vision, Mission, and Program Educational Objectives (PEOs) are effectively communicated and understood by all stakeholders through a structured dissemination and awareness process. This process covers both internal stakeholders (Management, Governing Board Members, faculty, support staff, students) and external stakeholders (employers, industry representatives, alumni, funding agencies, parents). The Vision and Mission of the Institute are published and disseminated as follows in Table 1.1.4a:

Table 1.1.4a: The Vision and Mission of the Institute dissemination.

Sr. No.	Location	Internal Stakeholders	External Stakeholders
1	Institute's Website	✓	✓
2	Institute's Brochure	✓	✓
3	Enterprise Resource Planning (ERP)	✓	-
4	LMS- Moodle Home Page	✓	-
5	Administration Building	✓	✓
6	Director's Office	✓	✓
7	Deputy Director's Office	✓	✓
8	Examination Office	✓	✓
9	Student Support Section/ Office	✓	✓
10	Stake Holder's Meeting (BOS, Alumni, Industry Institute Interaction, etc)	✓	✓
11	HOD Office	✓	✓

The Vision, Mission, and PEOs of the Civil Engineering Department are published and disseminated as in Table 1.1.4b:

Table 1.1.4b: Vision, Mission, and PEOs of the Civil Engineering Department dissemination

Sr. No.	Location	Internal Stakeholders	External Stakeholders
1	HOD Office	✓	✓
2	Board of Studies (BOS) Meetings	✓	✓
3	Academic Audit	✓	✓
4	Product Audit	✓	✓
5	Curriculum Structure	✓	✓
6	Department Handbook	✓	✓
7	Laboratory Manual	✓	-
8	Classrooms	✓	✓
9	Laboratories	✓	✓
10	Departmental Notice Board	✓	✓
11	Learning Management System (LMS)	✓	-
12	Educational Organizations Management System (EOMS) file.	✓	-
13	Student Project files	✓	-
14	Email Communication	✓	✓

15	Department Presentation for a parent meet, alumni meet, etc.	✓	✓
16	Employer/Industry meetings	-	✓
17	Department magazine and news letter	✓	✓

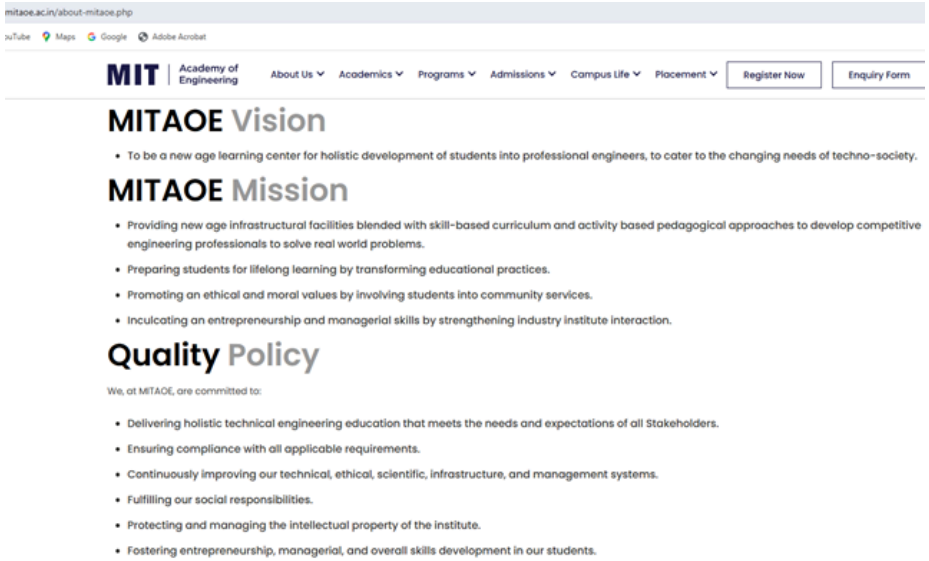


Fig 1.1.4a. Institute's Vision – Mission displayed on the Institute Official Website (**https://mitaoe.ac.in/about-mitaoe.php*** (https://mitaoe.ac.in/about-mitaoe.php)**)**

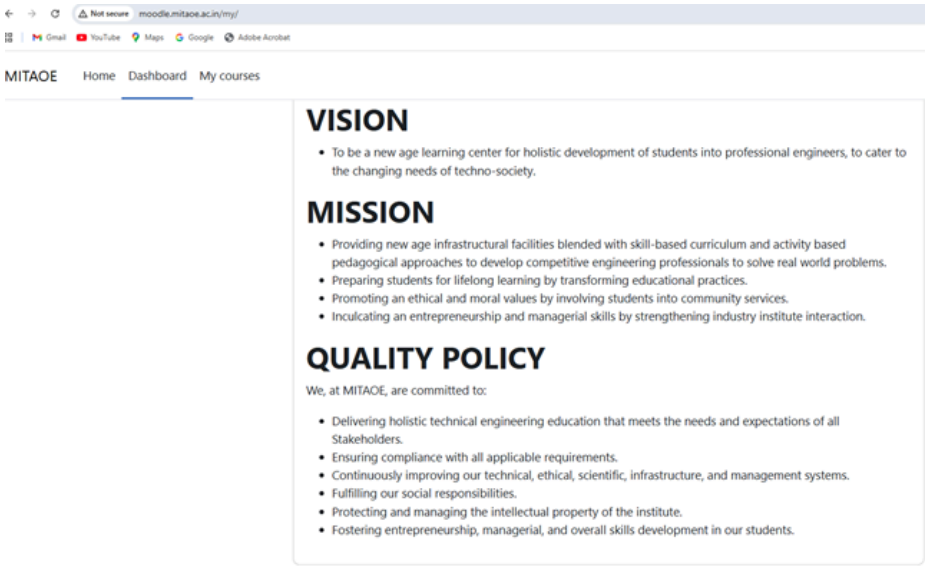


Fig 1.1.4b. Institute's Vision – Mission displayed on the MOODLE Home page

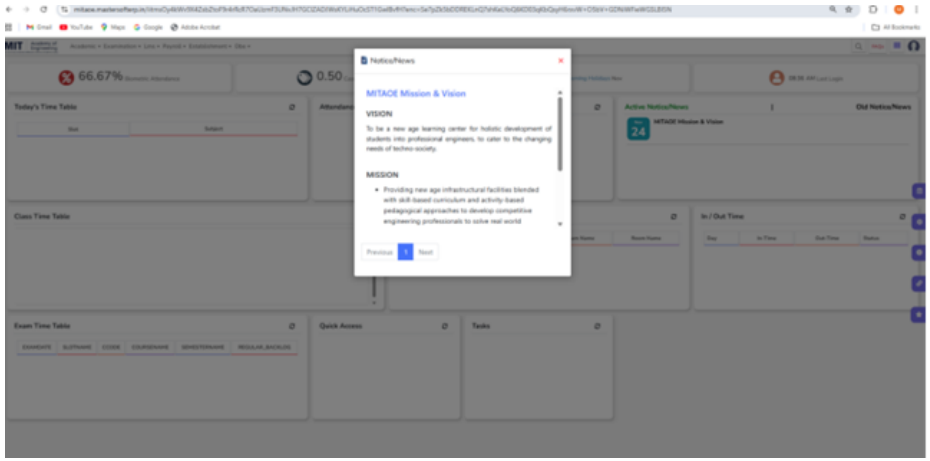


Fig 1.1.4c. Institute's Vision – Mission displayed on ERP

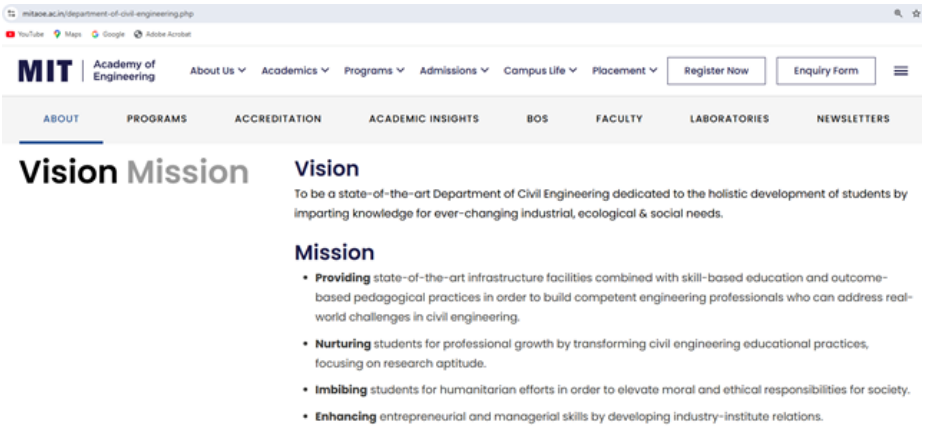


Fig 1.1.4d. Vision – Mission of Civil dept. displayed on the Institute Official Website *(https://mitaoe.ac.in/BTech-Civil-Engineering.php* (https://mitaoe.ac.in/BTech-Civil-Engineering.php) *)*

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO No.	PROGRAM SPECIFIC OUTCOMES (PEOs)
PEO 1	Apply civil engineering principles and modern tools to design and develop sustainable infrastructure solutions for industrial and societal needs.
PEO 2	Demonstrate professional ethics, teamwork, and effective communication while addressing real-world challenges in civil engineering.
PEO 3	Engage in lifelong learning, research, and professional development to adapt to emerging technologies and global trends.

Fig 1.1.4e.. PSOs and PEOs of Civil dept. displayed on the Institute Official Website *(https://mitaoe.ac.in/Btech-civil-engineering-PEOs-PSOs-POs.php* (https://mitaoe.ac.in/Btech-civil-engineering-PEOs-PSOs-POs.php) *)*

Fig 1.1.4f. Vision-Mission of Civil Engineering dept. on the displayed-on MOODLE Course page

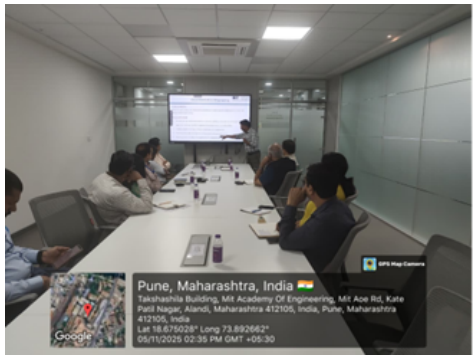


Fig 1.1.4g. Vision-Mission, POs, PSO & PEOs Disseminated in BOS Meeting

Fig 1.1.4h. Vision-Mission, POs, PSO & PEOs Disseminated in Academic Audit

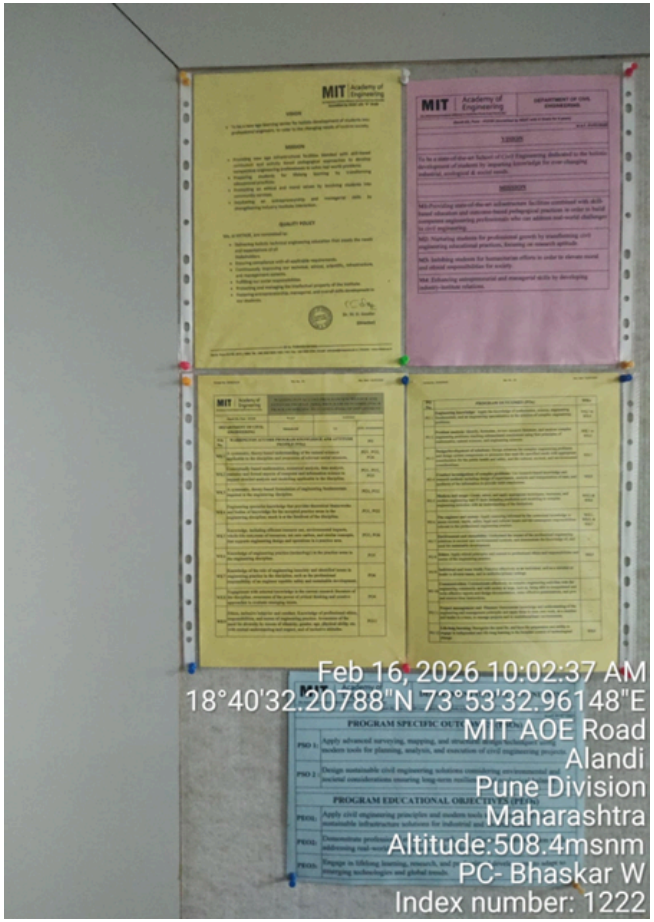


Fig 1.1.4i. Vision-Mission, POs, PSO & PEOs Disseminated in HOD Office

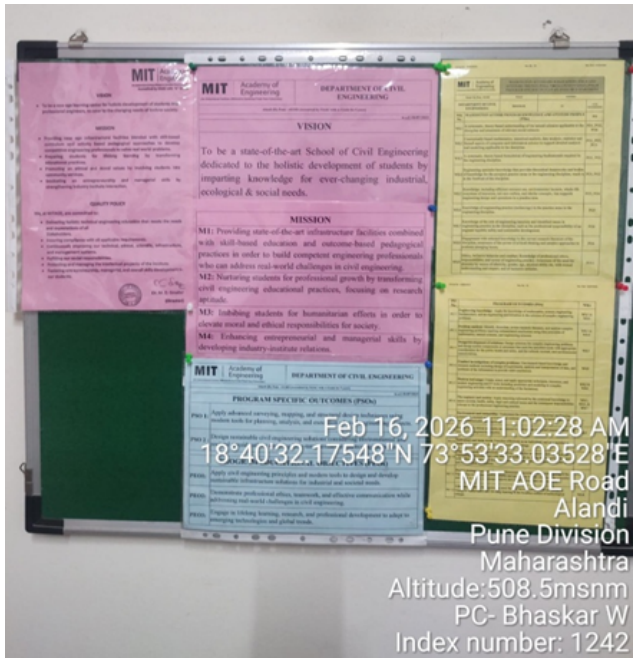


Fig 1.1.4j. Vision-Mission, POs, PSO & PEOs Disseminated in Faculty Cabin

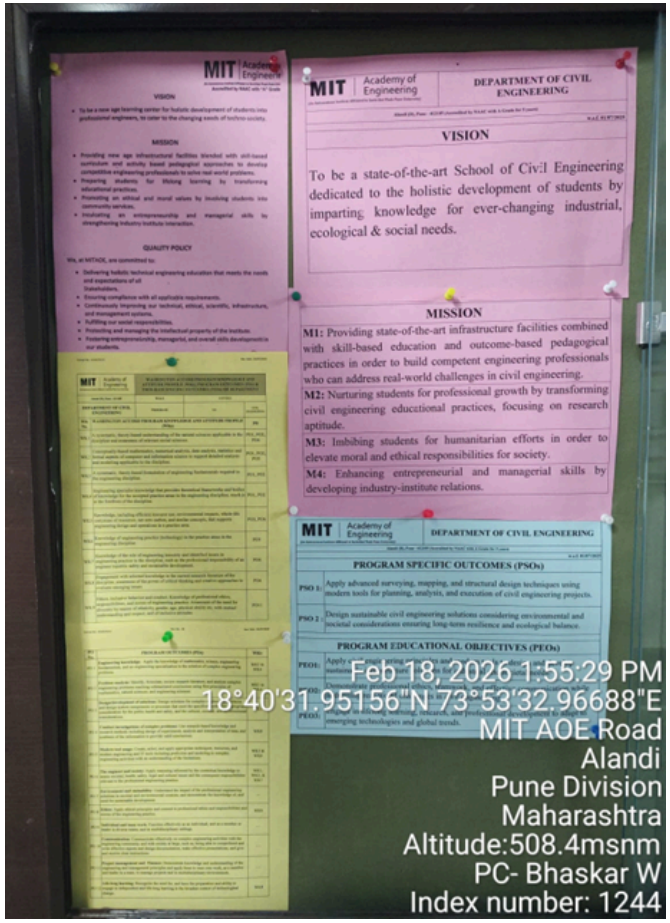


Fig 1.1.4k. Vision-Mission, POs, PSO & PEOs Disseminated on Student/Department Notice Board

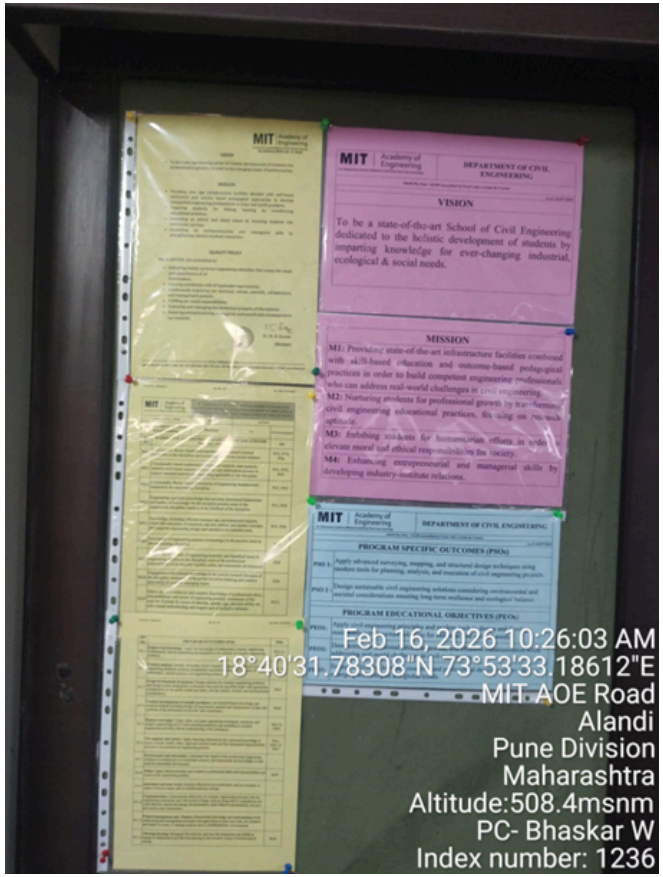


Fig 1.1.4l. Vision-Mission, POs, PSO & PEOs Disseminated in Class Room

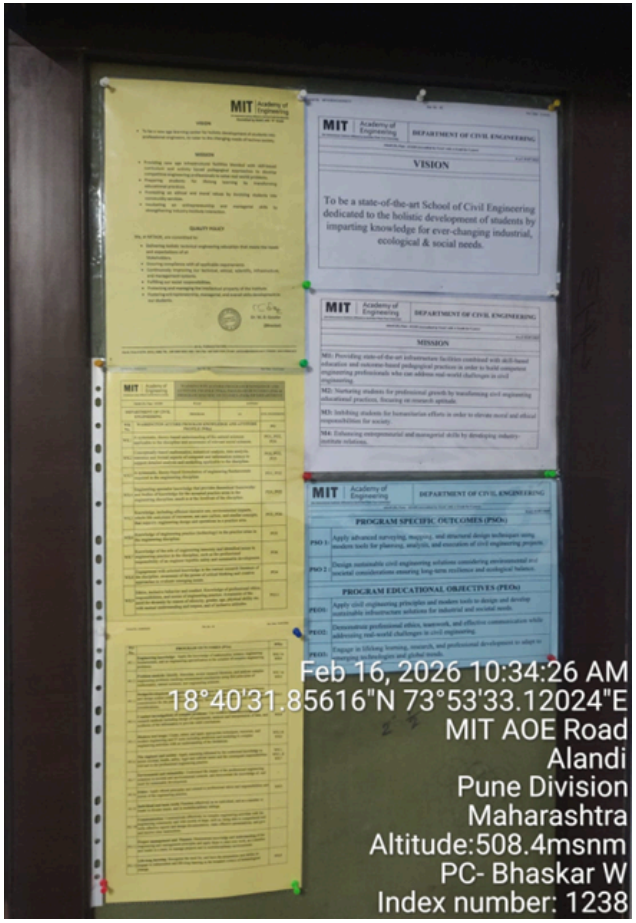


Fig 1.1.4m. Vision-Mission, POs, PSO & PEOs Disseminated on the Computer Laboratory Notice Board

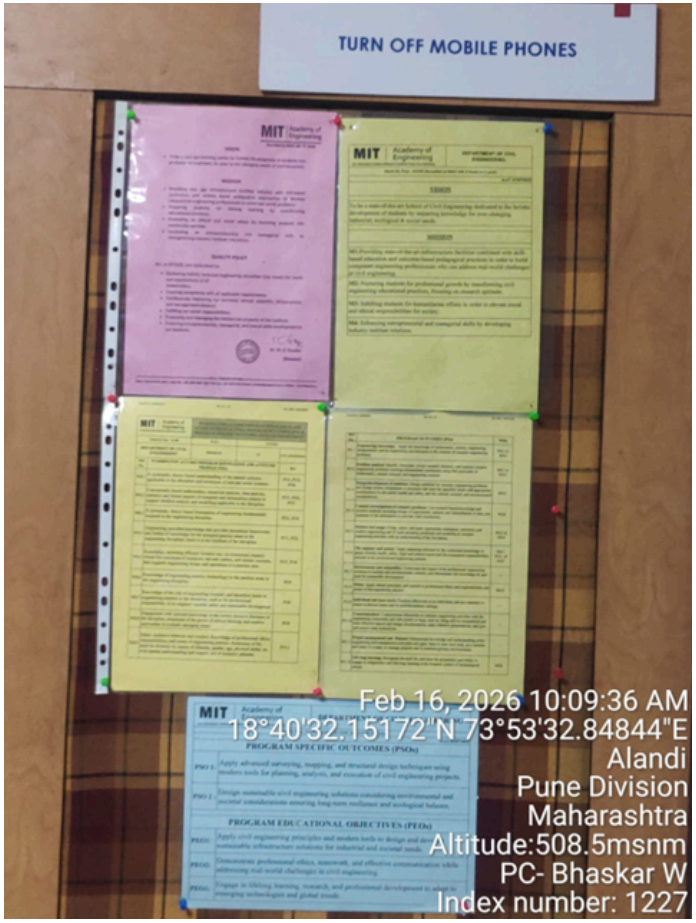


Fig 1.1.4n. Vision-Mission, POs, PSO & PEOs Disseminated on the Environmental Laboratory Notice Board.

1.1.5 Mapping of PEOs with Mission (10)

Institute Marks : 10.00

PEO Statements	M1	M2	M3	M4
Apply civil engineering principles and modern tools to design and develop sustainable infrastructure solutions for industrial and societal needs.	3	2	1	2
Demonstrate professional ethics, teamwork, and effective communication while addressing real-world challenges in civil engineering.	2	2	3	3
Engage in lifelong learning, research, and professional development to adapt to emerging technologies and global trends.	2	3	2	2

Table 1.1.5a. Justification for PEOs and Mission Statements mapping

PEO	Mission	Mapping Strength	Justification
PEO 1	M1	3 (Strong)	State-of-the-art infrastructure and skill-based education strongly support technical competence and effective application of modern engineering tools. Core courses such as Structural Analysis, Concrete Technology, Transportation Engineering, Geotechnical Engineering, along with well-equipped laboratories, ensure strong technical foundations.
	M2	2 (Moderate)	Mini Projects and the Major Project moderately contribute to innovative thinking and problem-solving abilities required for sound engineering design.
	M3	1 (Low)	Humanitarian and societal initiatives have limited direct influence on technical application, though they provide contextual awareness of engineering solutions.
	M4	2 (Moderate)	Industry–institute interaction through internships, industrial visits, and expert lectures moderately supports the application of engineering principles to real-world problems.

PEO 2	M1	2 (Moderate)	Skill-based education moderately enhances teamwork and communication skills through laboratory work, group assignments, project-based and experiential learning activities.
	M2	2 (Moderate)	Research orientation encourages ethical conduct and collaboration through seminars, technical paper presentations, and group-based research activities.
	M3	3 (Strong)	Courses such as Environmental Engineering, supported by ethics- and sustainability-focused curriculum components and experiential learning activities, strongly align with professional ethics, social responsibility, and sustainable development.
	M4	3 (Strong)	Entrepreneurial and managerial skill development through Project Management and entrepreneurship-oriented curriculum components and activities substantially strengthens teamwork, leadership, and communication abilities.
PEO 3	M1	2 (Moderate)	Outcome-Based Education (OBE) pedagogy moderately supports the development of adaptability and a lifelong learning mindset among graduates.
	M2	3 (Strong)	Strong emphasis on program electives and Major Project work significantly promotes independent learning, research aptitude, and continuous professional development.
	M3	2 (Moderate)	Moral and ethical value-based education moderately encourages graduates to pursue continuous learning and contribute responsibly to society.
	M4	2 (Moderate)	Industry exposure through internships, industrial training, and professional interactions provides moderate support for adaptability and long-term career growth among graduates.

1.2 Curriculum Structure and Features (30) Total Marks 30.00

1.2.1 State the Process for Developing/Revising the Program Curriculum (10)

Institute Marks : 10.00

The Civil Engineering program follows a well-defined and systematic Curriculum Structure Design and Development Process, as documented in the Curriculum Structure Design Record (CSDR). This process ensures full alignment with the Washington Accord Knowledge Profiles (WKs) and the NBA Program Outcomes (POs). Curriculum revision is initiated based on comprehensive inputs from industry experts, students, faculty members, alumni, and regulatory bodies such as AICTE and SPPU, supported by evidence from batch-exit surveys, employer feedback, academic audits, and product audits. These inputs are reviewed and analyzed by the Board of Studies (BoS), which prepares the draft curriculum in accordance with the Institute's Common Curriculum Framework (168 credits) and mapped to the **Vision–Mission**, **PEOs**, **POs**, and **WK1–WK9**, ensuring comprehensive coverage of engineering fundamentals, problem analysis, design, investigation, modern tools, ethics, environmental responsibility, teamwork, and lifelong learning competencies.

The draft curriculum undergoes a rigorous multi-level review process beginning with departmental and institute-level scrutiny by internal experts, followed by evaluation by external experts through the Board of Studies. After incorporating the suggestions from BoS members, the revised curriculum is forwarded for approval to the Academic Council and subsequently ratified by the Governing Body. Upon approval, the curriculum is formally released and implemented across the program. This structured, evidence-driven, and outcome-oriented process ensures that the curriculum remains contemporary, relevant, and fully compliant with national and international engineering education standards.

- **Identify Need for Revision**

  Regulatory changes (AICTE/SPPU/DTE), NBA/NAAC.

  Feedback: students, faculty, alumni, industry, batch-exit, audits.

- **Collect and Analyze Inputs**

  Map feedback to gaps in existing curriculum

  Benchmark with national & international universities and Washington Accord WKs

- **Draft Programme Curriculum (BoS & PAQIC)**

  Use Common Curriculum Framework (168 credits)

  Define/revise PCC, PEC, OE, MDM, VSEC, HSSM, project and internship.

  Ensure PEO–PO–PSO–WK mapping.

- **Internal & External Review**

  Academic rigor, OBE alignment, feasibility, lab & infrastructure readiness

- **Approval Process**

  Academic Council scrutiny and approval

  Governing Body ratification

- **Implementation & Communication**

  Publish curriculum, syllabi, teaching and assessment schemes

  Orient faculty (training calendar, FDPs)

- **Validation & Continuous Improvement**

  Monitor via course exit feedback, batch-exit survey, employer/alumni feedback, academic/product audits.

  Document changes in CSDR ("Curriculum Structure Design and Development Changes") and trigger next cycle.

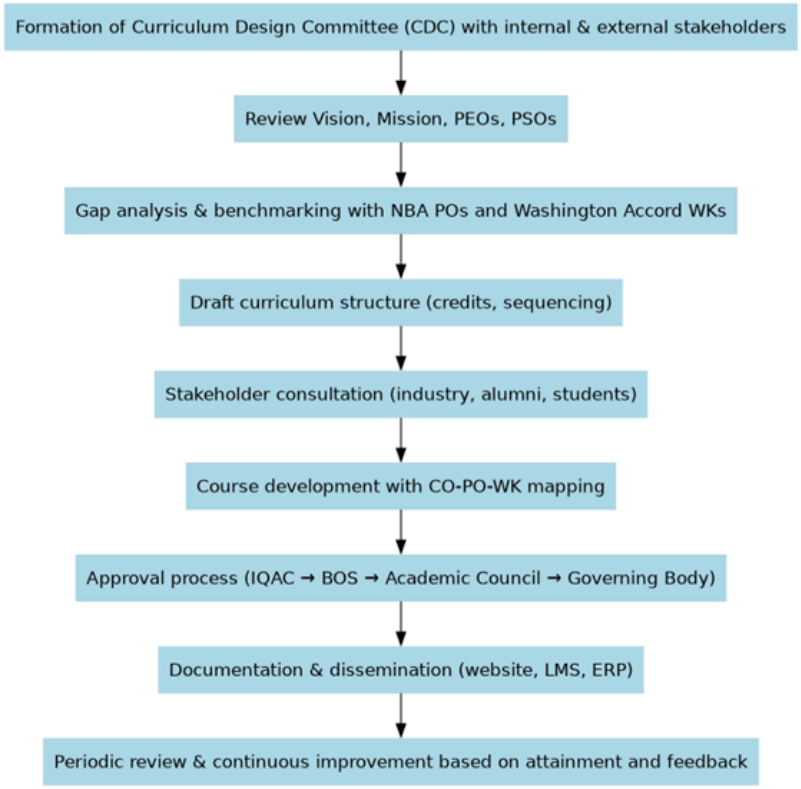


Fig 1.2.1a. Curriculum Design and Evolution Process

Integration of Washington Accord WKs and NBA POs

- Each course is mapped to WKs (e.g., WK1: Engineering fundamentals, WK4: Design, WK8: Ethics) and relevant POs (e.g., PO1: Engineering knowledge, PO3: Design/development of solutions).
- Mapping ensures global standards and graduate attributes are achieved.

1.2.2 Curriculum Structure (10) Institute Marks : 10.00

Edit

ID	Course Code	Course Title	Classroom Instruction (Cl) (in hours per semester)		Lab Instruction (LI) (in hours per semester)	Term Work (TW) and Self Learning (SL) (TW+ SL) (in hours per semester)	Total no. of Hours per semester	Total Credits (C)* (Total Hours/30)
			L	T	P	SL		
1	2301101T	Calculus and Differential Equations	45	0	0	45	90	3.00
2	2301101U	Calculus and Differential Equations Tutorial	0	15	0	15	30	1.00
3	2301102T	Engineering Physics	30	0	0	30	60	2.00
4	2301102L	Engineering Physics Lab	0	0	30	0	30	1.00
5	2307101T	Electrical & Electronics Engineering	30	0	0	30	60	2.00
6	2307101L	Electrical & Electronics Engineering Lab	0	0	30	0	30	1.00
7	2304101L	Foundations of Computing	30	0	0	30	60	2.00
8	2304101L	Foundations of Computing Lab	0	0	30	0	30	1.00
9	2303161L	Computer-Aided Engineering Drawing	0	0	60	0	60	2.00
10	2301111L	Communication Skills (English) Lab	0	0	60	0	60	2.00
11	2301182L	Liberal Learning	0	0	30	0	30	1.00
12	2303181T	Indian Knowledge System (Ancient Indian Architecture & Town Planning)	30	0	0	30	60	2.00
13	2301103T	Statistics and Integral Calculus	45	0	0	45	90	3.00
14	2301103U	Statistics and Integral Calculus Tutorial	0	15	0	15	30	1.00
15	2301104T	Science of Nature	45	0	0	45	90	3.00
16	2301104L	Science of Nature Lab	0	0	30	0	30	1.00
17	2304102T	Essentials of Data Science	30	0	0	30	60	2.00
18	2304102L	Essentials of Data Science Lab	0	0	30	0	30	1.00
19	2303101T	Applied Mechanics	30	0	0	30	60	2.00

20	2303101L	Applied Mechanics Lab	0	0	30	0	30	1.00
21	2309101T	Design Thinking	15	0	0	15	30	1.00
22	2309101L	Design Thinking Lab	0	0	30	0	30	1.00
23	2303162T	Surveying and Geomatics	15	0	0	15	30	1.00
24	2303162L	Surveying and Geomatics Lab	0	0	30	0	30	1.00
25	2303111T	Basics of Civil Engineering	30	0	0	30	60	2.00
26	2307183L	Creative Technologies	0	0	60	0	60	2.00
27	2303210T	Mechanics of Solids	29	0	0	31	60	2.00
28	2303212T	Geotechnical Engineering	45	0	0	45	90	3.00
29	2303212L	Geotechnical Engineering Lab	0	0	30	0	30	1.00
30	2303213T	Building Design and Construction	45	0	0	45	90	3.00
31	2303213L	Building Design and Construction Lab	0	0	30	0	30	1.00
32	2303264L	Building Information Modeling–I	0	0	60	0	60	2.00
33	23BD251L	Prototyping	0	0	60	0	60	2.00
34	2301286T	Environmental Science	30	0	0	30	60	2.00
35	2301287	Universal Human Values–II	15	0	60	15	90	3.00
36	2303291L	Project Design	0	0	30	0	30	1.00
37	2303296L	Internship (Life & Soft Skills)	0	0	0	60	60	2.00
38	2303214T	Mechanics of Fluids	45	0	0	45	90	3.00
39	2303214L	Mechanics of Fluids Lab	0	0	24	6	30	1.00
40	2303215T	Surveying & Geospatial Engineering	15	0	0	15	30	1.00
41	2303215L	Surveying & Geospatial Engineering Lab	0	0	30	0	30	1.00
42	2303216T	Structural Analysis	45	0	0	45	90	3.00
43	2303216L	Structural Analysis Lab	0	0	30	0	30	1.00

44	MDM Annexure	Multi-Disciplinary Minor Course–I	30	0	0	30	60	2.00
45	MDM Annexure	Multi-Disciplinary Minor Course–I Lab	0	0	30	0	30	1.00
46	2301252T	Applied Mathematics	45	0	0	45	90	3.00
47	2301252L	Applied Mathematics Lab	0	0	28	02	30	1.00
48	2303268L	Data Analysis	0	0	60	0	60	2.00
49	2301276	Entrepreneurship Skills	32	0	11	17	60	2.00
50	2303292L	Project Implementation	0	0	30	0	30	1.00
51	2301281A	Indian Constitution (Audit)	0	0	0	0	0	0.00
52	2303311T	Concrete Technology	45	0	0	45	90	3.00
53	2303311L	Concrete Technology Lab	0	0	30	0	30	1.00
54	2303312T	Water Supply & Sanitation Engineering	42	0	0	48	90	3.00
55	2303312L	Water Supply & Sanitation Engineering Lab	0	0	24	06	30	1.00
56	2303321/22/23T	Construction Engineering & Management/Design of Steel Structures/Hydrology & Irrigation Engineering	46	0	0	44	90	3.00
57	2303321/22/23L	Construction Engineering & Management/Design of Steel Structures/Hydrology & Irrigation Engineering	0	0	30	0	30	1.00
58	2303361/62L	Analysis & Design of Building Systems/Building Information Modeling–II	0	0	60	0	60	2.00
59	MDM Annexure	Multi-Disciplinary Minor Course–II	30	0	0	30	60	2.00
60	MDM Annexure	Multi-Disciplinary Minor Course–II Lab	0	0	30	0	30	1.00
61	2303391	Major Project–I	0	0	60	0	60	2.00
62	2303396	Internship (Technical)	0	0	0	60	60	2.00
63	2303314T	Design of Reinforced Concrete Structures	45	0	0	45	90	3.00
64	2303314L	Design of Reinforced Concrete Structures Lab	0	0	30	0	30	1.00
65	2303315T	Transportation Engineering	45	0	0	45	90	3.00

66	2303315L	Transportation Engineering Lab	0	0	28	2	30	1.00
67	2303326/27/28T	Contracts Management/Solid & Industrial Waste Management/Formwork Modelling & Design	45	0	0	45	90	3.00
68	2303326/27/28L	Contracts Management Lab/Solid & Industrial Waste Management Lab/Formwork Modelling & Design Lab	0	0	30	0	30	1.00
69	2303366/67L	Drone Surveying/Hydraulic Modeling	0	0	56	4	60	2.00
70	MDM Annexure	Multi-Disciplinary Minor Course–III	30	0	0	30	60	2.00
71	MDM Annexure	Multi-Disciplinary Minor Course–III Lab	0	0	30	0	30	1.00
72	2303371L	Employability & Career Development	0	0	60	0	60	2.00
73	2303392L	Major Project–II	0	0	60	0	60	2.00
74	2303411T	Estimating and Costing	45	0	0	45	90	3.00
75	2303411L	Estimating and Costing Lab	0	0	30	0	30	1.00
76	2303421/22/23T/2303409L	Advanced Construction Techniques/Environmental Impact & Climate Change Engineering/Railway Engg/IP	45	0	0	45	90	3.00
77	2303421/22/23L/2303409L	Advanced Construction Techniques/Environmental Impact & Climate Change Engineering/Railway Engg/IP	0	0	30	0	30	1.00
78	MDM Annexure	Multidisciplinary Minor Course–IV	30	0	0	30	60	2.00
79	2303476/2303499L	Project Management/IP	30	0	0	30	60	2.00
80	2303491	Major Project–III	0	0	60	0	60	2.00
81	2303492/2303499L	Research Methodology/IP	28	0	0	32	60	2.00
82	2303496	Summer Internship (Technical)	0	0	0	120	120	4.00
83	2303413T	Dams and Hydraulic Structures	45	0	0	45	90	3.00
84	2303413L	Dams and Hydraulic Structures Lab	0	0	30	0	30	1.00
85	2303SW##	Swayam Course (PEC)	20	0	0	70	90	3.00
86	MDM Annexure	Swayam Course (MDM-V)	20	0	0	70	90	3.00

87	230145XX	Professional Certification Skill Course	0	0	60	0	60	2.00
88	2303493/97/98L	Capstone Portfolio/Semester-Long Internship/Student Outreach Program	0	0	0	240	240	8.00
		Total	**1342**	**30**	**1701**	**1967**	**5040**	**168.00**

1.2.3 Components of Curriculum (5)

Institute Marks : 5.00

Course Components	Curriculum Content (% of total number of credits of the program)	Total number of contact hours	Total number of credits
Basic Sciences	9	255.00	15.00
Basic Engineering	9	285.00	14.00
Humanities and Social Scie	10	388.00	18.00
Program Core	27	837.00	46.00
Program Electives	9	237.00	15.00
Open Electives	5	193.00	8.00
Project(s)	6	268.00	10.00
Internships/Seminars	10	800.00	16.00
Any other (Please specify)	15	600.00	26.00
Total number of Credits			**168.00**

1.2.4 Strategies for Education Reforms (5)

Institute Marks : 5.00

To align with NEP 2020, AICTE guidelines, and global best practices, the Civil Engineering Department has adopted the following strategies:

1. **Multidisciplinary and Interdisciplinary Integration:**
    - Curriculum includes open electives and multidisciplinary courses from allied engineering branches and emerging domains such as AI, IoT, and Data Science with civil engineering applications (e.g., smart cities, structural health monitoring).
    - Students can opt for Honors and Minors programs in specialized areas like Environmental Engineering and Construction Management to broaden their knowledge base.
2. **Academic Bank of Credits (ABC):**
    - The institute has implemented ABC as per UGC and Maharashtra Government directives, enabling students to earn, store, and transfer credits across institutions.
    - Credits from MOOCs (SWAYAM/NPTEL), internships, and value-added courses are integrated into the ABC framework for flexibility and lifelong learning.
3. **Automated Permanent Academic Account Registry (APAAR):**
    - APAAR IDs are generated for all students to ensure secure, centralized academic records.
    - This system supports credit mobility, compliance with NEP's multiple entry-exit policy, and transparent documentation of academic achievements.
4. **Mapping Activities to Curriculum Design:**
    - Each course is mapped to Program Outcomes (POs), Program-Specific Outcomes (PSOs), and Washington Accord WKs to maintain global standards.
    - Interdisciplinary electives and ABC credits are linked to lifelong learning (PO11) and modern tool usage (PO5), while APAAR ensures traceability and accountability.
5. **Continuous Monitoring and Review:**
    - IQAC and Curriculum Design Committee periodically review implementation of ABC and APAAR, ensuring compliance with NEP and NBA requirements.
    - Stakeholder feedback (industry, alumni, students) is incorporated to refine multidisciplinary offerings and credit transfer mechanisms.

1.3 PO, PSO and their Mapping with Courses (20) Total Marks 20.00

1.3.1 POs and PSOs (5) :

PSO1	Apply advanced surveying, mapping, and structural design techniques using modern tools for planning, analysis, and execution of civil engineering projects.
PSO2	Design sustainable civil engineering solutions considering environmental and societal considerations ensuring long-term resilience and ecological balance.

1.3.2 Mapping between the Courses and POs/PSOs (15) Institute Marks : 15.00

PO:

PO Number	List of Courses
PO1	2301101T Calculus and Differential Equations 2301103T Statistics and Integral Calculus 2301252T Applied Mathematics 2301102T Engineering Physics 2303101T Applied Mechanics 2303210T Mechanics of Solids 2303214T Mechanics of Fluids 2303216T Structural Analysis 2303311T Concrete Technology 2303314T Design of Reinforced Concrete Structures 2303322T Design of Steel Structures
PO2	2303210T Mechanics of Solids 2303212T Geotechnical Engineering 2303216T Structural Analysis 2303315T Transportation Engineering 2303323T Hydrology & Irrigation Engineering 2303327T Solid & Industrial Waste Management 2303413T Dams and Hydraulic Structures
PO3	2303213T Building Design and Construction 2303314T Design of Reinforced Concrete Structures 2303322T Design of Steel Structures 2303328T Formwork Modelling & Design 2303361L Analysis & Design of Building Systems 2303391 Major Project–I 2303392L Major Project–II 2303491 Major Project–III
PO4	2303212L Geotechnical Engineering Lab 2303214L Mechanics of Fluids Lab 2303323L Hydrology & Irrigation Engineering Lab 2303367L Hydraulic Modeling 2303492 Research Methodology 2303493L Capstone Portfolio
PO5	2303264L Building Information Modeling–I 2303362L Building Information Modeling–II 2303366L Drone Surveying 2304101L Foundations of Computing Lab 2304102L Essentials of Data Science Lab 2303268L Data Analysis 2303161L Computer-Aided Engineering Drawing
PO6	2301286T Environmental Science 2303422T Environmental Impact & Climate Change Engineering 2303327T Solid & Industrial Waste Management 2301111L Communication Skills (English) Lab 2301281A Indian Constitution
PO7	2301286T Environmental Science 2303323T Hydrology & Irrigation Engineering 2303312T Water Supply & Sanitation Engineering 2303422T Environmental Impact & Climate Change Engineering 2303413T Dams and Hydraulic Structures
PO8	2301287 Universal Human Values–II 2301276 Entrepreneurship Skills 2303326T Contracts Management 2303411T Estimating and Costing 2301111L Communication Skills (English) Lab
PO9	2303291L Project Design 2303391 Major Project–I 2303392L Major Project–II 2303491 Major Project–III 2303496 Summer Internship (Technical) 2303497L Semester-Long
PO10	2301111L Communication Skills (English) Lab 2301112/3/4T Communication Skills (Foreign Language) 2303493L Capstone Portfolio 2303476 Project Management 2303492 Research Methodology
PO11	2303321T Construction Engineering & Management 2303326T Contracts Management 2303476 Project Management 2303411T Estimating and Costing 2301276 Entrepreneurship
PO12	2303492 Research Methodology 2303496 Internship (Technical) 2303371L Employability & Career Development 2303SW## Swayam Course (PEC) 230145XX Professional Certification Skill

PSO:

PO Number	List of Courses
PSO1	2303216T Structural Analysis 2303314T Design of Reinforced Concrete Structures 2303322T Design of Steel Structures 2303311T Concrete Technology 2303328T Formwork Modelling & Design 2303413T Dams and Hydraulic Structures
PSO2	2303312T Water Supply & Sanitation Engineering 2303327T Solid & Industrial Waste Management 2303422T Environmental Impact & Climate Change Engineering 2303323T Hydrology & Irrigation Engineering 2303321T Construction Engineering & Management 2303362L Building Information

1.4 Course Outcomes and Course Articulation Matrix (30) Total Marks 15.00

1.4.1 Course Outcome (Semester Wise) (15)

Institute Marks : 15.00

No. of Core Courses : 10	**C2 :** 4	**C3 :** 4	**C4 :** 2

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

Course Code :	2303161L	Semester :	1

Course Outcome	Statements
2303161L.1	Develop and/or comprehend a simple engineering drawing in both First and Third angle orthographic projections. [
2303161L.2	Develop the techniques of constructing various types of curves and scales
2303161L.3	Apply visualization skills for development of surfaces.
2303161L.4	Analyze engineering drawings.
2303161L.5	Decide annotations for two dimensional drawings.
2303161L.6	Create manual drawing and CAD data using SP46 standards.

Course Code :	2303101T	Semester :	2

Course Outcome	Statements
2303101T.1	Determine the resultant of system of forces acting on bodies.
2303101T.2	Calculate the support reactions and member forces for simple structures.
2303101T.3	Analyse bodies in rectilinear and curvilinear motion.
2303101T.4	Apply energy and momentum methods for kinetics problems.

Course Code :	2303211T	Semester :	3

Course Outcome	Statements
2303211T.1	Construct axial force diagrams (AFD) for axially loaded members, and twisting moment diagrams for statically determinate shafts.
2303211T.2	Calculate the critical load corresponding to elastic instability for columns with various end conditions.
2303211T.3	Draw shear force diagrams and bending moment diagrams for statically determinate beams and twisting moment diagram for statically determinate shafts.
2303211T.4	Produce bending stress distribution diagrams (BSD) for beams and shear stress distribution diagrams (SSD) for beams and shafts.
2303211T.5	Analyze a structural component to calculate principal stresses using analytical methods and graphical methods.

Course Code :	2303214T	Semester :	4

Course Outcome	Statements

2303214T.1	Demonstrate the knowledge of the properties and behavior of the fluid at rest and in motion
2303214T.2	Apply equations of motion for various flow conditions and compute the discharge of the flows
2303214T.3	Analyze laminar and turbulent flows through pipes considering the losses
2303214T.4	Evaluate various parameters related to the flow around immersed bodies
2303214T.5	Apply the knowledge related to open channel flow along with critical flow
2303214T.6	Apply the knowledge related to open channel flow along with critical flow

Course Code :	**2303216T**	**Semester :**	**4**

Course Outcome	**Statements**
2303216T.1	Determine internal forces in determinate structures using equilibrium equations
2303216T.2	Calculate the deflections of beams and trusses using classical methods
2303216T.3	Analyse statically indeterminate structures by force methods
2303216T.4	Analyse kinematically indeterminate structures by displacements methods
2303216T.5	Draw the influence lines for reactions, shears, and bending moments in beams and member forces in trusses due to moving load

Course Code :	**2303311T**	**Semester :**	**5**

Course Outcome	**Statements**
2303311T.1	Discover different types of concrete ingredients with their properties.
2303311T.2	Illustrate properties of concrete using various IS tests.
2303311T.3	Design a concrete with specific mix.
2303311T.4	Choose special concrete and concreting techniques.
2303311T.5	Select different concrete related equipment.
2303311T.6	Analyze Methods of Concrete Repair.

Course Code :	**2303321T**	**Semester :**	**5**

Course Outcome	**Statements**
2303321T.1	Elaborate management plans for construction projects with proficiency in application and synthesis of project management concepts
2303321T.2	Demonstrate the ability to utilize scheduling techniques for projects, optimize project timelines and resource allocation within realistic constraints.
2303321T.3	Examine the time-cost study through network crashing, resource smoothening and leveling.

2303321T.4	Identify the potential of the advanced techniques, Lean Construction, EVM, Artificial ntelligence, BIM.
2303321T.5	Demonstrate proficiency in quality and safety management practices in construction projects, quality control measures, and adhering to safety regulations.
2303321T.6	Demonstrate proficiency in applying ABC and EOQ, utilizing indices in materials inventory models.

Course Code :	**2303315T**	**Semester :**	**6**

Course Outcome	**Statements**
2303315T.1	Apply basic transportation planning process.
2303315T.2	Design systems for traffic operations.
2303315T.3	Design highway geometry.
2303315T.4	Design bituminous mixes
2303315T.5	Apply the fundamental principles of bridge engineering.
2303315T.6	Demonstrate use of BIS, IRC MORTH codes

Course Code :	**2303411T**	**Semester :**	**7**

Course Outcome	**Statements**
2303411T.1	Apply the fundamentals of estimation to prepare approximate estimates.
2303411T.2	Draft detailed technical specification for various components in civil engineering works.
2303411T.3	Analyze the factors influencing detailed estimates with preparation of it and to prepare bar bending schedules for RCC structures
2303411T.4	Apply rate analysis techniques to get the costs of construction item work components.
2303411T.5	Evaluate property valuation by studying factors influencing to prepare accurate valuation reports for land and buildings.
2303411T.6	Apply construction billing processes to ensure accurate financial management in construction projects.

Course Code :	**2303492**	**Semester :**	**8**

Course Outcome	**Statements**
2303492.1	Apply the key concepts of research methodology to provide real world solutions.
2303492.2	Analyze the research problems and results to evaluate the methodologies, identify limitations, and draw conclusions.
2303492.3	Apply scientific writing skills to prepare dissertations, research articles, and research proposals.
2303492.4	Assess the ethical implications of artificial intelligence tools and their use to ensure fairness and integrity in research results.

1.4.2 Course Articulation Matrix (15) :

1 . course name : C22303161L

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C22303161L.1	Develop an	2	1	3	1	3	-	-	3	3	1	2
C22303161L.2	Develop the	2	1	3	1	3	-	-	3	3	1	2
C22303161L.3	Apply visua	2	1	3	1	3	-	-	3	3	1	2
C22303161L.4	Analyze en	2	1	3	1	3	-	1	3	3	1	2
C22303161L.5	Decide ann	2	1	3	1	3	-	1	3	3	1	2
C22303161L.6	Create mar	2	1	3	2	3	2	2	3	3	1	2
Average		**2.00**	**1.00**	**3.00**	**1.00**	**3.00**	**0.00**	**1.00**	**3.00**	**3.00**	**1.00**	**2.00**

2 . course name : C22303101T

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C22303101T.1	Determine t	3	3	2	1	1	-	-	-	1	-	-
C22303101T.2	Calculate th	3	3	2	1	1	-	-	-	1	-	-
C22303101T.3	Analyse bo	3	3	2	1	1	-	-	-	1	-	-
C22303101T.4	Apply energ	3	3	2	1	1	-	-	-	1	-	-
Average		**3.00**	**3.00**	**2.00**	**1.00**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**	**0.00**	**0.00**

3 . course name : C22303211T

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C22303211T.1	Construct a	3	3	1	2	2	-	1	1	3	-	1
C22303211T.2	Calculate th	3	3	1	2	2	-	1	1	3	-	1
C22303211T.3	Draw shear	3	3	1	2	2	-	1	1	3	-	1
C22303211T.4	Produce be	3	3	1	2	2	-	1	1	3	-	1
C22303211T.5	Analyze a s	3	3	1	2	2	-	1	1	3	-	1
Average		**3.00**	**3.00**	**1.00**	**2.00**	**2.00**	**0.00**	**1.00**	**1.00**	**3.00**	**0.00**	**1.00**

4 . course name : C22303214T

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

C22303214T.1	Demonstrat	3	1	1	-	-	-	1	-	-	-	2
C22303214T.2	Apply equa	3	2	2	1	-	-	-	-	-	-	1
C22303214T.3	Analyze lan	3	2	1	-	1	-	-	-	-	-	1
C22303214T.4	Evaluate va	2	2	1	1	-	-	-	-	-	-	1
C22303214T.5	Apply the k	2	1	1	-	-	-	-	-	-	-	2
C22303214T.6	Apply the k	2	2	1	-	-	-	-	-	-	-	1
Average		**3.00**	**2.00**	**1.00**	**1.00**	**1.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**

5 . course name : C32303216T

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C32303216T.1	Determine i	1	1	-	1	1	-	-	1	1	-	1
C32303216T.2	Calculate th	2	2	-	2	-	-	-	1	1	-	1
C32303216T.3	Analyse sta	2	3	-	2	3	-	-	1	1	-	1
C32303216T.4	Analyse kin	2	3	-	2	3	-	-	1	1	-	1
C32303216T.5	Draw the in	2	3	-	2	3	-	-	1	1	-	1
Average		**2.00**	**0.00**	**0.00**	**2.00**	**3.00**	**0.00**	**0.00**	**1.00**	**1.00**	**0.00**	**1.00**

6 . course name : C32303311T

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C32303311T.1	Discover dif	1	-	-	-	2	-	-	-	-	-	1
C32303311T.2	Illustrate pr	3	1	-	-	-	-	-	-	-	-	1
C32303311T.3	Design a cc	3	3	1	-	-	-	1	-	-	-	-
C32303311T.4	Choose spe	1	-	-	2	-	-	1	-	-	-	1
C32303311T.5	Select differ	-	-	-	-	-	-	1	-	-	-	-
C32303311T.6	Analyze Me	2	2	-	2	-	-	-	-	-	-	1
Average		**2.00**	**2.00**	**1.00**	**3.00**	**2.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**

7 . course name : C32303321T

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C32303321T.1	Elaborate n	1	1	1	1	-	1	-	2	2	-	1
C32303321T.2	Demonstrat	3	3	1	1	1	-	-	2	2	-	1

C32303321T.3	Examine th	2	2	1	1	1	1	-	-	2	2	1
C32303321T.4	Identify the	1	1	1	1	1	1	1	-	2	3	1
C32303321T.5	Demonstrat	2	1	1	1	1	1	1	1	2	1	1
C32303321T.6	Demonstrat	1	1	1	1	1	1	1	1	1	-	1
Average		**2.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**2.00**	**2.00**	**2.00**	**1.00**

8 . course name : C32303315T

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C32303315T.1	Apply basic	2	2	-	1	1	-	1	-	1	-	1
C32303315T.2	Design syst	3	2	1	1	1	-	2	2	-	-	-
C32303315T.3	Design high	3	3	1	1	1	-	2	-	-	-	-
C32303315T.4	Design bitu	3	3	2	1	1	-	2	2	-	-	1
C32303315T.5	Apply the fu	2	1	1	1	-	-	2	1	-	-	-
C32303315T.6	Demonstrat	2	-	1	1	-	-	2	-	1	-	-
Average		**3.00**	**2.00**	**1.00**	**1.00**	**1.00**	**0.00**	**2.00**	**2.00**	**1.00**	**0.00**	**1.00**

9 . course name : C42303411T

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C42303411T.1	Apply the f	3	2	1	1	1	-	-	-	1	1	-
C42303411T.2	Draft detail	2	1	2	-	1	2	-	-	2	1	-
C42303411T.3	Analyze the	3	3	1	2	3	-	-	1	1	2	1
C42303411T.4	Apply rate a	3	2	1	1	1	-	-	1	1	2	-
C42303411T.5	Evaluate pr	2	3	1	1	2	2	1	-	2	1	2
C42303411T.6	Apply const	2	1	-	-	1	-	2	2	1	3	-
Average		**3.00**	**2.00**	**1.00**	**1.00**	**2.00**	**2.00**	**2.00**	**1.00**	**1.00**	**2.00**	**2.00**

10 . course name : C42303492

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C42303492.1	Apply the k	2	3	2	2	1	-	-	-	1	1	-
C42303492.2	Analyze the	2	3	1	3	2	-	-	-	-	1	-
C42303492.3	Apply scien	-	1	-	1	-	-	-	3	-	1	-

C42303492.4	Assess the	-	1	-	1	2	2	-	-	-	1	-
Average		**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**0.00**	**3.00**	**1.00**	**1.00**	**0.00**

1 . Course Name : C22303161L

Course	PSO1	PSO2
C22303161L.1	3	1
C22303161L.2	3	1
C22303161L.3	3	1
C22303161L.4	3	1
C22303161L.5	3	1
C22303161L.6	3	1
Average	**3.00**	**1.00**

2 . Course Name : C22303101T

Course	PSO1	PSO2
C22303101T.1	1	1
C22303101T.2	1	1
C22303101T.3	1	1
C22303101T.4	1	1
Average	**1.00**	**1.00**

3 . Course Name : C22303211T

Course	PSO1	PSO2
C22303211T.1	1	-
C22303211T.2	1	-
C22303211T.3	1	-
C22303211T.4	1	-
C22303211T.5	1	-
Average	**1.00**	**0.00**

4 . Course Name : C22303214T

Course	PSO1	PSO2

C22303214T.1	-	1
C22303214T.2	-	1
C22303214T.3	-	1
C22303214T.4	1	1
C22303214T.5	1	2
C22303214T.6	1	2
Average	**1.00**	**1.00**

5 . Course Name : C32303216T

Course	PSO1	PSO2
C32303216T.1	1	-
C32303216T.2	2	-
C32303216T.3	2	-
C32303216T.4	2	-
C32303216T.5	2	-
Average	**2.00**	**0.00**

6 . Course Name : C32303311T

Course	PSO1	PSO2
C32303311T.1	1	1
C32303311T.2	1	1
C32303311T.3	-	3
C32303311T.4	1	1
C32303311T.5	-	3
C32303311T.6	1	1
Average	**1.00**	**3.00**

7 . Course Name : C32303321T

Course	PSO1	PSO2
C32303321T.1	2	1
C32303321T.2	1	1

C32303321T.3	2	1
C32303321T.4	1	-
C32303321T.5	1	-
C32303321T.6	1	-
Average	**1.00**	**1.00**

8 . Course Name : C32303315T

Course	PSO1	PSO2
C32303315T.1	-	-
C32303315T.2	1	-
C32303315T.3	1	-
C32303315T.4	2	1
C32303315T.5	-	-
C32303315T.6	-	-
Average	**1.00**	**1.00**

9 . Course Name : C42303411T

Course	PSO1	PSO2
C42303411T.1	1	-
C42303411T.2	-	2
C42303411T.3	2	1
C42303411T.4	1	1
C42303411T.5	-	-
C42303411T.6	1	-
Average	**1.00**	**1.00**

10 . Course Name : C42303492

Course	PSO1	PSO2
C42303492.1	1	-
C42303492.2	1	-
C42303492.3	1	-

C42303492.4	1	-
Average	**0.00**	**0.00**

1.5 Program Articulation Matrix (5) Total Marks 5.00

Program Articulation Matrix

:

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
2301101T	1	1	1	1	0	0	0	1	0	0	0
2301101U	1	1	1	1	0	0	0	1	0	0	0
2301102T	2	2	2	2	1	0	1	1	0	2	0
2301102L	2	2	2	2	2	0	1	1	1	1	0
2307101T	2	2	2	2	2	0	1	1	1	1	0
2307101L	2	1	2	1	1	0	1	1	1	1	0
2304101T	2	2	1	1	1	0	0	0	0	2	0
2304101L	2	2	1	1	2	0	0	0	0	2	0
2301111L	0	0	0	0	0	0	0	3	3	0	2
2301112T	0	0	0	0	0	0	0	3	3	0	2
2301113T	0	0	0	0	0	0	0	3	3	0	2
2301182L	2	2	2	1	1	2	1	1	1	1	1
2301104T	2	1	1	1	2	0	1	1	1	1	0
2301104L	2	1	1	1	2	0	1	1	1	1	0
2303101T	3	2	2	3	3	2	3	2	0	1	0
2303101L	3	3	2	3	3	2	3	2	0	1	0
2309101T	2	2	2	1	2	2	2	1	0	1	0
2309101L	2	3	2	2	2	2	2	2	2	2	0
2301103T	2	2	1	1	0	0	1	1	0	0	0
2301103U	2	2	1	1	0	0	1	1	0	1	0
2304102T	2	2	2	1	1	0	1	1	0	1	0
2304102L	2	2	2	1	1	0	1	1	0	1	0
2307183L	3	2	2	2	2	2	2	2	2	2	0
2303161L	2	2	2	2	1	2	0	2	0	0	0
2303181T	1	0	1	0	0	2	0	1	2	2	0
2303162T	3	3	1	2	3	0	3	2	0	1	0
2303162L	3	2	1	2	2	0	1	3	1	1	0
2303211T	3	3	1	2	2	0	1	1	3	0	1
2303212T	3	2	1	1	0	2	3	1	2	0	1
2303212L	3	2	1	3	0	2	2	1	2	0	1

2303213T	2	1	2	2	2	3	2	2	3	2	2
2303264L	2	1	2	2	2	2	1	0	2	1	1
2311251L	2	3	3	1	2	1	2	3	2	2	2
2301286T	2	1	2	2	2	2	2	2	2	2	2
2301287T	0	0	0	0	0	2	1	1	1	1	1
2301287L	1	1	1	1	0	1	1	1	1	1	1
2303291L	2	1	2	1	1	2	1	2	2	0	1
2303291L	1	2	2	1	2	2	1	0	1	1	1
2301254T	2	2	1	1	2	0	0	3	2	3	0
2301254L	1	1	1	1	1	0	1	1	0	1	1
2303214T	3	2	1	1	1	0	1	0	0	0	1
2303214L	2	3	0	2	3	0	0	1	1	0	1
2303215T	3	3	1	2	3	0	0	3	2	0	1
2303215L	3	3	1	2	3	0	0	3	2	0	1
2303216T	2	3	0	2	3	0	0	1	1	0	1
2303216L	2	3	0	2	3	0	0	1	1	0	1
2303232T	1	1	1	1	1	0	0	1	1	1	1
2303232L	1	1	1	1	1	0	0	1	1	1	1
2304268L	2	1	1	2	2	2	2	1	0	1	0
2301277L	1	1	1	0	2	0	1	0	0	1	0
2303293L	2	1	1	1	2	3	2	2	2	2	2
2303311T	2	2	1	3	2	0	1	0	0	0	1
2303311L	1	1	1	0	2	0	1	0	0	0	1
2303312T	1	2	2	2	2	3	1	1	2	2	1
2303312L	1	1	1	1	1	2	1	1	0	1	1
2303321T	1	2	1	2	1	3	1	3	2	2	2
2303321L	1	2	1	2	1	3	1	3	2	2	2
2303322T	2	3	3	3	3	2	2	2	2	1	3
2303322L	2	3	3	3	3	2	2	2	3	1	3
2303323T	2	1	1	2	2	2	1	1	1	1	1
2303323L	1	1	2	0	2	0	0	1	1	0	1

2303361L	2	1	1	2	2	2	3	3	2	2	2
2303362L	1	3	2	3	2	2	1	1	3	2	2
2303391L	2	1	2	1	1	2	1	2	2	0	1
2303396L	1	2	2	1	2	2	1	0	1	1	1
2303314T	2	2	1	1	1	2	2	2	3	0	1
2303314L	2	0	2	1	1	0	3	0	0	0	0
2303315T	3	2	1	1	1	0	2	2	1	0	1
2303315L	2	2	2	2	2	2	0	1	0	0	0
2303326T	2	2	1	2	3	3	2	2	2	3	0
2303326L	2	2	1	1	2	3	2	2	2	1	0
2303327T	1	1	1	1	1	2	3	1	1	1	1
2303327L	1	1	1	1	1	2	3	1	1	1	1
2303366L	3	3	1	2	3	2	0	3	0	0	0
2303367L	2	1	1	1	1	2	1	1	0	1	1
2303392L	3	2	3	2	2	3	1	3	2	3	2
2303411T	3	2	1	1	2	2	2	1	1	2	2
2303411L	3	2	1	2	2	2	2	2	2	0	1
2303492	2	2	2	2	2	2	0	3	1	1	1
2303496	1	2	2	1	2	2	1	0	1	1	1
2303491	2	2	2	2	2	2	3	2	2	2	2
2303499L	1	1	1	1	1	1	1	1	2	2	2
2303413T	3	3	2	3	1	3	2	3	2	0	0
2303413L	3	3	2	3	1	3	2	3	2	2	2

Course Code	PSO1	PSO2
2301101T	0	0
2301101U	0	0
2301102L	0	0
2301102T	0	0
2301103T	0	0
2301103U	0	0

2301104L	0	0
2301104T	0	0
2301111L	0	0
2301112T	0	0
2301113T	0	0
2301182L	0	0
2301254L	0	0
2301254L	0	0
2301254T	0	0
2301254T	0	0
2301277L	0	0
2301286T	0	0
2301286T	0	0
2301287L	0	0
2301287L	0	0
2301287T	0	0
2301287T	0	0
2303101L	0	0
2303101T	0	0
2303161L	0	0
2303162L	0	0
2303162T	0	0
2303181T	0	0
2303211T	1	0
2303212L	1	0
2303212T	1	1
2303213T	3	3
2303214L	1	1
2303214T	2	0
2303215L	1	3
2303215T	1	3

2303216L	1	2
2303216T	1	2
2303232L	1	1
2303232T	1	1
2303264L	1	1
2303291L	2	2
2303292L	2	2
2303311L	2	0
2303311T	2	3
2303312L	1	1
2303312T	1	2
2303314L	2	0
2303314T	2	0
2303315L	1	0
2303315T	1	1
2303321L	1	0
2303321T	1	0
2303322L	2	0
2303322T	2	0
2303323L	1	0
2303323T	1	1
2303326L	1	0
2303326T	1	2
2303327L	1	1
2303327T	1	1
2303361L	1	0
2303362L	2	0
2303366L	3	1
2303367L	1	1
2303391L	2	2
2303392L	2	2

2303396L	1	2
2303411L	2	1
2303411T	1	1
2303413L	3	1
2303413T	2	1
2303491	2	2
2303492	1	2
2303496	1	2
2303499L	2	2
2304101L	0	0
2304101T	0	0
2304102L	0	0
2304102T	0	0
2304268L	0	0
2307101L	0	0
2307101T	0	0
2307183L	0	0
2309101L	0	0
2309101T	0	0
2311251L	0	0

2 OUTCOME-BASED TEACHING LEARNING (120)

Total Marks 115.00

2.1 Describe Processes Followed to Ensure Quality of Teaching & Learning (20)

Total Marks 20.00

Institute Marks : 20.00

The Undergraduate (UG) Civil Engineering program at MIT Academy of Engineering (MIT AOE), Pune, implements a structured Outcome-Based Education (OBE) framework to plan, deliver, monitor, and continuously improve the teaching–learning process. Quality assurance is achieved through systematic academic planning, diversified and student-centric pedagogy, continuous and transparent assessment, learner-specific support mechanisms, and feedback-driven improvement, all supported by evidence-based review and governance.

A. Adherence to the Academic Calendar

Each semester commences with the preparation of an Institute-level Academic Calendar, formulated in accordance with University regulations and the norms prescribed by the All India Council for Technical Education (AICTE), which is further translated into Department-level Academic Calendars for each class. These calendars define instructional days, assessment schedules, laboratory sessions, project reviews, industrial visits, expert lectures, workshops, academic audits, and co-curricular and extra-curricular activities. Departmental teaching plans, laboratory schedules, and uploads on the Learning Management System (LMS) are derived from this calendar to ensure systematic execution of outcome-based teaching–learning. The calendar also incorporates academic audits, industrial visits, expert sessions, workshops, and professional society activities to enhance experiential learning. Figure 2.1a presents the institute-level academic calendar that governs semester-wise teaching–learning activities, while Figure 2.1b illustrates the department-level academic calendar used for detailed planning and execution of academic activities.

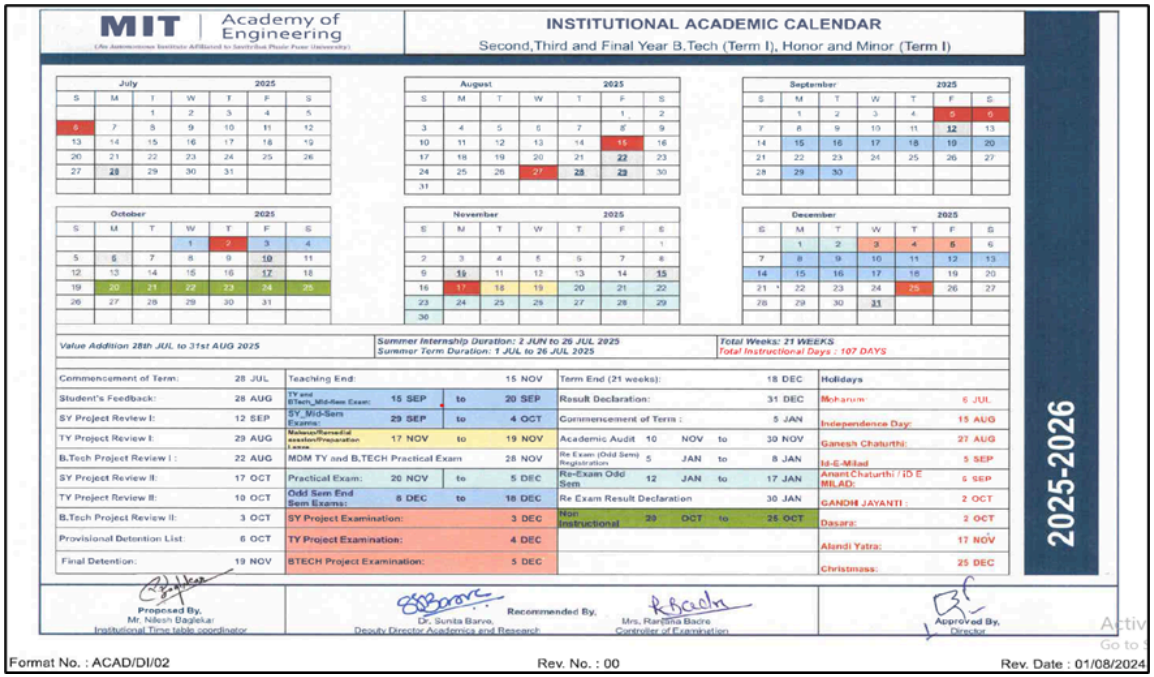
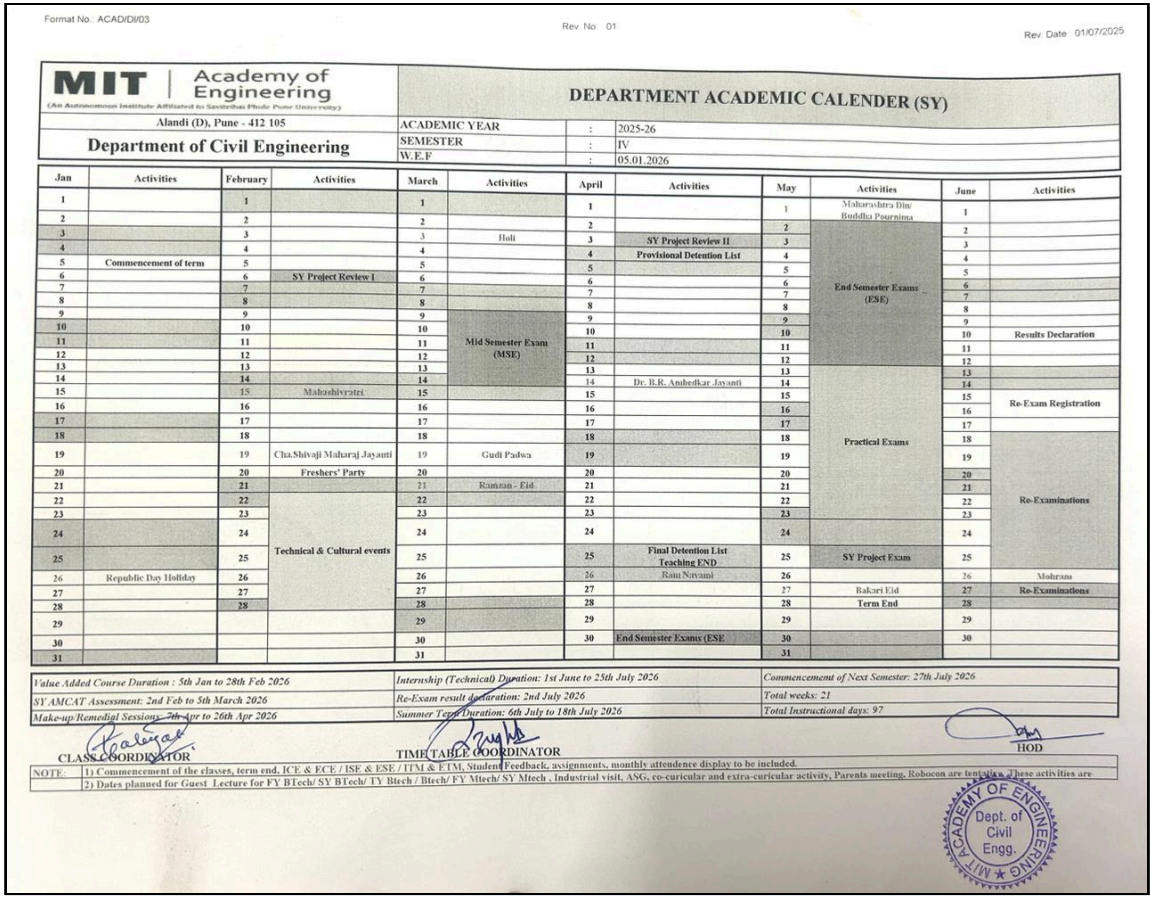


Figure 2.1a: Institutional Academic Calendar



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Alandi (D), Pune - 412 105

Department of Civil Engineering

DEPARTMENT ACADEMIC CALENDER (SY)

ACADEMIC YEAR : 2025-26
SEMESTER : IV
W.E.F : 05.01.2026

Jan	Activities	February	Activities	March	Activities	April	Activities	May	Activities	June	Activities
1		1		1		1		1	Maharashtra Din/ Buddha Pournima	1	
2		2		2		2		2		2	
3		3		3	Holi	3	SY Project Review II	3		3	
4		4		4		4	Provisional Detention List	4		4	
5	Commencement of term	5		5		5		5		5	
6		6	SY Project Review I	6		6		6	End Semester Exams (ESE)	6	
7		7		7		7		7		7	
8		8		8		8		8		8	
9		9		9		9		9		9	
10		10		10		10		10		10	Results Declaration
11		11		11	Mid Semester Exam (MSE)	11		11		11	
12		12		12		12		12		12	
13		13		13		13		13		13	
14		14		14		14	Dr. B.R. Ambedkar Jayanti	14		14	
15		15	Mahashivratri	15		15		15		15	Re-Exam Registration
16		16		16		16		16		16	
17		17		17		17		17		17	
18		18		18		18		18	Practical Exams	18	
19		19	Cha.Shivaji Maharaj Jayanti	19	Gudi Padwa	19		19		19	
20		20	Freshers' Party	20		20		20		20	
21		21		21	Ramzan - Eid	21		21		21	
22		22		22		22		22		22	Re-Examinations
23		23		23		23		23		23	
24		24	Technical & Cultural events	24		24		24		24	
25		25		25		25	Final Detention List Teaching END	25	SY Project Exam	25	
26	Republic Day Holiday	26		26		26	Ram Navami	26		26	Mohram
27		27		27		27		27	Bakari Eid	27	Re-Examinations
28		28		28		28		28	Term End	28	
29				29		29		29		29	
30				30		30	End Semester Exams (ESE	30		30	
31				31				31			

Value Added Course Duration : 5th Jan to 28th Feb 2026
SY AMCAT Assessment: 2nd Feb to 5th March 2026
Make-up/Remedial Sessions: 7th Apr to 26th Apr 2026

Internship (Technical) Duration: 1st June to 25th July 2026
Re-Exam result declaration: 2nd July 2026
Summer Term Duration: 6th July to 18th July 2026

Commencement of Next Semester: 27th July 2026
Total weeks: 21
Total Instructional days: 97

CLASS COORDINATOR
TIME TABLE COORDINATOR
HOD

NOTE: 1) Commencement of the classes, term end, ICE & ECE / ISE & ESE / ITM & ETM, Student Feedback, assignments, monthly attendence display to be included.
2) Dates planned for Guest Lecture for FY BTech/ SY BTech/ TY Btech / Btech/ FY Mtech/ SY Mtech , Industrial visit, ASG, co-curicular and extra-curicular activity, Parents meeting, Robocon are tentative. These activities are

MIT ACADEMY OF ENGINEERING ★ Dept. of Civil Engg.

Figure 2.1b: Department-Level Academic Calendar for Final Year UG Civil Engineering Program

Adherence to the academic calendar is regularly monitored through departmental meetings and teaching quality audits to ensure timely syllabus delivery, effective coverage of Course Outcomes (COs), and continuous improvement. At the end of the semester, a review of the academic calendar is conducted to assess adherence, and all observed variances are systematically recorded. Figure 2.1c depicts the report of adherence to departmental activities for semester III.

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DEPARTMENT OF CIVIL ENGINEERING

ADHERENCE OF DEPARTMENTAL ACADEMIC CALENDAR

ACADEMIC YEAR	2025-2026	PROGRAM	UG
SEMESTER	III	DATE	31-12-2025

Sr. No.	Activity Details	Planned Date of Activity	Actual Date of Activity	Reason for Variance	Action Taken for Variance
1	Orientation for Regular SY Students	24-07-2025	24-07-2025	-	-
2	Commencement of Term	28-07-2025	28-07-2025	-	-
3	FORCES student body formation	14-08-2025	29-08-2025	Extended time for application collection.	Shall start the process at the beginning of the term itself.
4	Students' Feedback	28-08-2025	28-08-2025	-	-
5	Freshers' Party	30-08-2025	-	Could not be conducted in Term I due to prolonged admission rounds of Direct Second year students.	Planned to be conducted in term II 2025-26
6	SY Project Review I	12-09-2025	12-09-2025	-	-
7	Orientation for DSY Students	24-09-2025	24-09-2025	-	-
8	Engg. day Celebration	26-09-2025	26-09-2025	-	-
9	SY MSE start	29-09-2025	29-09-2025	-	-
10	SY MSE end	04-10-2025	04-10-2025	-	-

Format No.: ACAD/DI/23 Rev. No. 00 Rev. Date: 01/08/2024

Sr. No.	Activity Details	Planned Date of Activity	Actual Date of Activity	Reason for Variance	Action Taken for Variance
11	Start of DSY SIP	01-10-2025	01-10-2025	DSY student were given an extention to complete their internship till November end due to their delayed admissions.	Issue of delayed admissions of DSY students is taken into account and provision to complete DSY SIP till November has been incorporated in MITAOE SIP Policy.
12	End of SIP (DSY)	16-11-2025	30-11-2025		
13	Provisional Detention List	06-10-2025	20-11-2025	DSY students admission concluded on 13-09-2025. Thus all make up sessions conducted were considered to prepare provisional detention list	Shall adhere to original date planned from next term.
14	Start of Value Added Course	07-10-2025	17-10-2025	Value Added Course through L&T LearnKonnect Platform was mandated for all SY students. Thus VAC had to start only after registration of all SY Students.	Value Added Course shall be identified right from beginning of term II
15	End of Value Added Course	30-11-2025	30-11-2025		
16	Askhed Dam Site Visit	09-10-2025	09-10-2025	-	-
17	Visit to College of Military Engineering	11-10-2025	-	Could not be conducted due to crunched academic schedules of both institutes.	Planned for 2025-26 Term II
18	SY Project Reviw II	17-10-2025	17-10-2025	-	-
19	Non-Instructional Days start	20-10-2025	20-10-2025	-	-
20	Non-Instructional Days end	25-10-2025	25-10-2025	-	-

Format No.: ACAD/DI/23 Rev. No. 00 Rev. Date: 01/08/2024

Sr. No.	Activity Details	Planned Date of Activity	Actual Date of Activity	Reason for Variance	Action Taken for Variance
21	End of Teaching	15-11-2025	15-11-2025	-	-
22	Make up sessions start	17-11-2025	17-11-2025	-	-
23	Make up sessions start	18-11-2025	18-11-2025	-	-
24	Final Detention List	19-11-2025	26-11-2025	Student absentees proofs were submitted late and thus detention list had to be revised several times.	Provisional detention list shall be published a month in advance to ensure students submit all relevant proofs on time.
25	SY Practical exam start	20-11-2025	20-11-2025	-	-
26	SY Practical exam end	05-12-2025	05-12-2025	-	-
27	SY Project Exam	03-12-2025	03-12-2025	-	-
28	SY ESE start	08-12-2025	08-12-2025	-	-
29	SY ESE end	18-12-2025	18-12-2025	-	-
30	Term End	18-12-2025	18-12-2025	-	-
31	Result Declaration	31-12-2025	31-12-2025	-	-

CLASS COORDINATOR TIME TABLE COORDINATOR HOD / DEAN

Figure 2.1c: Adherence to Departmental Calendar for Semester II

B. **Pedagogical initiatives**

Department of Civil Engineering adopts student-centric and outcome-based pedagogical practices to enhance the effectiveness of teaching–learning. Faculty members employ a mix of traditional and innovative teaching methods aligned with the defined Cos. Faculty members prepare subject handouts, notes, etc., containing detailed information about the topic, a question bank comprising previous question papers, videos, animated videos, self-prepared videos, solved question papers of Mid-Semester Examination (MSE) and End-Semester examinations (ESE), etc. A summary of various Teaching Pedagogy initiatives is illustrated in Figure 2.1d.

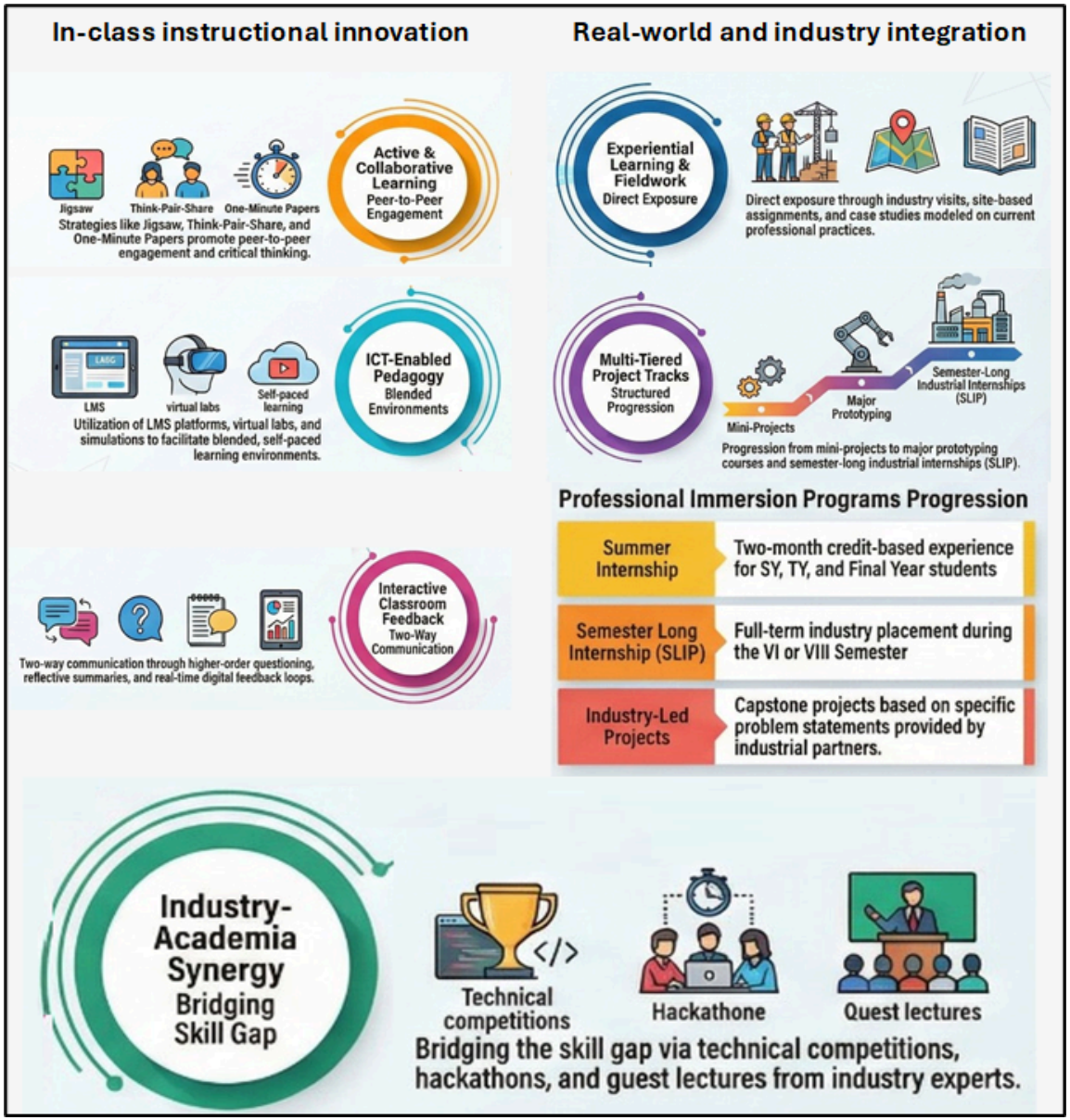


Figure 2.1d: Summary of various Teaching Pedagogy initiatives

Following are some of the Pedagogical Initiatives by the faculties:

- Interactive classroom teaching

Faculty members adopt interactive teaching practices to actively engage students in the learning process. Classroom sessions are designed to encourage two-way communication, peer learning, and critical thinking. Strategies include questioning techniques, discussions on sample examination problems, interpretation of graphs and data, case discussions, student presentations, and reflective summaries at the end of sessions. Higher-order thinking questions involving analysis, evaluation, and prediction are regularly incorporated.

- ICT-Enabled Learning

ICT-enabled learning is systematically integrated into the teaching–learning process to support blended instruction, student engagement, and continuous assessment. The LMS (Moodle) facilitates sharing of course plans, learning resources, assignments, and tracking of student participation. Microsoft Teams supports online and blended delivery through live classes, recorded lectures, and doubt-clearing sessions. Faculty-developed E-content, along with interactive tools such as Mentimeter and Kahoot, are used for formative assessment and real-time feedback. Figure 2.1e depicts the various ICT-Enabled Pedagogical Support Systems at MIT AOE.

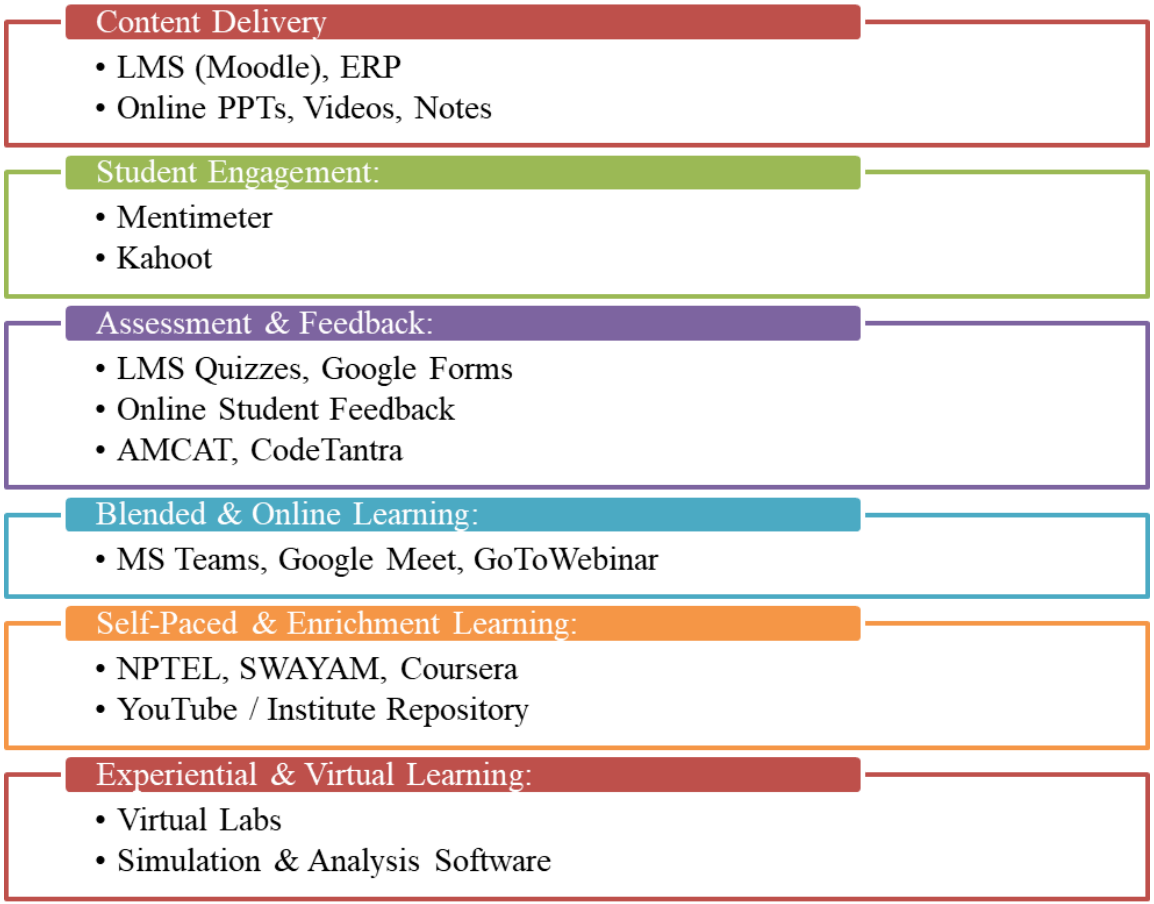


Figure 2.1e: ICT-Enabled Pedagogical Support Systems

Sample utilization of some ICT-enabled tools is illustrated in the figures from 2.1f to 2.1i.

LMS: Configured Moodle is used as an LMS tool to share course plans, lecture notes, presentations, question banks, solved in-semester and end-semester examination papers, assignments, and announcements. It also supports assignment submission and tracking of student participation

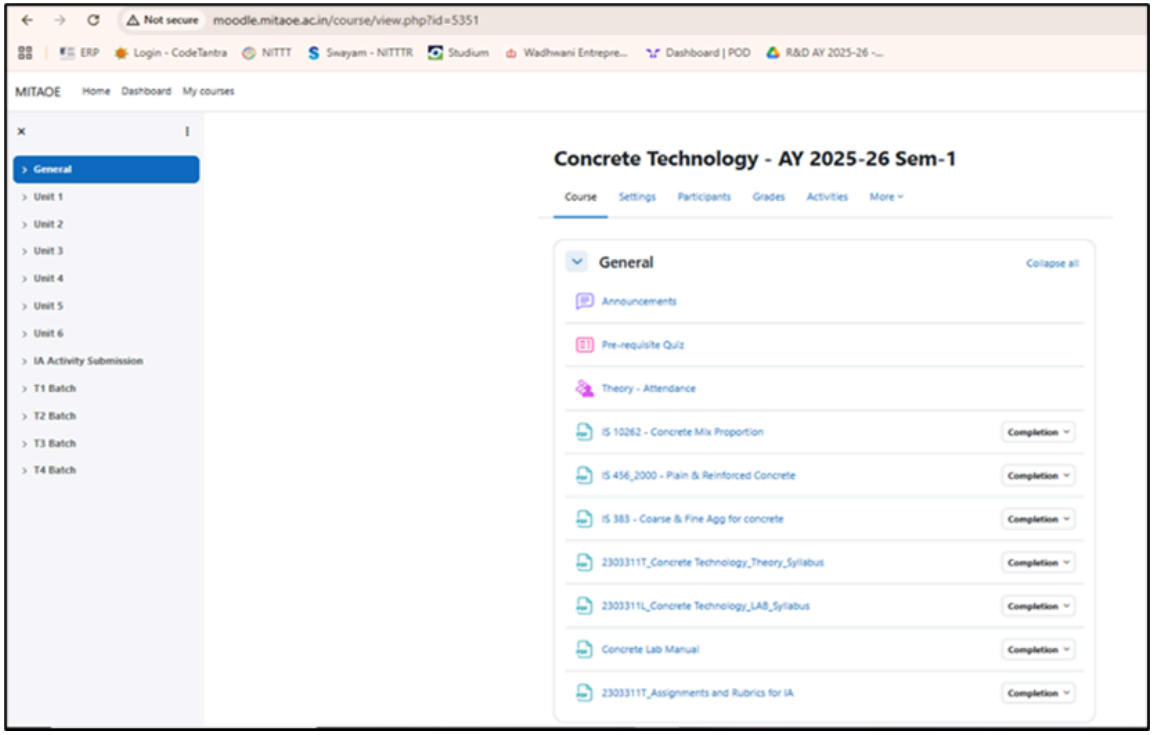


Figure 2.1f: Sample utilization of Moodle for content delivery

- Kahoot: Interactive platforms such as Mentimeter and Kahoot are used during classroom sessions for live polling, quizzes, and formative assessment, thereby promoting active participation and immediate feedback

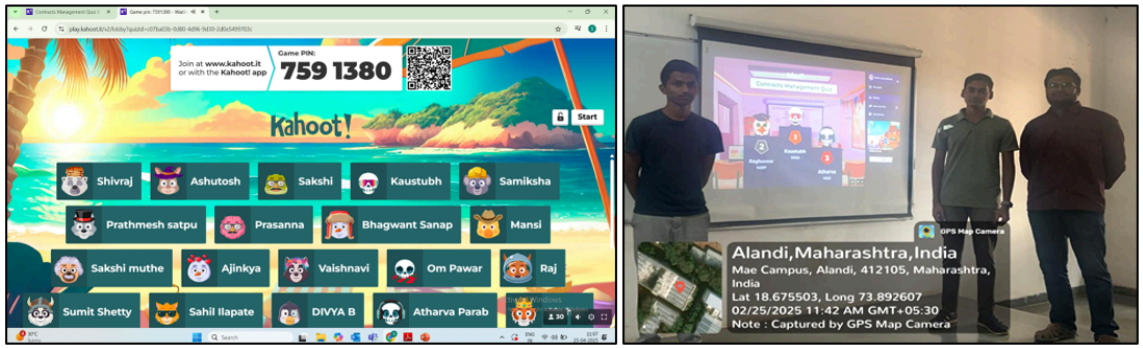


Figure 2.1g: Kahoot quiz for interactive classroom

- Codetantra: CodeTantra is used for structured practice and automated assessment, providing instant feedback and supporting continuous, outcome-based evaluation.

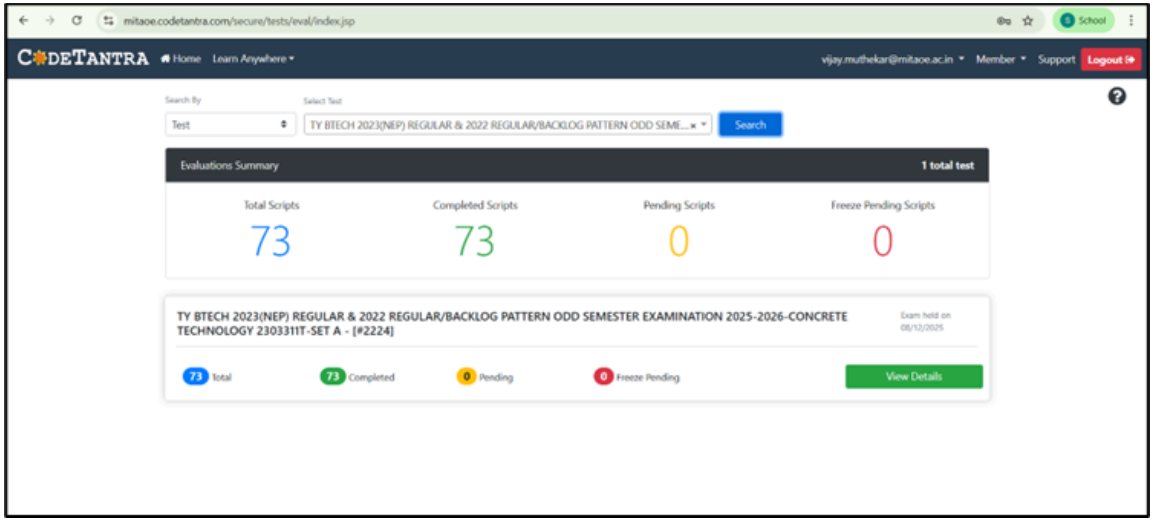


Figure 2.1h: Sample Utilization of CodeTantra Platform for Online Assessment and Evaluation

- E-Content Development by Faculty: Faculty members develop CO–aligned e-content in the form of recorded lectures, topic-wise explanatory videos, and demonstration modules. These self-prepared resources are made available through the LMS and the institute's official YouTube platform to support self-paced learning, revision, and conceptual reinforcement. The institute-developed video course series can be accessed at: https://mitaoe.ac.in/video-course-series/Video-Course-Series-Domain.php (https://mitaoe.ac.in/video-course-series/Video-Course-Series-Domain.php)

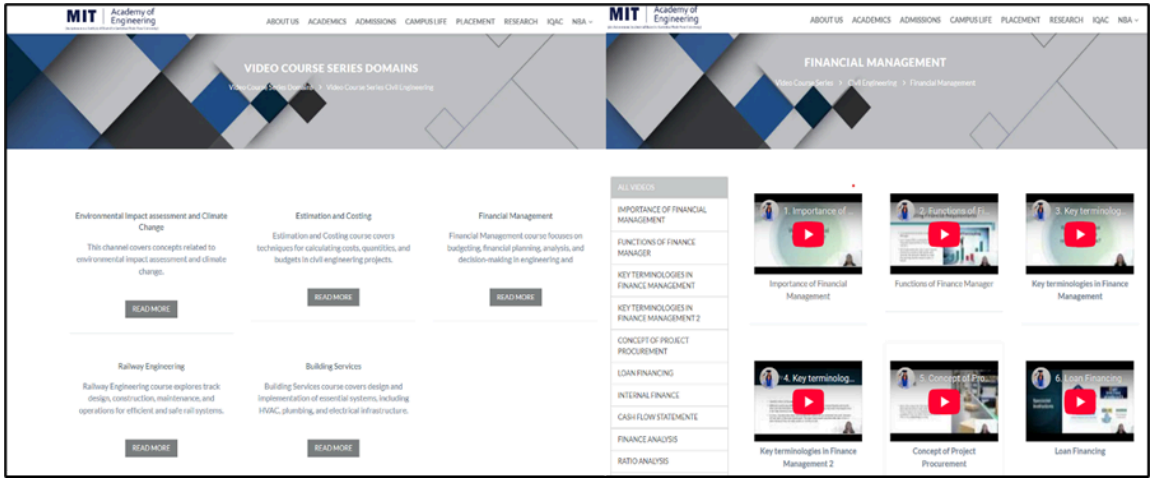


Figure 2.1i: Asynchronous E-Content Delivery through Institute Video Course Series

- Activity-Based & Experiential Learning

Department of Civil Engineering systematically integrates Activity-Based and Experiential Learning into course delivery to strengthen conceptual understanding and ensure alignment with COs. Faculty implement structured in-class and out-of-class activities such as problem-solving tasks, case analyses, quizzes, group discussions, assignments, and mini-projects, complemented by real-world exposure through industry-based case studies, field assignments, and inquiry-driven exercises. These practices promote collaborative learning, critical thinking, and practical application of engineering concepts, with all activities documented through reports, submissions, and assessment records to support systematic evaluation and continuous improvement. Figure 2.1j presents the activity details for course concrete technology.

MIT | Academy of Engineering (An Autonomous Institute Affiliated to Savitribai Phule Pune University)	ACTIVITY	
Alandi (D), Pune - 412105	ACADEMIC YEAR	2024 - 2025
DEPARTMENT OF CIVIL ENGINEERING	SEMESTER	V
	CLASS	TY BTech
	DIVISION	A

COURSE CODE	2303311	ACTIVITY NO.	1
COURSE	Concrete Technology	DATE	24 August 2024

ACTIVITY DETAILS			
Name of Activity	Hands-onActivity in the course 'Concrete Technology'		
Activity Details	Students embraced the fascinating concept of "Study the performance of concrete by designing the mix for special concrete for long-term serviceability i.e. sustainable construction" at the start of the semester. The Primary objective of this activity is drafting a research paper for probable publication in Scopus indexed journal. Students worked as a team, delving deeply into various problem statements, and doing extensive literature studies and conducting tests on various ingredients at RMC plants. Students visited to various RMC plants in groups and acquired sponsorship from the plants for this activity. They developed persuasive scientific research articles and creative working models due to their collective effort, displaying their commitment to and originality in studying replacement of concrete ingredients by various materials.		
Type of Activity	Collaborative	Mode of Assessment	Out Class
Course Topic Covered	Beyond syllabus	Marks	25
Course Outcome	CO1, CO2, CO3	RBT Level	Level 4
No of Present Students	74		
Learning Styles Addressed	Visual / Auditory / Active / Reflective / Sequential		
Pre-Reflection of Activity	Students were unaware about the practical aspects of concrete mix design and concrete manufacturing		
Post-Reflection of Activity	Students got knowledge about concrete manufacturing, mix validity, specimen sampling and testing with documentation.		
No of Weaker Students	7		
No of Bright Students	10		

No of Average Students	56

Criteria	**Excellent (5)**	**Good (4)**	**Satisfactory (3)**	**Needs Improvement (2)**	**Major Improvement Needed (1)**
Model / Paper Concept	Exceptional understanding; detailed, accurate explanations showing deep knowledge.	Good understanding; clear explanations with minor inaccuracies.	Basic understanding; some explanation, but lacks depth.	Limited understanding; explanations vague or partially incorrect.	No clear understanding of the concept.
Presentation Skill	Confident, dynamic delivery; clear language; excellent body language and eye contact.	Mostly confident; clear language; appropriate body language and eye contact.	Somewhat confident; mostly clear; minor hesitation; inconsistent non-verbal communication.	Lacks confidence; unclear language; minimal engagement and eye contact.	No engagement; presentation lacks structure and coherence.
Laboratory Experiments	Clear objectives; accurate data collection; thorough analysis; well-organized presentation; logical conclusions; excellent safety adherence.	Defined objectives; proper data and analysis; organized presentation; logical conclusions; follows safety protocols.	Objectives defined; adequate data and analysis; good presentation; basic conclusions; follows safety procedures.	Objectives unclear; improper data/analysis; weak conclusions; poor safety adherence; limited lab skills.	No objectives; no proper data/analysis; no valid conclusions; no safety adherence; lacks lab skills.

Figure 2.1j: Experiential Learning practices

- Industrial Visits /Hands-on Workshops / Skill-Based Training/ Expert Lectures.

Initiative such as Industrial visits, hands-on training workshops, guest lectures, and expert sessions are systematically conducted to expose students to current industry practices, market trends, advanced technologies, and materials. These initiatives enable students to understand real-world engineering applications, industrial work culture, and professional ethos, while helping them effectively connect classroom learning with practical implementation. Frequent interactions with renowned industry experts further strengthen industry–academia linkage and enhance application-oriented learning. Table 2.1a summarizes year-wise industry interaction activities conducted for students.

Table 2.1a: Industry Interaction Activities (Year-wise)

Academic Year	No. of Industrial Visits	No. of workshops organized	Expert lectures by Industry
2022 – 2023	09	2	5
2023 – 2024	06	2	6
2024 – 2025	7	4	14

Figure 2.1k: Expert Sessions Delivered as Part of Industry–Academia Interaction

Figure 2.1l: Industry interaction through site visit and hands on workshop

Along with the above initiative, technical competitions, internships, and collaborative learning activities are systematically integrated to enrich the teaching–learning process. Collectively, these pedagogical initiatives create a robust and inclusive learning environment at MIT AOE, effectively addressing diverse learner needs and fostering enhanced engagement, skill development, and optimal learning outcomes aligned with OBE.

C. Support students based on their ability

The institute adopts a systematic mechanism to assess the learning levels of students. This diagnostic process allows for the implementation of differentiated teaching strategies to cater to the diverse needs of learners.

- Assessment Basis: Student performance is evaluated based on Continuous Internal Evaluation (CIE), primarily the Mid-Semester Examinations, alongside class interactions and faculty assessment.
- Advanced Learners: Students typically securing above 75%, or those demonstrating exceptional conceptual understanding relative to the class average/subject complexity, are identified as Advanced Learners.

- Slow Learners: Students securing less than **50%**, or those requiring additional academic reinforcement to meet COs, are identified as Slow Learners.

Initiatives for Advanced Learners

To foster intellectual growth and satisfy the inquisitive nature of Advanced Learners, the department implements the following enrichment strategies:

- Advanced Resource Provisioning: Students are directed toward advanced reference texts, high-impact journals, and specialized e-resources to deepen their domain knowledge beyond the syllabus.
- Research & Skill Development:
  - Encouragement to utilize modern engineering tools and simulation software for advanced modelling.
  - Guidance to undertake research-oriented mini-projects and interdisciplinary problem-solving tasks.
- Participatory & Collaborative Learning:
  - Micro-Teaching: Students are given opportunities to conduct seminar sessions or explain complex topics to peers to enhance their communication and conceptual clarity.
  - Quiz Formulation: Involving students in the creation of technical quizzes to test their grasp of the subject matter at a higher cognitive level.
- Peer Mentorship: Under the formal "Peer Mentorship Program," Advanced Learners are assigned to mentor Slow Learners, fostering a collaborative learning ecosystem that reinforces their own understanding while aiding peers.

Initiatives for Slow Learners

The department adopts a supportive and corrective approach to bring Slow Learners on par with the class average and ensure the attainment of POs.

- Remedial Intervention:
  - Scheduled remedial classes are conducted by course faculty to clarify doubts and revisit critical concepts.
  - The duration and frequency of these sessions are calibrated based on the specific needs of the cohort and the complexity of the course modules.
- Collaborative Peer Learning: Implementation of a "Buddy System" where Slow Learners are paired with Advanced Learners for focused study groups and peer-assisted learning.
- Personalized Counselling: Faculty provide individual counselling to address academic challenges and boost morale.

Impact Analysis and Continuous Improvement

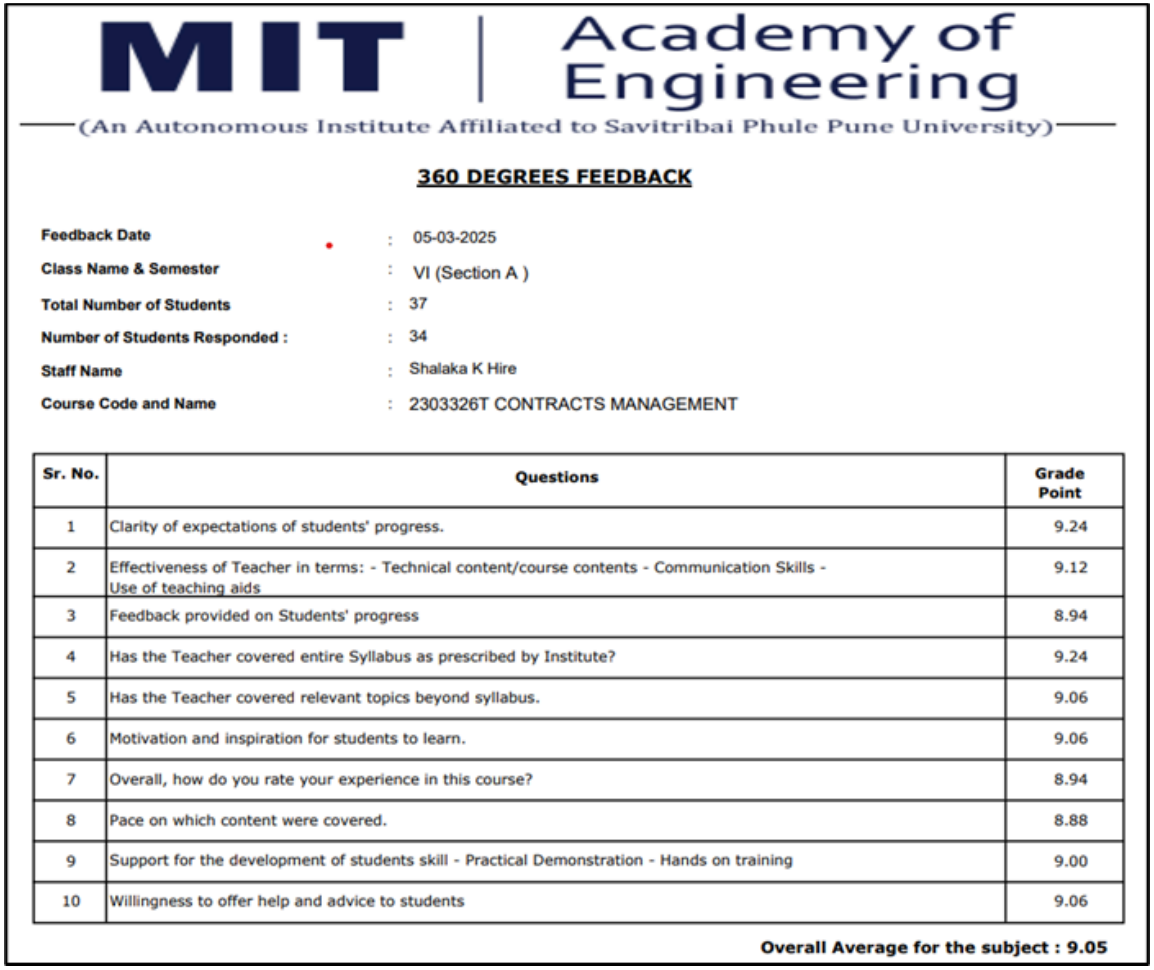
The effectiveness of the implemented strategies is monitored to ensure continuous quality improvement:

- Performance Tracking: Academic progress is quantitatively measured by comparing performance in the Mid-Semester Examination versus the End-Semester Examination.
- Outcome: Data regarding the percentage of Slow Learners who successfully cleared the course and Advanced Learners achieved higher grades or published work.

D. Quality of classroom teaching

The quality of classroom teaching is ensured through a structured and centralized feedback and review mechanism. Teaching feedback is conducted at the institutional level using standardized formats and is disseminated to the respective Head of Department (HoD). The HoD conducts one-to-one interactions with faculty members to share feedback, appreciate effective practices, and suggest improvement measures wherever required. In addition, early-stage student feedback is collected by the class teacher after one month of teaching to enable timely corrective actions.

Further, a course exit survey is conducted by individual faculty members at the end of each course, as per the academic calendar, to assess course delivery and achievement of COs. During conduction of feedback sessions, following types of questions are generally asked to the students. A sample feedback form is shown below in Figure 2.1m.



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360 DEGREES FEEDBACK

Feedback Date : 05-03-2025
Class Name & Semester : VI (Section A)
Total Number of Students : 37
Number of Students Responded : : 34
Staff Name : Shalaka K Hire
Course Code and Name : 2303326T CONTRACTS MANAGEMENT

Sr. No.	Questions	Grade Point
1	Clarity of expectations of students' progress.	9.24
2	Effectiveness of Teacher in terms: - Technical content/course contents - Communication Skills - Use of teaching aids	9.12
3	Feedback provided on Students' progress	8.94
4	Has the Teacher covered entire Syllabus as prescribed by Institute?	9.24
5	Has the Teacher covered relevant topics beyond syllabus.	9.06
6	Motivation and inspiration for students to learn.	9.06
7	Overall, how do you rate your experience in this course?	8.94
8	Pace on which content were covered.	8.88
9	Support for the development of students skill - Practical Demonstration - Hands on training	9.00
10	Willingness to offer help and advice to students	9.06

Overall Average for the subject : 9.05

Figure 2.1m: Sample copy of 360° feedback

E. Conduct of experiments

The department ensures systematic, safe, and outcome-oriented conduct of laboratory sessions to strengthen practical competencies and achieve COs.

- Readiness & Resources
    - Lab manuals (objectives, CO mapping, procedures, safety, viva questions) and reading material are provided before the semester and hosted on Moodle.
    - Equipment readiness/calibration logs, chemical inventories, and risk assessments are verified by the Laboratory Committee prior to delivery.
- Delivery & Engagement
    - Faculty announce an experiment schedule with CO linkage; students record attendance in lab logbooks.
    - Experiments are performed individually/in small teams under supervision, with emphasis on safe practices (PPE, SOPs, emergency protocols).
    - Missed sessions are completed in make-up slots to ensure 100% experiment coverage.
- Assessment & Transparency
    - Continuous evaluation per session uses predefined rubrics (theory understanding, procedure adherence, quality of observations/results, data analysis, record/report quality, safety, teamwork).
    - Marks and feedback are shared promptly (on Moodle/record books) to guide improvement; malpractice is recorded with corrective action.

- OBE Integration & Improvement
    - CO-wise performance from lab assessments is analyzed each cycle and discussed in the Department/Lab Committee for corrective actions (e.g., revising manuals, sequencing, apparatus upgrades, demo videos).
    - Faculty reflect improvements in subsequent offerings; changes and outcomes are minuted.

2.2 Quality of Student Capstone Project (25) Total Marks 22.00

Institute Marks : 22.00

Capstone Portfolio is an individual, self-chosen final-year (8th semester) project designed to integrate the knowledge, skills, and professional competencies developed throughout the undergraduate program. Sustainability Development Goals (SDG's) are embedded even through Capstone projects, encouraging students to explore solutions related to clean energy, waste management, responsible consumption, sustainable manufacturing, and community development. The course comprises two components: **Capstone Work** and a **Digital Portfolio**.

- The **Capstone Work** may be technical, research-oriented, application-based, or interdisciplinary, addressing real-world problems related to industry, urban and rural development, environment, sustainability, innovation, and open-ended engineering challenges. Students along with their chosen guides identify problems, formulate solutions, apply appropriate methodologies, and generate tangible outcomes such as designs, models, analyses, publications, or digital content.
- The **Digital Portfolio** is a professional online presence created by each student to document academic achievements, projects, reflections, and skills using written, visual, and multimedia content.

Together, the Capstone Portfolio promotes critical thinking, problem-solving, creativity, sustainability awareness, and professional communication, while providing students the flexibility to define project scope, negotiate deliverables, and present outcomes in alignment with POs. Department of Civil Engineering ensures the quality of student capstone projects through a structured framework covering project identification, guide allocation, project relevance, continuous monitoring, and quality of final outcomes.

A. Identification of Capstone Project and Allocation of Guides

At the beginning of the semester, faculty members from various civil engineering domains (Structural Engineering, Construction Management, Environmental Engineering, Hydraulics, and Interdisciplinary areas) propose a diverse list of capstone topics aligned with emerging trends, societal needs, sustainability, and industry relevance.

Students select project topics after detailed discussions with prospective guides, considering their interests and the guide's expertise. Upon mutual agreement, the project title, student, and guide are formally finalized and documented through the department-level capstone allocation process, ensuring transparency, academic suitability, and balanced guide allocation. This mechanism promotes student ownership while maintaining academic rigor and domain relevance. Figure 2.2a indicates the Process flow chart of Capstone Portfolio and Figure 2.2b depicts the allocation of portfolios-Capstone 2024-25.

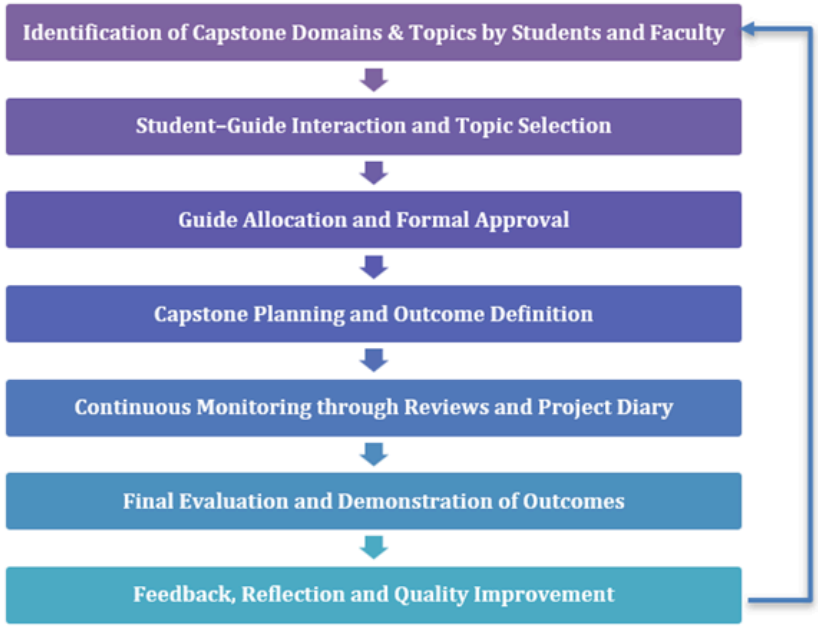

Figure 2.2a: Process flow chart of Capstone Portfolio

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ALLOCATION OF PROJECTS (CAPSTONE)

Alandi (D), Pune – 412105

SCHOOL OF CIVIL ENGINNERING

ACADEMIC YEAR: 2024-25
TERM: II
CLASS: Btech

Group ID	Name of Student	Project Advisor(s)	Title of Project	Fore Front Area	Type (In-house / Sponsored)	Sponsored by (if any)
1	INGLE TEJAS VINOD	Ms. Anagha Galagali	Literature review of current and advanced procedure in RMC plants.	Construction management	In-house	
2	SIDHARTH RAJAGOPAL	Ms. Shalaka Hire	Review on BIM adoption for Sustainibility	Construction management	In-house	
3	PATIL RAJDEEPSING DINKAR	Mr. Khushal Kanade	Global trends and evolution of Antibiotic Resistance Genes in Wastewater Systems..	Hydraulics and Environmental Engineering	In-house	

MIT ACADEMY OF ENGINEERING School of Civil Engineering

4	MANDORE MANAS SUNIL	Mr. Khushal Kanade	Efficiency od Wastewater Treatment in ARG REmovl : Challenges and innovations	Hydraulics and Environmental Engineering	In-house	
5	AMBHORE VISHWADEEP VASANT	Mr. Khushal Kanade	literature review on time management issues in RMC	Hydraulics and Environmental Engineering	In-house	
6	GANGODE PRAKASH NIVRUTI	Dr.Swapnil Patare	Literature Review and Impact analysis On Concreting Without Cement	Construction management	In-house	
7	AKASH KACHGUNDE	Ms. Swapnali Mohol	Practical Construction Guide With YouTube Channel - AK Infra	Hydraulics and Environmental Engineering	In-house	
8	PURI VARSHA PRAMOD	Mrs. Swapnali Mohol	Create a cost effective system system for E waste collection, treatment, disposal.	Hydraulics and Environmental Engineering	In-house	

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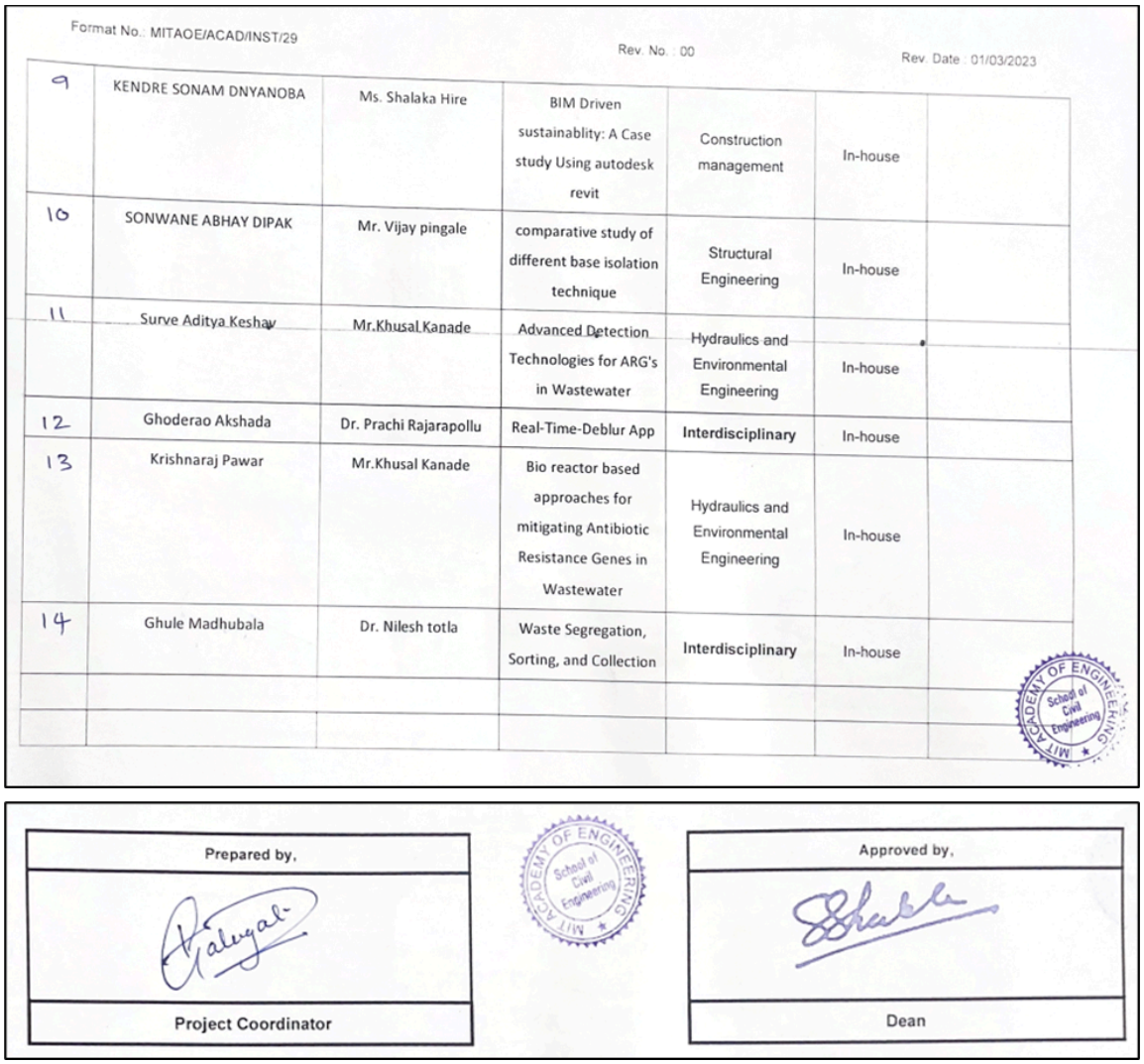


Format No.: MITAOE/ACAD/INST/29 Rev. No. : 00 Rev. Date : 01/03/2023

9	KENDRE SONAM DNYANOBA	Ms. Shalaka Hire	BIM Driven sustainablity: A Case study Using autodesk revit	Construction management	In-house	
10	SONWANE ABHAY DIPAK	Mr. Vijay pingale	comparative study of different base isolation technique	Structural Engineering	In-house	
11	Surve Aditya Keshav	Mr.Khusal Kanade	Advanced Detection Technologies for ARG's in Wastewater	Hydraulics and Environmental Engineering	In-house	
12	Ghoderao Akshada	Dr. Prachi Rajarapollu	Real-Time-Deblur App	Interdisciplinary	In-house	
13	Krishnaraj Pawar	Mr.Khusal Kanade	Bio reactor based approaches for mitigating Antibiotic Resistance Genes in Wastewater	Hydraulics and Environmental Engineering	In-house	
14	Ghule Madhubala	Dr. Nilesh totla	Waste Segregation, Sorting, and Collection	Interdisciplinary	In-house	

MIT ACADEMY OF ENGINEERING School of Civil Engineering

Prepared by,

Project Coordinator

MIT ACADEMY OF ENGINEERING School of Civil Engineering

Approved by,

Dean

Figure 2.2b: Allocation of portfolios-Capstone 2024-25

B. Types and Relevance of Capstone Projects and Contribution to POs and Program Specific Outcomes (PSOs)

Capstone projects undertaken by students are diverse in nature and well-distributed across multiple categories, including:

- Case Study / Industry identified/ Review Projects
- Experimental / Research-Based Projects
- Analytical Projects
- Simulation / Modelling Projects
- Interdisciplinary / Collaborative Projects

Details of Capstone student projects and their types are provided in table 2.2a and Figure 2.2c depicts the types of Capstone Projects in 2024-25.

Table 2.2a: List of 2024-25 Capstone student projects and their types are provided in table below:

Sr.no	Project Title	Student Name	Area of Project (Forefront)	Project Type	Internal Guide	PO/PSO addressed
1	Literature review of current and advanced procedures in RMC plants.	Ingle Tejas Vinod	Construction Management	Case Study / Review Projects	Ms. Anagha Galagali	PO1, PO2, PO3, PO9, PO10, PO12, PSO1
2	Review on BIM adoption for Sustainability	Sidharth Rajagopal	Construction Management	Case Study / Review Projects	Ms. Shalaka Hire	PO1, PO2, PO3, PO5, PO7, PO10, PO12, PSO1, PSO2
3	Global trends and evolution of Antibiotic Resistance Genes in Wastewater Systems.	Patil Rajdeepsing Dinkar	Environmental Engineering & Hydraulics	Experimental / Research-Based Projects	Mr. Khushal Kanade	PO1, PO4, PO5, PO8, PO10, PO12, PSO1, PSO2
4	Efficiency od Wastewater Treatment in ARG Removal : Challenges and innovations	Mandore Manas Sunil	Environmental Engineering & Hydraulics	Experimental / Research-Based Projects	Mr. Khushal Kanade	PO1, PO4, PO5, PO8, PO10, PO12, PSO1, PSO2
5	Literature review on time management issues in RMC	Ambhore Vishwadeep Vasant	Environmental Engineering & Hydraulics	Analytical Projects	Mr. Khushal Kanade	PO1, PO4, PO9, PO10, PO12,PSO1, PSO2
6	Literature Review and Impact analysis On Concreting Without Cement	Gangode Prakash Nivruti	Construction Management	Case Study / Review Projects	Dr.Swapnil Patare	PO1, PO2, PO3, PO9, PO10, PO12, PSO1
7	Practical Construction Guide With YouTube Channel - AK Infra	Akash Kachgunde	Environmental Engineering & Hydraulics	Experimental / Research-Based Projects	Ms. Swapnali Mohol	PO1, PO5, PO8, PO9, PO10, PO12, PSO1, PSO2
8	Create a cost effective system for E waste collection, treatment, disposal.	Puri Varsha Pramod	Environmental Engineering & Hydraulics	Experimental / Research-Based Projects	Mrs. Swapnali Mohol	PO1, PO4, PO5, PO8, PO9, PO10, PO12, PSO1, PSO2
9	BIM Driven sustainability: A Case study Using autodesk revit	Kendre Sonam Dnyanoba	Construction Management	Case Study / Review Projects	Ms. Shalaka Hire	PO1, PO2, PO4, PO5, PO7, PO10, PO12, PSO1, PSO2
10	comparative study of different base isolation technique	Sonwane Abhay Dipak	Structural Engineering	Simulation / Modelling Projects	Mr. Vijay pingale	PO3, PO4, PO5, PO9, PSO 1
11	Advanced Detection Technologies for ARGs in Wastewater	Surve Aditya Keshav	Environmental Engineering & Hydraulics	Experimental / Research-Based Projects	Mr.Khusal Kanade	PO1, PO4, PO5, PO8, PO10, PO12, PSO1, PSO2
12	Real-Time-Deblur App	Ghoderao Akshada	Interdisciplinary	Interdisciplinary / Collaborative Projects	Dr. Prachi Rajarapollu	PO1, PO2, PO3, PO5, PO9, PO10
13	Bio reactor based approaches for mitigating Antibiotic Resistance Genes in Wastewater	Krishnaraj Pawar	Environmental Engineering & Hydraulics	Experimental / Research-Based Projects	Mr.Khushal Kanade	PO1, PO4, PO5, PO8, PO10, PO12, PSO1, PSO2
14	Waste Segregation, Sorting, and Collection	Ghule Madhubala	Interdisciplinary	Interdisciplinary / Collaborative Projects	Dr. Nilesh totla	PO1, PO2, PO3, PO5, PO7,PO9, PO10

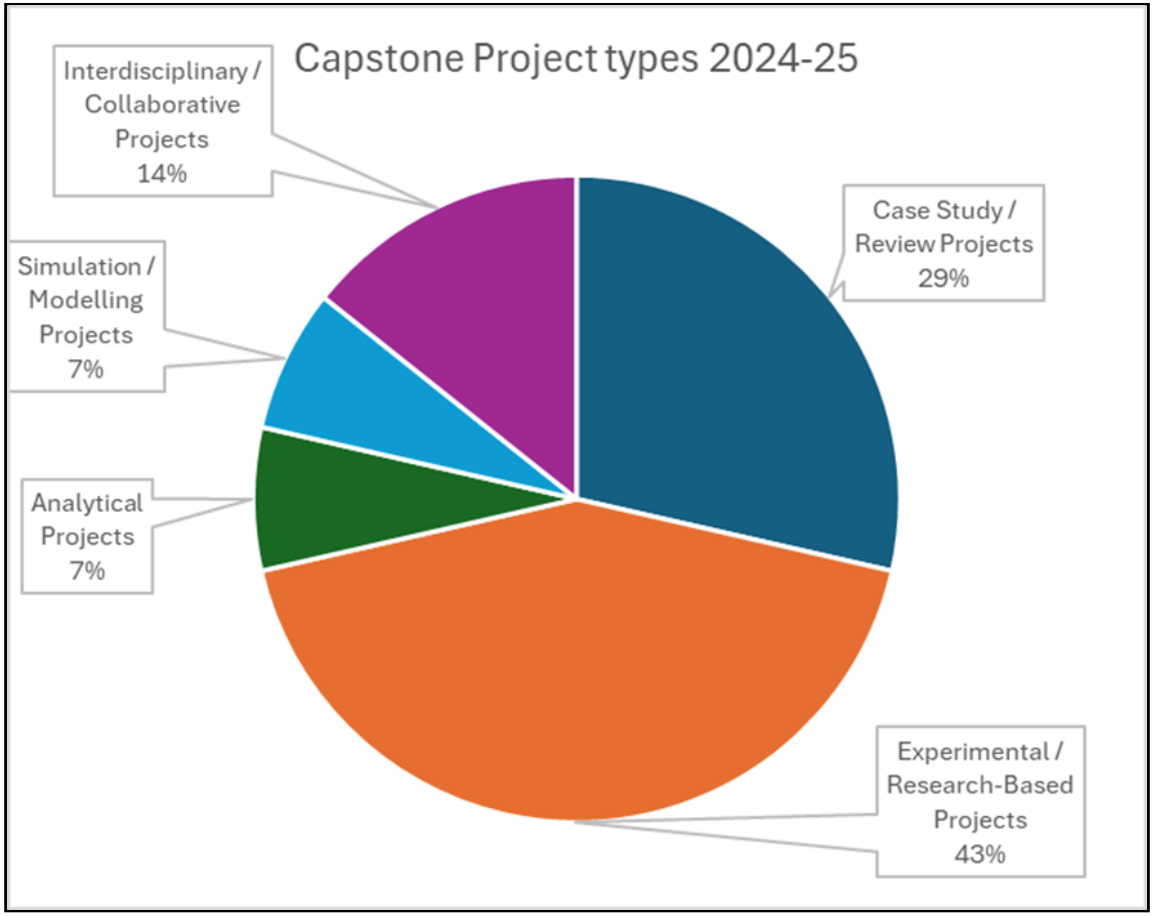


Figure 2.2c: Types of Capstone Projects in 2024-25

The projects address real-world engineering problems related to sustainability, cost feasibility, safety, ethics, and adherence to standards. Mapping of projects to POss (POs) demonstrates strong alignment, particularly with:

- PO2 (Problem Analysis) through problem identification and objective formulation
- PO3 (Design/Development of Solutions) through feasible and innovative solutions
- PO4 (Investigation) through research, validation, and analysis
- PO7 (Environment and Sustainability) through environmentally responsible project themes
- PO10 & PO11 (Communication and Project Management) through presentations, planning, and documentation

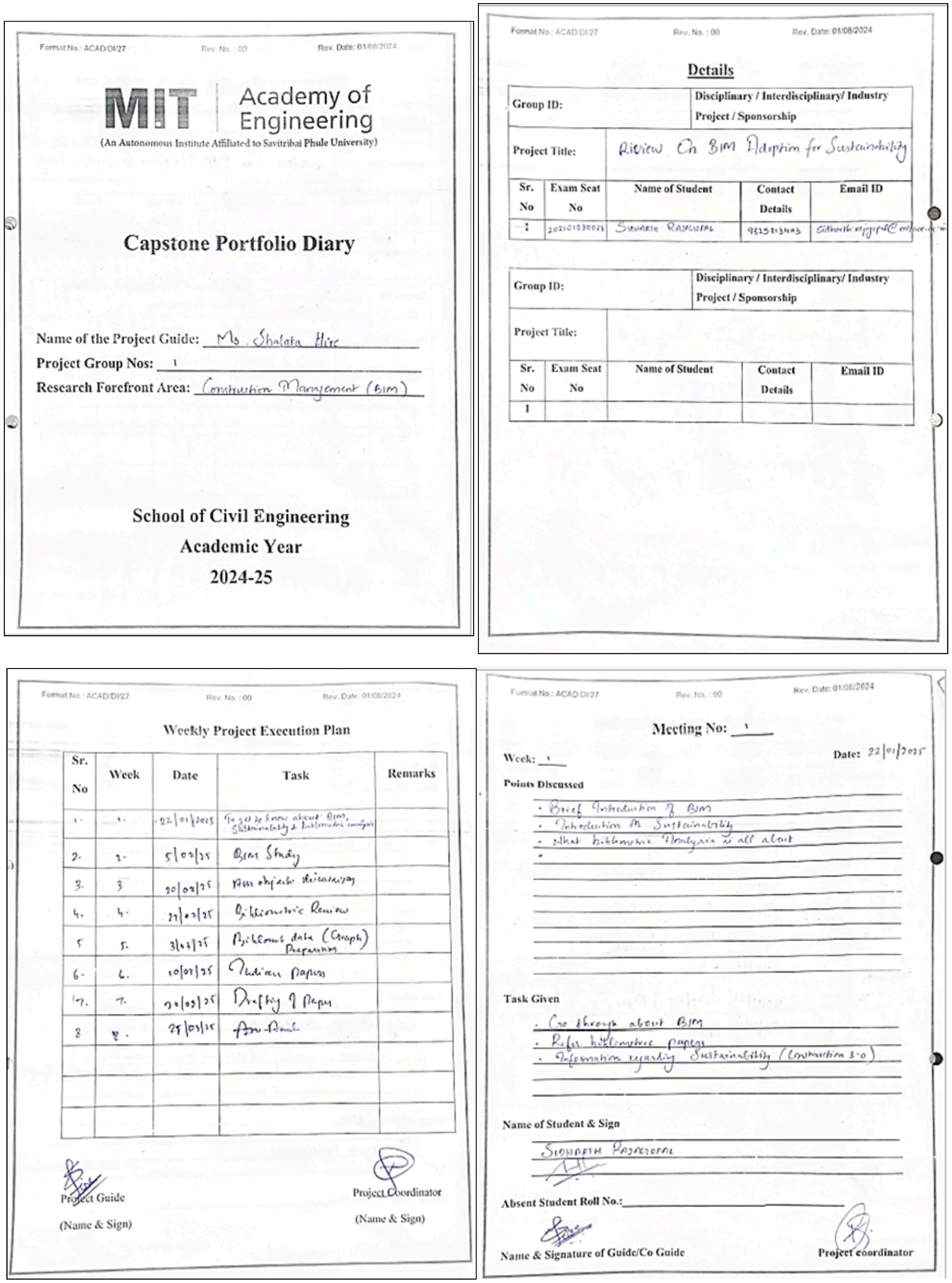
Domain-specific PSOs are attained by projects aligned with core civil engineering areas, strengthening discipline competence.

C. Continuous Monitoring Process

The department has a well-defined continuous monitoring mechanism to ensure steady progress and quality outcomes. Each student maintains a Capstone Project Diary, which records:

- Weekly task planning
- Guide–student meeting minutes
- Progress status and corrective actions

Snippets of student Capstone project diary is shown in Figure 2.2d.



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Capstone Portfolio Diary

Name of the Project Guide: Ms. Shalata Hire

Project Group Nos: 1

Research Forefront Area: Construction Management (BIM)

School of Civil Engineering

Academic Year

2024-25

Format No.: ACAD/DI/27 Rev. No.: 00 Rev. Date: 01/08/2024

Details

Group ID:	Disciplinary / Interdisciplinary/ Industry Project / Sponsorship
Project Title:	Review On BIM Adoption for Sustainability

Sr. No	Exam Seat No	Name of Student	Contact Details	Email ID
1	202101030023	Siddharth Rajguru	9325313403	[illegible]

Group ID:	Disciplinary / Interdisciplinary/ Industry Project / Sponsorship
Project Title:	

Sr. No	Exam Seat No	Name of Student	Contact Details	Email ID
1				

Format No.: ACAD/DI/27 Rev. No.: 00 Rev. Date: 01/08/2024

Weekly Project Execution Plan

Sr. No	Week	Date	Task	Remarks
1.	1.	22/01/2025	To get to know about BIM, Sustainability & bibliometric analysis	
2.	2.	5/02/25	BIM Study	
3.	3	20/02/25	[illegible]	
4.	4.	24/02/25	Bibliometric Review	
5	5.	3/03/25	Bibliometric data (Graph) Preparation	
6.	6.	10/03/25	Indian Papers	
7.	7.	20/03/25	Drafting of Paper	
8	8.	28/03/25	[illegible]	

Project Guide (Name & Sign)

Project Coordinator (Name & Sign)

Format No.: ACAD/DI/27 Rev. No.: 00 Rev. Date: 01/08/2024

Meeting No: 1

Week: 1

Date: 22/01/2025

Points Discussed

- Brief Introduction of BIM
- Introduction to Sustainability
- What bibliometric Analysis is all about

Task Given

- Go through about BIM
- Refer bibliometric papers
- Information regarding Sustainability (Construction 3.0)

Name of Student & Sign

Siddharth Rajguru

Absent Student Roll No.:

Name & Signature of Guide/Co Guide

Project coordinator

Figure 2.2d: Snippets of student Capstone project diary

In addition, two formal reviews are conducted:

- Capstone Review-I (https://drive.google.com/file/d/1mx9LTps-_23cZrHGN9CDfl9VKjSpt2Jk/view?usp=sharing): Focuses on problem selection, objective formulation, and coverage of relevant engineering knowledge
- Capstone Review-II (https://drive.google.com/file/d/1yCTS8hNEhOo5c-NlsfM0WHd0mugimmhK/view?usp=sharing): Evaluates achievement of objectives, quality of outputs, project timeline, draft digital portfolio, and graduation book framework

These reviews are conducted using structured evaluation sheets with rubrics, ensuring timely feedback, scope refinement, and continuous improvement.

D. Quality of Completed Projects / Working Models / Outcomes

The quality of completed capstone projects is reflected through tangible technical and professional outcomes generated by students. In addition to validated project results, models, and analytical studies, students are required to produce a Graduation Book, which documents major engineering achievements, details of all projects undertaken, including their design methodology, standards followed, cost feasibility, sustainability considerations, results, and reflective learning. Further, each student develops a Digital Portfolio, serving as a professional online record of projects, skills, certifications, and learning milestones, demonstrating technical depth, creativity, and professional readiness.

Students have also presented research papers at conferences, showcasing investigation, validation of results, and adherence to academic and ethical standards. Collectively, these outcomes demonstrate students' ability to address environmental relevance, sustainability, safety, ethics, cost-effectiveness, and use of applicable standards, thereby ensuring high-quality capstone outputs aligned with POss.

Screenshots of student graduation book, digital portfolio, YouTube channel and conference presentation certificates are presented in Figures 2.2e to Figure 2.2h.

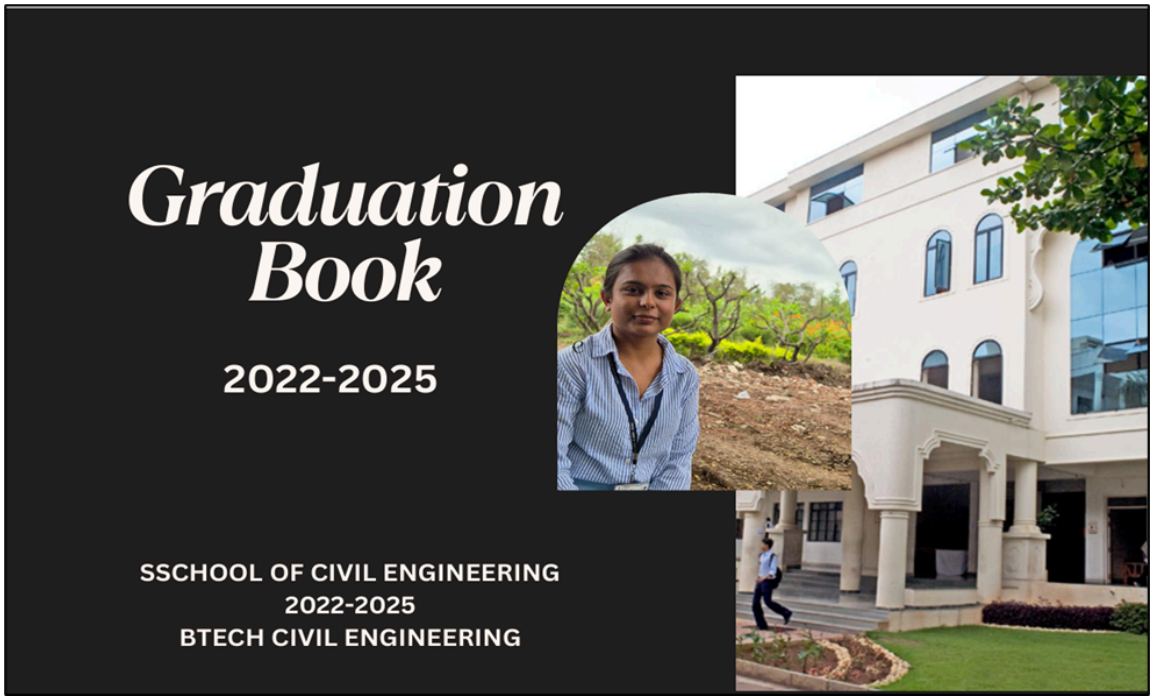

Figure 2.2e: Graduation book of Varsha Puri

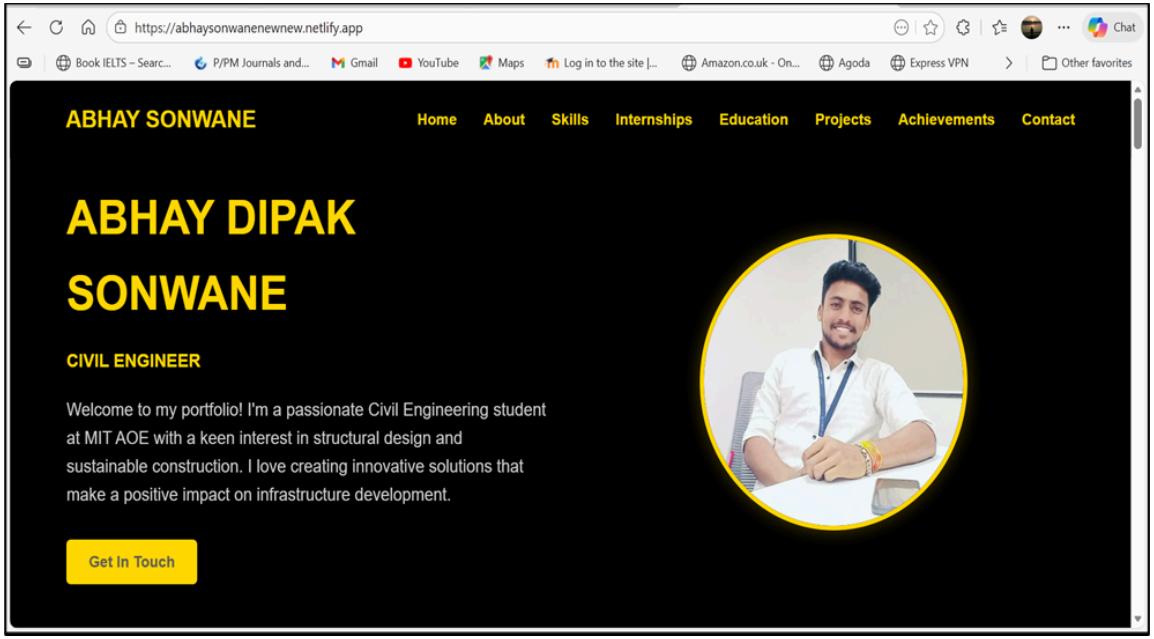

Figure 2.2f: Digital portfolio of Abhay Sonawane

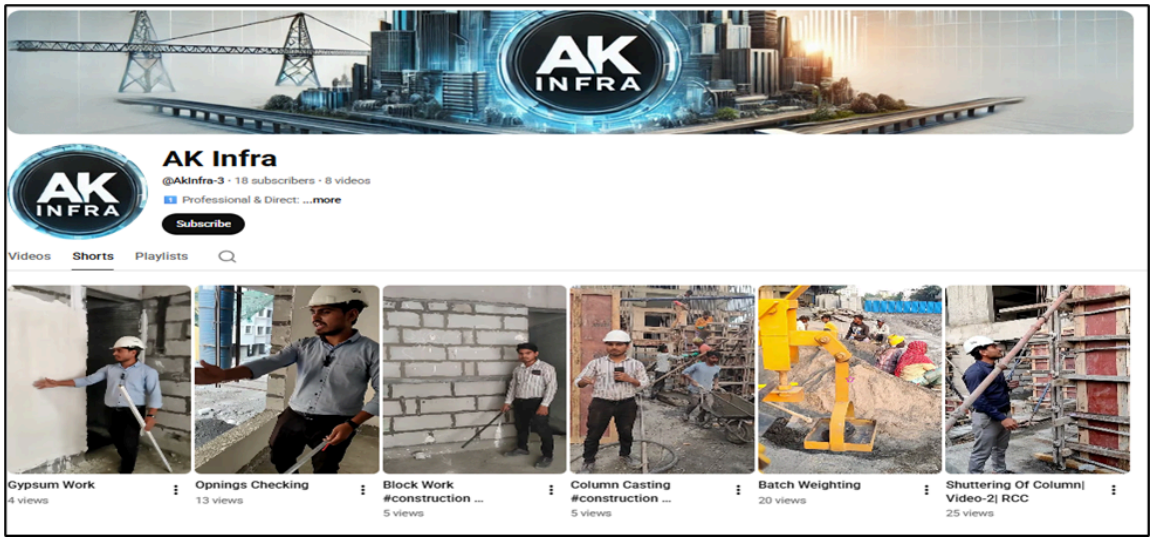

Figure 2.2g: YouTube channel by Akash Kachgunde

Figure 2.2h: Conference presentation of Capstone project by Siddharth Rajagopalan

2.3 Internship/Industrial Training (10) Total Marks 10.00

Institute Marks : 10.00

The Department of Civil Engineering, MITAOE, provides credit-based internship opportunities to ensure systematic industry exposure and effective attainment of POs and PSOs.

A. Process of Internship / Industrial Training for Students

The program offers three mandatory, structured Student Internship Programs (SIP) for:

- **Second Year:** 2 Credits
- **Third Year:** 2 Credits
- **Final Year:** 4 Credits

All SIPs are conducted during the June–July period of every academic year, and are defined clearly in the approved course syllabi .

In addition to SIPs, students are provided with opportunities to pursue Semester Long Internship Programs (SLIP) during each semester of the final year, carrying 8 credits per semester, based on eligibility and availability of industry opportunities. Table 2.3a illustrates various credit-based internships offered to students.

Table 2.3a: Various credit-based internships offered to students in every year of the program

Experiential Learning Course Student's Internship (Summer/Semester Long) (ELC SI): 4 Courses and 16 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2303296	Internship (Life And Soft Skills)	2
2.	2303396	Summer Internship (Technical)	2
3.	2303496	Summer Internship (Technical)	4
4.	2303497	Semester Long Internship/ Capstone Project/ Student Exchange	8

(i) Eligibility and Registration

- All students promoted to Second Year, Third Year, and Final Year are eligible for the respective SIPs.
- SIP participation is mandatory for all eligible students, ensuring 100% coverage.

(ii) Identification of Industry / Training Area

- Students may undertake internships in industry, research organizations, technical training platforms, or professional establishments relevant to civil engineering and allied domains.

As per syllabus guidelines, internships are not permitted in family-owned businesses or organizations smaller than private limited companies, ensuring professional exposure and quality learning. Table 2.3b presents details of students along with their internship companies.

Table 2.3b: List of Final year students along with their internship companies

Sr no	Name of Student	PRN	Name of Organization providing Internship/courses
1	Adhao Balkrushna Dnyaneshwar	202202030029	AMS Concrete Consultancy Services Pvt Ltd , Ravet Pune
2	Ambhore Vishwadeep Vasant	202202030003	AMS Pvt Ltd, Dudulgaon, Moshi
3	Athawale Abhijeet Gajanan	202101030025	Avdhoot Construction Pvt Ltd. Amravati
4	Bedmutha Amogh Nitin	202202030039	AMs Project Consultants -703, 7th Floor, Nucleus Mall, Agarkar Nagar, Pune, Maharashtra 411001
5	Bhalerao Aniket Manesh	202101030002	SS Sathe Infra Pvt limited, old Sangvi
6	Bhatnate Ritesh Ashok	202202030005	Bhujal Abhiyan Trust, Baner, Pune
7	Bimrot Gajanan Ugamsing	202101030038	AMS concrete consultant service Pune
8	Chaudhari Ganesh Shivling	202202030026	MKDM Pvt Ltd, Erandwana Karve Road – Pune
9	Chaudhari Vaidehi Baban	202202030011	Avighnaa Contractors Pvt Ltd, Mulund-Mumbai

Sr no	Name of Student	PRN	Name of Organization providing Internship/courses
10	Chavan Jatin Satish	202202030013	Riyasat Infra Developers Pvt. Limited, Navi Mumbai, Raigad
11	Chavan Sarthak Anil	202101030042	Avighnaa contractors PVR LTD, Mulund, Mumbai
12	Chavhan Sanskar Ashok	202202030020	Avighnaa Contractors Private Limited, Mulund West
13	Deshmukh Bhupendra Yogesh	202202030008	AMS concrete consultant, Pune
14	Dharpale Arti Dadasaheb	202202030040	Gunwanta Build Con, New Panvel
15	Gadge Shraddha Sanjivkumar	202202030024	Pune Smart City Development Corporation Ltd Pashan-Pune
16	Gangode Prakash Nivruti	202202030004	AMS Concrete Consultancy, Dudulgaon Moshi
17	Gawai Aditya Vijay	202202030001	Survey Of India, Phule Nagar, near Vishtrantwadi.
18	Ghoderao Akshada Abhijeet	202101030015	Pushpajayanti Constructors Pvt Limited. Address: Office No 2, Neelkamal Commerce Zone, College Rd, above Fabindia, Yeolekar Mala, Nashik, Maharashtra 422005
19	Ghule Madhubala Mahadev	202202030012	Gate No 418, Opp.Eiffel City , Ranubai Mala Chakan, Talegaon Road , Nanekarwadi, Chakan 410501
20	Gundle Raj Balaji	202202030015	Sharda Construction Pvt Ltd, Nanded
21	Ingle Tejas Vinod	202101030024	ADPl Pvt Ltd, Logicon facility management, near Radha chowk, Balewadi Pune
22	Jagadale Mayuri Mahesh	202202030030	Deshmukh Infrastructure Project Pvt Ltd (Karad)
23	Kamble Parimeeta Anil	202202030010	Public Works Department, Sub-Division 2, Wardha
24	Kendre Sonam Dnyanoba	120200345	UND Infra Pvt Ltd Latur
25	Khatri Chirag Vijay	202101030021	Dreamz City Chamber Pvt Ltd, Mahaveer plaza-Amravati
26	Kolhe Atharva Sharadkumar	202101030006	Karva Construction Pvt Ltd, Sinnar – Nashik
27	Kuwar Lokesh Baburao	202202030025	AMs project consultants pvt ltd
28	Mandore Manas Sunil	202101030036	Nirmiti Consultants PVT LTD
29	Masooma Sultan	202202030037	Space Engineering Consortium Pvt. Ltd.
30	Mousim Sultan	202202030036	Space Engineering Consortium Pvt. Ltd.
31	Narawade Vishakha Kishor	202101030034	Millennium engineers and contractors Pvt Ltd
32	Pandagare Rakhi Sudam	202202030033	Neelam Infrastructure Pvt.Ltd, Wasupura Walgaon
33	Patil Rajdeepsing Dinkar	202101030019	Nirmiti Consultant Pvt Ltd, Peth road- Nashik
34	Pawar Ashwajeet Harishchandra	202101030001	Mandlik Infracon India Pvt. Ltd, Dhule
35	Pawar Krishnaraj Panjabrao	202101030011	S Sathe Infra Private Limited(Pimpri Chinchwad,Pune, Maharashtra)
36	Pogulwar Shantanu Kaveshwar	202202030002	Bhujal Abhiyan, Pashan, Pune
37	Puri Varsha Pramod	202202030018	Pune Smart city office near Pashan
38	Sakunde Sandeep Gangadhar	202202030022	Mangalam Miraya, Mangalam Landmarks Moshi
39	Sangale Yash Sushil	202202030021	Mangalam Miraya, Moshi, Pune
40	Shaikh Furquanziya Shakeel	202101030035	Millennium Engineers and Contractors Pvt. Ltd

Sr no	Name of Student	PRN	Name of Organization providing Internship/courses
41	Shirode Madhura Kishor	202202030038	AMS CONCRETE CONSULTANCY Pune
42	Sidharth Rajagopal	202101030028	AMS Concrete Consultancy , Pune, Maharashtra
43	Sonwane Abhay Dipak	202202030035	MKDM PVT.LTD ,Karve road Erandwane -Pune
44	Surve Aditya Keshav	202101030022	Dynamic Prestress Pvt Ltd, Satpur MIDC Nashik
45	Sutar Sudesh Dilip	202101030020	INFRAKING CONSULTING ENGINEERS PVT.LTD, "A" Wing, Silver Space, SNo25/1, Jagtap Dairy-Vishal Nagar, Wakad Road, Pune-411027
46	Takate Uddhav Ambadas	202202030019	Durocrete Pune Narhe
47	Tiwari Shubham Sanjeevkumar	202202030032	Survey of India, 120/B2, Phulenagar, Alandi Road Opp, Hari Ganga Society, Yerawada, Pune, Maharashtra 411006
48	Todkari Hrushikesh Vikas	202101030008	S. S. INFRA PVT LTD
49	Vedant Sontakke	202202030023	PUNE SMART CITY DEVELOPMENT CORPORATION LTD (PSCDCL)
50	Wankhede Rohit Jitendra	202202030014	Jain Irrigation Pvt Ltd, Jalgaon
51	Sanket Gopal Dhamshedwar	120190566	Sharda Constructions Pvt. Ltd., Nanded.
52	Vedant Jitendra Bhavsar	120190570	AMs Project Consultants Pvt Ltd. -703, 7th Floor, Nucleus Mall, Camp, Pune – 411001
53	Akash Kachgunde	120200485	AMS Concrete Consultancy Pvt Ltd, Pune

(iii) Approval Mechanism

The Department of Civil Engineering follows a formal, documented approval and evaluation mechanism for internships, as prescribed in the **Institute Student Internship Program (SIP) Policy**. To ensure eligibility, academic control, and uniform evaluation, students are required to submit prescribed Annexures at different stages of the internship as shown in Figure 2.3a.

1. **Pre-Internship Approval:** Before joining the internship, students must submit the following documents to obtain formal approval:

- Annexure I: Undertaking Format
- Annexure II: Application for Internship Program
- Annexure III: Request Letter from Institute to Internship Provider (if applicable)
- Annexure IV: Reporting Letter of Student

Only after verification and approval of these annexures by the Faculty SIP Coordinator are students permitted to commence the internship.

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ANNEXURE – I

UNDERTAKING FORMAT

I, Mr. Mousim Sultan, Program: BTech, School : Civil Engineering, student of **MITAcademy..... of Engineering (MIT AOE),** permanent resident of Onagam Bandipora, Jammu & Kashmir, Phone No: 9149603913 do hereby undertake on 29-May-2024 the following.

1. I, hereby, declare that the entries made by me in the Application Form are complete and true to the best of my knowledge and based on valid records.
2. I, hereby, promise to abide by the admissible rules and regulations, concerning discipline, attendance, etc. of the Institute (MIT AOE), and also to follow the Code of Conduct prescribed by the Institute / Industry in which I am going to take the internship.
3. I, hereby undertake to maintain the name of the Institute in high levels during my period as intern in whichever Institute / Industry I am given an opportunity to undergo technical training.
4. I, hereby declare that I will maintain confidentiality and not disseminate / share any information related to the Institute / Industry to third parties.
5. I, hereby, undertake to be responsible for maintaining the security of properties belonging to the Institute / industry.

Date: 29-May-2024 **Place:** MIT AOE, Alandi

Signature of Student: Mousim

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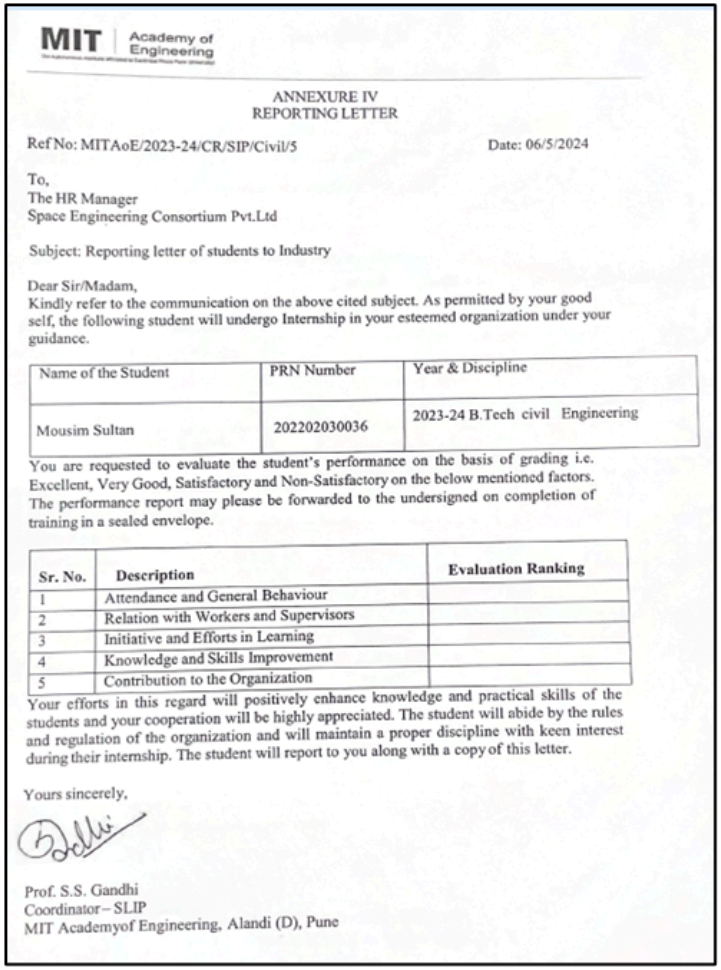
ANNEXURE – II

Sr. No.	Particulars	
1	Name of the applicant (in bold letters)	**Mousim Sultan**
2	Gender	Male
3	Class & School	TY- School of Civil Engineering
4	Date of Birth & Age (as on date)	03-03-2005 (19 years)
5	Roll Number & PRN	137 & 202202030036
6	Address for correspondence with mobile / telephone number and email-id	MIT Academy of Engineering, Alandi Pune 412105
7	Name & address of the Institute / Industry	Space Engineering Consortium Pvt. Ltd. At Jawahar Nagar Srinagar 190008
8	Core Domain of Institute / Industry	Infrastructure Project Development and Management Consultancy
9	Contact details Supervisor / HR Mobile / Telephone number and email-id	9419015196
10	Period of internship	4 - 8 weeks
11	Total number of credits proposed to internship (if applicable)	4

Signatures

Mousim Student	Recommended By SIP Mentor (Project Guide form SCVE)
Approved by:	School Internship Coordinator
Dean – School of Civil Engineering	MIT AOE Seal
Date:	



MIT Academy of Engineering

ANNEXURE IV
REPORTING LETTER

Ref No: MITAoE/2023-24/CR/SIP/Civil/5 Date: 06/5/2024

To,
The HR Manager
Space Engineering Consortium Pvt.Ltd

Subject: Reporting letter of students to Industry

Dear Sir/Madam,
Kindly refer to the communication on the above cited subject. As permitted by your good self, the following student will undergo Internship in your esteemed organization under your guidance.

Name of the Student	PRN Number	Year & Discipline
Mousim Sultan	202202030036	2023-24 B.Tech civil Engineering

You are requested to evaluate the student's performance on the basis of grading i.e. Excellent, Very Good, Satisfactory and Non-Satisfactory on the below mentioned factors. The performance report may please be forwarded to the undersigned on completion of training in a sealed envelope.

Sr. No.	Description	Evaluation Ranking
1	Attendance and General Behaviour	
2	Relation with Workers and Supervisors	
3	Initiative and Efforts in Learning	
4	Knowledge and Skills Improvement	
5	Contribution to the Organization	

Your efforts in this regard will positively enhance knowledge and practical skills of the students and your cooperation will be highly appreciated. The student will abide by the rules and regulation of the organization and will maintain a proper discipline with keen interest during their internship. The student will report to you along with a copy of this letter.

Yours sincerely,

Prof. S.S. Gandhi
Coordinator – SLIP
MIT Academyof Engineering, Alandi (D), Pune

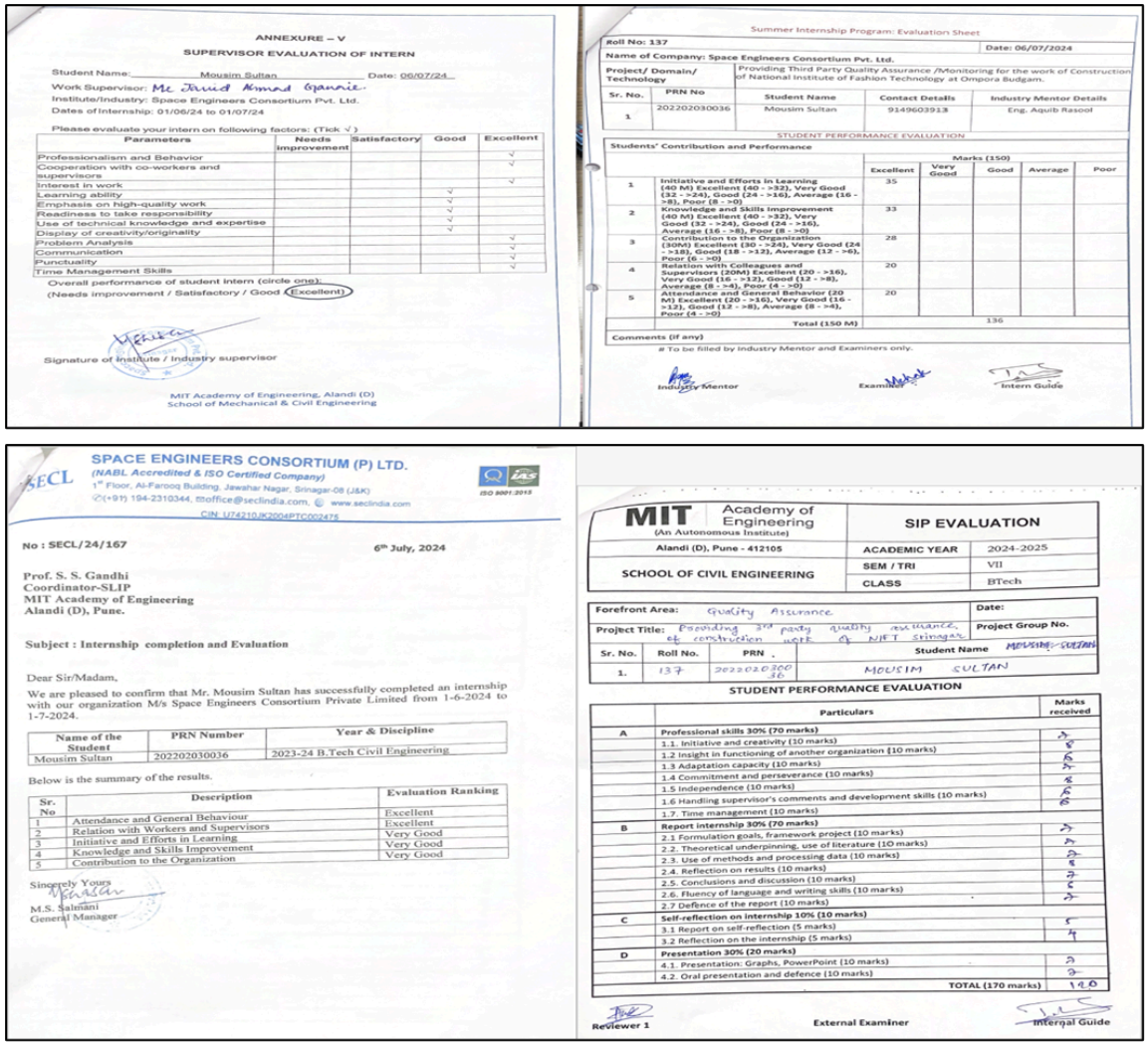
Figure 2.3a: Pre-Internship approval documents

1. **Post-Internship Evaluation:**

Upon completion of the internship, students are required to submit the following documents for grading and evaluation:

- Annexure V: Supervisor Evaluation of Intern
- Internship Report as per template provided in Annexure VIII
- Internship Completion Certificate

These documents form the basis for continuous assessment and End Semester Evaluation (SEE) using approved rubrics. Figure 2.3b depicts the post-internship submission documents



ANNEXURE – V

SUPERVISOR EVALUATION OF INTERN

Student Name: Mousim Sultan Date: 06/07/24

Work Supervisor: Mr. Javid Ahmad Ganaie.

Institute/Industry: Space Engineers Consortium Pvt. Ltd.

Dates of Internship: 01/06/24 to 01/07/24

Please evaluate your intern on following factors: (Tick √)

Parameters	Needs Improvement	Satisfactory	Good	Excellent
Professionalism and Behavior				√
Cooperation with co-workers and supervisors				√
Interest in work				√
Learning ability			√	
Emphasis on high-quality work			√	
Readiness to take responsibility			√	
Use of technical knowledge and expertise			√	
Display of creativity/originality			√	
Problem Analysis				√
Communication				√
Punctuality				√
Time Management Skills				√

Overall performance of student intern (circle one):

(Needs improvement / Satisfactory / Good (Excellent))

Signature of Institute / Industry supervisor

MIT Academy of Engineering, Alandi (D)
School of Mechanical & Civil Engineering

Summer Internship Program: Evaluation Sheet

Roll No: 137 Date: 06/07/2024

Name of Company: Space Engineers Consortium Pvt. Ltd.

Project/ Domain/ Technology: Providing Third Party Quality Assurance /Monitoring for the work of Construction of National Institute of Fashion Technology at Ompora Budgam.

Sr. No.	PRN No	Student Name	Contact Details	Industry Mentor Details
1	2022020300036	Mousim Sultan	9149603913	Eng. Aquib Rasool

STUDENT PERFORMANCE EVALUATION

Students' Contribution and Performance

		Marks (150) Excellent	Very Good	Good	Average	Poor
1	Initiative and Efforts in Learning (40 M) Excellent (40 - >32), Very Good (32 - >24), Good (24 - >16), Average (16 - >8), Poor (8 - >0)	35				
2	Knowledge and Skills Improvement (40 M) Excellent (40 - >32), Very Good (32 - >24), Good (24 - >16), Average (16 - >8), Poor (8 - >0)	33				
3	Contribution to the Organization (30M) Excellent (30 - >24), Very Good (24 - >18), Good (18 - >12), Average (12 - >6), Poor (6 - >0)	28				
4	Relation with Colleagues and Supervisors (20M) Excellent (20 - >16), Very Good (16 - >12), Good (12 - >8), Average (8 - >4), Poor (4 - >0)	20				
5	Attendance and General Behavior (20 M) Excellent (20 - >16), Very Good (16 - >12), Good (12 - >8), Average (8 - >4), Poor (4 - >0)	20				
	Total (150 M)	136				

Comments (if any)

To be filled by Industry Mentor and Examiners only.

Industry Mentor Examiner Intern Guide

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ISO 9001:2015

No : SECL/24/167 6th July, 2024

Prof. S. S. Gandhi
Coordinator-SLIP
MIT Academy of Engineering
Alandi (D), Pune.

Subject : Internship completion and Evaluation

Dear Sir/Madam,

We are pleased to confirm that Mr. Mousim Sultan has successfully completed an internship with our organization M/s Space Engineers Consortium Private Limited from 1-6-2024 to 1-7-2024.

Name of the Student	PRN Number	Year & Discipline
Mousim Sultan	202202030036	2023-24 B.Tech Civil Engineering

Below is the summary of the results.

Sr. No	Description	Evaluation Ranking
1	Attendance and General Behaviour	Excellent
2	Relation with Workers and Supervisors	Excellent
3	Initiative and Efforts in Learning	Very Good
4	Knowledge and Skills Improvement	Very Good
5	Contribution to the Organization	Very Good

Sincerely Yours

M.S. Salmani
General Manager

MIT Academy of Engineering
(An Autonomous Institute)
Alandi (D), Pune - 412105

SIP EVALUATION

ACADEMIC YEAR	2024-2025
SEM / TRI	VII
CLASS	BTech

SCHOOL OF CIVIL ENGINEERING

Forefront Area: Quality Assurance. Date:

Project Title: Providing 3rd party quality assurance of construction work at NIFT Srinagar. Project Group No.

Sr. No.	Roll No.	PRN	Student Name
1.	137	2022020300 36	MOUSIM SULTAN

STUDENT PERFORMANCE EVALUATION

	Particulars	Marks received
A	Professional skills 30% (70 marks)	
	1.1. Initiative and creativity (10 marks)	8
	1.2 Insight in functioning of another organization (10 marks)	8
	1.3 Adaptation capacity (10 marks)	7
	1.4 Commitment and perseverance (10 marks)	8
	1.5 Independence (10 marks)	8
	1.6 Handling supervisor's comments and development skills (10 marks)	8
	1.7. Time management (10 marks)	
B	Report internship 30% (70 marks)	
	2.1 Formulation goals, framework project (10 marks)	7
	2.2. Theoretical underpinning, use of literature (10 marks)	7
	2.3. Use of methods and processing data (10 marks)	7
	2.4. Reflection on results (10 marks)	8
	2.5. Conclusions and discussion (10 marks)	7
	2.6. Fluency of language and writing skills (10 marks)	6
	2.7 Defence of the report (10 marks)	7
C	Self-reflection on internship 10% (10 marks)	
	3.1 Report on self-reflection (5 marks)	5
	3.2 Reflection on the internship (5 marks)	4
D	Presentation 30% (20 marks)	
	4.1. Presentation: Graphs, PowerPoint (10 marks)	9
	4.2. Oral presentation and defence (10 marks)	9
	TOTAL (170 marks)	140

Reviewer 1 External Examiner Internal Guide

Figure 2.3b: Post-Internship submission documents

(iv) Document Collection and Record Maintenance:

For Final Year SIP, all annexures, reports, and certificates are collected in both hard and soft copy formats to ensure comprehensive documentation and traceability. For Second Year and Third Year SIPs, documents are collected and maintained in soft copy format. All records are archived in course files and are available for NBA verification.

This structured approval and documentation mechanism ensures transparency, authenticity, and outcome-based evaluation of internships.

Duration

- All SIPs have a minimum duration of 3–4 weeks (≥100 hours) or 4–8 weeks (≥160 hours), depending on the academic year.

Completion Requirements

Students are required to submit:

- Internship completion certificate
- Structured internship report

- Progress reports and presentations

All documents are maintained in both soft copy and hard copy formats in course files for verification.

B. Mapping of Internship / Industrial Training with POs and PSOs

The SIP structure and learning outcomes are explicitly aligned with the attainment of POss and PSOs. Table 2.3c presents Internship CO mapping, demonstrating that internships substantially contribute to the attainment of professional, technical, and lifelong learning outcomes

Table 2.3c: CO-PO Mapping for all credit-based Internships

Internship Level	Course name	Representative COs	Mapped POs
SY SIP (2 credits)	**Internship (Life & Soft Skills)**	CO.1: Utilize online learning platforms effectively to acquire technical skills and engage in lifelong learning	PO1, PO 5, PO12
		CO.2: Apply professional behavioural practices, including teamwork, time management, and ethical decision-making, in diverse settings	PO6, PO8, PO9
		CO.3: Reflect on and evaluate personal growth and adaptability through experiential learning and living experiences	PO6, PO8, PO9, PO10
		CO.4: Analyse emerging industry trends and develop actionable strategies to meet professional and career-related goals	PO5, PO6
		CO.5: Formulate well-defined problem statements by critically examining real-world challenges and proposing innovative approaches	PO2, PO3
		CO.6: Demonstrate effective communication skills by preparing and delivering professional presentations and writing clear, concise reports	PO10
TY SIP (2 credits)	**Internship (technical)**	CO.1: Develop and implement advanced technical competencies through hands-on training and industry-relevant technical certification programs, demonstrating expertise in applying acquired knowledge to solve complex challenges	PO3, PO4, PO5
		CO.2: Design and execute professional behavioural frameworks, integrating teamwork, time management, and ethical decision-making to address multifaceted technical and industrial scenarios	PO8, PO9, PO11
		CO.3: Evaluate and synthesize personal growth and adaptability by critically analysing experiential learning, technical training outcomes, and real-world industry exposure to inform strategic career decisions	PO6, PO8, PO9, PO10
		CO.4: Create innovative and actionable strategies to address emerging industry trends by conducting comprehensive analyses and integrating advanced technical and professional knowledge	PO2, PO3, PO4, PO5
		CO.5: Formulate and critically evaluate complex problem statements by integrating multidisciplinary approaches to develop and propose innovative, solution-driven methodologies for real-world challenges	PO4, PO5
		CO.6: Design and deliver professional technical presentations and comprehensive reports, effectively communicating advanced technical insights and solutions to diverse audiences, supported by technical certifications and practical expertise	PO10

Internship Level	Course name	Representative COs	Mapped POs
Final Year SIP (4 credits)	**Summer Internship**	CO1: Analyse and evaluate the organizational structure and workflow of a professional setup to identify opportunities for optimization and innovation.	PO11
		CO2: Design and develop innovative products, systems, or software by integrating interdisciplinary knowledge and addressing real-world challenges.	PO2, PO3
		CO3: Lead and collaborate effectively within multidisciplinary teams to achieve project objectives, demonstrating strategic decision-making and problem-solving skills.	PO4, PO9
		CO4: Critically evaluate and refine industry-relevant practices through hands-on experience, enhancing professional competence and adaptability.	PO5, PO12
		CO5: Formulate comprehensive and innovative engineering problem statements by synthesizing technical knowledge and industry insights.	PO3
Final year SLIP Term I/II (8 credits)	**Industry Practicum/Semester Long Internship**	CO.1: Analyze real-world engineering problems and propose effective solutions using domain-specific knowledge	PO1, PO2, PO3, PO4
		CO.2: Evaluate suitable problem-solving methodologies and modern tools to address practical engineering challenges	PO1, PO2, PO3, PO4, PO5
		CO.3: Demonstrate the ability to work effectively in cross-cultural and multidisciplinary teams within a professional environment	PO6, PO9, PO10
		CO.4: Develop and demonstrate teamwork, leadership, and communication skills required for collaborative and individual tasks	PO9, PO10, PO11
		CO.5: Apply ethical principles and commit to professional responsibilities and norms in engineering practice	PO6, PO8
		CO.6: Demonstrate awareness of the need for, and engage in, independent and lifelong learning to remain relevant in technological and professional domains	PO11

The COs of the Student Internship Programs are structurally mapped with the POs through the Performance Indicator (PI) sheets maintained in the course files, following the Educational Organization Management System (EOMS) format. This structured CO–PO mapping ensures that internship learning is systematically aligned with targeted POs and PSOs.

C. Student Feedback on Internship and Its Analysis

Student feedback on internships is systematically collected at the end of each SIP cycle using structured feedback mechanisms using Google forms.

Feedback Analysis

Student feedback on the SIP/SLIP initiative was collected through structured feedback forms to understand its strengths, limitations, and areas for improvement. Overall, the feedback indicates a high level of student satisfaction with the internship program. A majority of students appreciated the hands-on site exposure, understanding of work culture, site execution practices, and opportunities to apply academic knowledge in real-world scenarios. Many students highlighted improvements in technical competence, professional interaction, confidence, and self-development, and described the experience as “very good” or “excellent”.

Very few weaknesses were reported. Some students pointed out challenges related to academic imbalance during internship periods, lecture scheduling, and limited availability of institute-facilitated internship opportunities. Figure 2.3c illustrates the Google form for feedback on SIP 2024-25.

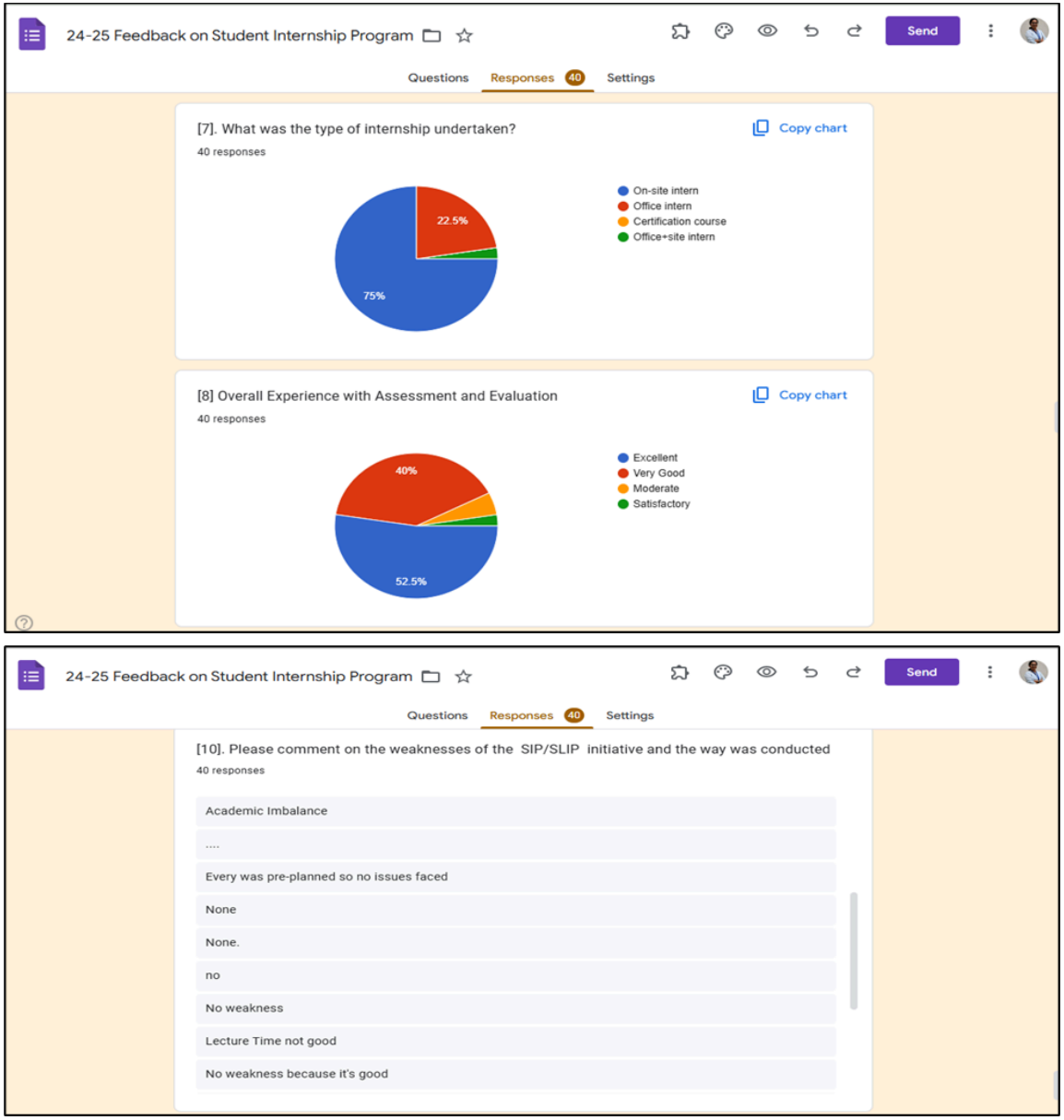


Figure 2.3c: Screenshots of Google form feedback on SIP 2024-25

Based on the feedback received, the department/institute has initiated the following corrective and improvement actions in the current academic year:

- Classes conducted in hybrid mode to support students engaged in internships.
- Examination reforms for final year Program Core Courses (PCC), wherein mid-semester examinations have been removed, and assessment is now split between online internal assessments and end-semester presentations, reducing academic load during internships.
- Active departmental support for students who are unable to secure internship opportunities independently.
- From A.Y. 2025–26 onwards, all internship approvals, documentation, and record maintenance will be conducted through the POD.AI online platform, ensuring transparency, consistency, and ease of coordination.

These actions demonstrate the department’s commitment to continuous improvement and effective integration of student feedback to enhance the quality and relevance of the SIP/SLIP initiative.

2.4 Seminar and Mini/Micro Projects (10) Total Marks 10.00

Institute Marks : 10.00

Civil Engineering program effectively utilizes seminars and mini/micro projects to provide a structured progression from conceptual understanding to practical application. Seminars develop students' abilities in literature review, problem identification, and technical communication, while mini/micro projects require design, implementation, analysis, and validation of engineering solutions. These activities are systematically mapped to COs, POs, and PSOs and evaluated using rubric-based assessment, clearly demonstrating effective outcome-based teaching–learning practices.

A.Mapping of Seminars Presented by Students with POs and PSOs

In the Second Year, Semester I, students undertake project design as a one-credit component, of 50 marks, during which they present seminars on the preliminary phase of their minor project. Seminar topics are identified in consultation with faculty members and are aligned with core and emerging areas of Civil Engineering. The seminars focus on literature reviews, understanding domain concepts, identifying engineering problems, and formulating proposed methodologies. Emphasis is placed on technical understanding, analytical thinking, and effective communication through structured presentations. Table 2.4a presents the list of student seminars conducted during the project design phase (Second Year, Semester I), highlighting the nature of activities and their mapping

Table: 2.4a. Seminar-wise Mapping of Seminars with PO and PSO

Sr No	Project Title	Students	Guide Name	POs Mapped	PSOs Mapped
1	Design and Analysis of Sustainable Urban Drainage Systems (SUDS)	Ghatol Pallavi, Suryavanshi Gayatri, Thakare Krishna, Bhagat Tanmay	Mr Khushal Kanade	PO1,PO2, PO4, PO10	PSO2
2	Study on delays in project completion and factors affecting schedule in the area of Pune city – A survey based approach	Ingole Sujal Vilas, Avajare Aryan Rajendra, Misal Abhay Bhalchandra, Rathod Shivkumar Balaji, Pimparkar Bapurao Pandit	Dr. Swapnil Patare	PO1, PO2, PO4, PO10	PSO2
3	GIS Based landslide study / Study of Landslides using Spatial Techniques	Battewad Atharv, Sonwane Mahadev, Sarode Aishwarya, Mahajan Naina	Bhaskar Wabhitkar	PO1, PO2, PO4, PO10	PSO1
4	Development of Laboratory Based Plate Load Test Equipment	Patil Soham, Narke Kartikey, Deshmukh Ranjit, Wakase Aryan	Bhaskar Wabhitkar	PO1, PO2, PO4, PO10	PSO1
5	Life cycle assessment of residential Building	Patil Aditya, Wadve Omkar, Zombade Shreyas, Kakde Akshay	Dr Muniappan	PO1, PO2, PO4, PO10	PSO2
6	Life Cycle Assessment of Industrial Building	Aishwarya Jadhav, Om Bhoyar	Dr Muniappan	PO1, PO2, PO4, PO10	PSO2
7	Cold Formed Steel Concrete Composite Sections for Axial compression & Flexural Action	Borkar Manthan, Danedar Shrinivas, Sonwane Abhishek, Shaikh Aman	Mr Sitaram Suryavanshi	PO1, PO2, PO4, PO10	PSO1
8	Design and Analysis of sustainable rural waste management	Rangari Sushant, Bhaware Kunal, Patil Madhur, Shitre Rajan	Mrs Swapanli Mohol	PO1, PO2, PO4, PO10	PSO2
9	Comparative study of different types of concrete pavement	Sanap Nivesh, Panchal Sahil	Mr. V K Pingale	PO1, PO2, PO4, PO10	PSO1
10	Utilization of Construction and Demolition waste in the construction industry	Parihar Ansh, Arun, Bhardwaj Dheeraj	Dr Vijay Muthekar	PO1, PO2, PO4, PO10	PSO2
11	Machine learning approach for understanding in the structural analysis	Pal Ashutosh, Deshpande Sangameshwar, Chuskit Skarma, Bhosale Om	Dr Swapnil Patare	PO1, PO2, PO4, PO10	PSO1

Sr No	Project Title	Students	Guide Name	POs Mapped	PSOs Mapped
12	In-house development shake table	Patiil Shravani, Waghmare Rutuja, Sarode Bhaiyasaheb, Waghmare Ajay	Mr N C Bagalekar	PO1, PO2, PO4, PO10	PSO1
13	Information system used in India Construction Sector	Lakhe Anant, Thorve Ayush, Shaikh Afun, Hagakmugake Yash	Mrs Anagha Galagali	PO1, PO2, PO4, PO10	PSO1
14	Investigation into bridge analysis	Joshi Komal, Marathe Mohit, Kedar Akshata, Shingade Utkarsh	Dr S B Magade	PO1, PO2, PO4, PO10	PSO1
15	Survey of smart buildings in Pune	Shreya Sonkamble, Sakshi Shinde, Rutuja Devkate, Siddhant More	Mrs Anagha Galgali	PO1, PO2, PO4, PO10	PSO2
16	Studying Natural driving behaviour in urban area	Amit Sarkate, Mayuri Kale, Vishakha Waghale, Abhay Thakare	Mr Bhaskar Wabhitkar & Atif Shaikh	PO1, PO2, PO4, PO10	PSO2
17	Rainfall induced landslide in Maharashtra area	Pranav Yeole, Shriyansh Rathod, Vedhvati Kharche, Aishwarya Dhande	Mr Bhaskar Wabhitkar	PO1, PO2, PO4, PO10	PSO2
18	Study of signal intersection and accident in Pune location	Siddhi Lohar, Kshitija Poman, Samarth Bhintade, Siddhesh Shirwalkar	Mr Bhaskar Wabhitkar & Atif Shaikh	PO1, PO2, PO4, PO10	PSO2
19	Review of construction and demolition waste in Pune region	Jyoti Bhaurale, Rushikesh Borkar, Harshal Thosare, Krushna Lad	Mrs Anagha Galgali	PO1, PO2, PO4, PO10	PSO2

Seminars are mapped primarily to POs such as PO1 (Engineering Knowledge), PO2 (Problem Analysis), PO4 (Investigation), PO10 (Communication), and relevant PSOs. Assessment is conducted using rubrics for content depth, analytical ability, and presentation skills, ensuring a measurable contribution to PO and PSO attainment. Table 2.4b summarizes the structured assessment scheme and marks distribution for the Seminar.

Table 2.4b: Review Stages and Marks Distribution for Seminar

Sr. No	Assessment Component	Key Assessment Focus	Marks
1	Review 1	Problem statement, project objectives and scope, project planning, and application of project management tools	05
2	Project Activities (Ethics)	Identification of unethical professional situations, ethical alternatives, commitment to professional ethics, and application of the code of ethics	05
3	Review 2 (Design & Modelling)	Literature review, need and significance of study, methodology, project modelling and design, block diagrams, flow charts, engineering drawings	10
4	Project Documentaion	Technical report quality, project cost estimation, plagiarism compliance	10
5	Final Project Demonstration & Team Presentaion	Demonstrate effective communication, implement the norms of standard professional practices, and Present results as a team, showing responsible behaviour	20

The detailed rubrics and assessment criteria for Review 1, Review 2, and Review 3 are provided in Tables 2.4c, 2.4d, and 2.4e, respectively. The marks allotted are proportionately scaled to the maximum marks specified in Table 2.4b.

Table 2.4c: Rubrics for Seminar Review 1

Criterion (Max Marks)	Mapped CO(s)	5 – Excellent	4 – Good	3 – Satisfactory	2 – Limited	1 – Poor
Problem Statement (5)	CO1	Clear, relevant real-world problem with strong justification	Relevant problem with adequate context	Identifiable problem but limited justification	Vague or weakly relevant problem	Unclear or irrelevant problem
Project Objectives & Scope (5)	CO1, CO2	Clear, measurable objectives with well-defined scope	Clear objectives with minor gaps in scope	Objectives stated but lack clarity or detail	Broad or unrealistic objectives; unclear scope	Objectives and scope not defined
Project Planning (5)	CO2	Well-structured plan with timeline and task allocation	Clear plan with minor missing details	Basic plan with major tasks identified	Poorly planned or unrealistic	No planning evident
Use of Project Management Tools (5)	CO2	Effective use of tools (Gantt/WBS) for planning and monitoring	Appropriate use of tools for planning	Tools used in a basic manner	Minimal or ineffective tool use	No tools used

Table 2.4d: Rubrics for Review 2

Criterion (Max Marks)	Mapped CO(s)	5 – Excellent	4 – Good	3 – Satisfactory	2 – Limited	1 – Poor
Project Modelling (5)	CO1, CO4	Accurate, detailed model showing integrated design and logical problem-solving	Well-developed model with minor gaps	Basic model representing core idea	Incomplete or inaccurate model	Model missing or irrelevant
Block Diagram (5)	CO1, CO4	Clear, complete diagram showing all components and interactions	Diagram shows major components clearly	Basic diagram with limited details	Poorly organized or incomplete diagram	Diagram absent or incorrect
Flow Chart (5)	CO1, CO2	Detailed, logical flow using standard symbols	Clear flow showing main steps	Basic flow with limited clarity	Confusing or incomplete flow	Flowchart missing or incorrect

Table 2.4e: Rubrics for Final Review 3

Criterion (Max Marks)	Mapped CO(s)	5 – Excellent	4 – Good	3 – Satisfactory	2 – Limited	1 – Poor
Project Report (5)	CO3, CO4	Well-structured, complete, professional	Clear and complete with minor gaps	Covers basics but lacks depth	Disorganized or incomplete	Missing or unacceptable
Presentation Skills (5)	CO5	Confident, clear, engaging	Clear with good visuals	Understandable but average	Poor clarity or preparation	Not delivered / unclear
Technical Knowledge (5)	CO1, CO3	Strong understanding and application	Good understanding with minor gaps	Basic understanding	Weak understanding	No technical clarity
Contribution & Teamwork (5)	CO5	Active participation and leadership	Good cooperation	Adequate participation	Minimal contribution	No contribution
Objectives Achieved (5)	CO1, CO2, CO4	All objectives achieved	Most objectives achieved	Basic objectives met	Many objectives unmet	Objectives not achieved

All seminar topics emphasized conceptual understanding, literature reviews, analytical thinking, and communication skills; hence, mapping is limited to foundational and analytical POs.

B. Mapping of Mini/Micro Projects and Their Contribution to POs and PSOs

In the Second Year, Semester II, the seminar topics are extended and executed as minor (mini) projects under a one-credit project implementation component of 50 marks, enabling students to implement the proposed methodologies through design, modelling, experimentation, simulation, or case study analysis. The mini projects involved applying modern tools, conducting data analysis, validating results, working as a team, and project planning. Hence, the projects are mapped to higher-order POs such as PO3 (Design/Development of Solutions), PO5 (Modern Tool Usage), PO6

(Engineer and Society), PO7 (Environment and Sustainability), PO9 (Teamwork), and PO11 (Project Management), along with relevant PSOs. Continuous evaluation through reviews, reports, and final presentations ensures the effective contribution towards PO and PSO attainment. Table 2.4f presents the mini projects and their contribution to POs and PSOs, and Figure 2.4.1 illustrates the Contribution of Mini Projects Across PO and PSOs.

Table 2.4f: Mini Project and its contribution to PO and PSO

Sr. No	Project Title	Contribution to POs	Contribution to PSOs
1	Design and Analysis of sustainable urban drainage system (SUDS)	Applies sustainable design, modelling, and teamwork (PO3, PO5, PO6, PO7, PO9, PO11)	Designs environmentally sustainable infrastructure (PSO2)
2	Study on delays in project completion and factors affecting schedule	Applies data analysis and project planning tools (PO3, PO5, PO6, PO9, PO11)	Ensures efficient and sustainable project delivery (PSO2)
3	GIS Based landslide study	Uses GIS and spatial tools for hazard analysis (PO3, PO5, PO6, PO7, PO9)	Applies advanced surveying and mapping techniques (PSO1)
4	Development of Laboratory Based Plate Load Test Equipment	Designs and validates experimental setups (PO3, PO5, PO6, PO9)	Applies geotechnical and structural testing methods (PSO1)
5	Life cycle assessment of residential building	Assesses environmental impacts using modelling tools (PO3, PO5, PO6, PO7, PO9)	Develops sustainable building solutions (PSO2)
6	Life Cycle Assessment of Industrial Building	Evaluates long-term sustainability and resilience (PO3, PO5, PO6, PO7, PO9)	Ensures ecological balance in infrastructure (PSO2)
7	Cold Formed Steel Concrete Composite Sections	Performs structural design using software tools (PO3, PO5, PO6, PO9)	Applies advanced structural design techniques (PSO1)
8	Design and Analysis of sustainable rural waste management	Designs sustainable waste management systems (PO3, PO5, PO6, PO7, PO9)	Addresses environmental and societal needs (PSO2)
9	Comparative study of different types of concrete pavement	Conducts experimental and analytical evaluation (PO3, PO5, PO6, PO9)	Applies material and pavement analysis techniques (PSO1)
10	Utilization of Construction and Demolition waste	Develops resource-efficient construction solutions (PO3, PO5, PO6, PO7, PO9)	Promotes sustainable construction practices (PSO2)
11	Machine learning approach for understanding structural analysis	Applies computational modelling and ML tools (PO3, PO5, PO6, PO9)	Uses modern tools for planning and analysis (PSO1)
12	In-house development of shake table	Designs and tests experimental structural systems (PO3, PO5, PO6, PO9)	Applies structural testing techniques (PSO1)
13	Information system used in India Construction Sector	Applies digital tools for project management (PO3, PO5, PO6, PO9, PO11)	Integrates IT systems in civil engineering practice (PSO1)
14	Investigation into bridge analysis	Applies modelling tools for structural safety analysis (PO3, PO5, PO6, PO9)	Uses advanced structural analysis methods (PSO1)
15	Survey of smart buildings in Pune	Applies smart technologies for energy efficiency (PO3, PO5, PO6, PO7, PO9)	Designs sustainable and resilient infrastructure (PSO2)
16	Studying natural driving behaviour in urban area	Analyses traffic data for planning solutions (PO3, PO5, PO6, PO9)	Improves public safety and mobility (PSO2)
17	Rainfall induced landslide in Maharashtra area	Applies geotechnical hazard modelling (PO3, PO5, PO6, PO7, PO9)	Enhances environmental resilience (PSO2)
18	Study of signal intersection and accident in Pune location	Applies traffic engineering analysis for safety (PO3, PO5, PO6, PO9)	Enhances sustainable transportation safety (PSO2)
19	Review of construction and demolition waste in Pune region	Evaluates sustainability practices in construction (PO3, PO5, PO6, PO7, PO9)	Promotes environmentally responsible construction (PSO2)

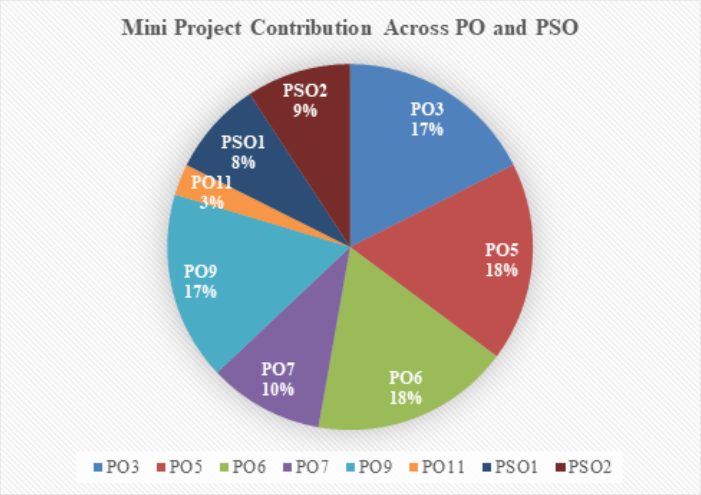


Figure 2.4a: Mini Project Contribution Across PO and PSO

Mini projects represent the execution and application of seminar work, contributing to higher-order PO and PSOs. Table 2.4g summarizes the structured assessment scheme and marks distribution for the mini project.

Table 2.4g: Review Stages and Marks Distribution for Mini Project

Sr. No.	Assessment Component	Key Assessment Focus (Project Implementation Stage)	Marks
1	Review 1	Use of modern tools and techniques for experimentation, data collection, analysis, and validation of results	05
2	Review 2	Application of discipline-specific tools and understanding of engineering roles related to safety, environment, and public welfare	10
3	Project Activities	Research paper preparation, patent drafting, and IPR filing	05
4	Project Documentation	Quality of technical report, cost estimation, and plagiarism compliance	10
5	Final Demonstration & Team Presentation	Effective communication, professional practices, teamwork, and responsible conduct	20

Detailed rubrics and assessment criteria for Review 1, Review 2, and Final Review for the mini project are presented in Tables 2.4h, 2.4i and 2.4j. The marks allotted are proportionately scaled to the maximum marks specified in Table 2.4.7.

Table 2.4h: Rubrics for Mini Project Review 1

Criterion (Max Marks)	Excellent (5)	Good (4)	Satisfactory (3)	Needs Improvement (2)	Poor (1)
Experimental Procedure & Planning (5)	Clear, systematic, appropriate	Mostly appropriate	Adequate but unclear	Poorly structured	No clear procedure
Use of Modern Tools & Techniques (5)	Appropriate & effective	Minor issues	Basic usage	Inefficient usage	No tool usage
Data Collection & Representation (5)	Accurate, tabulated, graphed	Mostly accurate	Adequate, weak representation	Incomplete/incorrect	No data

Criterion (Max Marks)	Excellent (5)	Good (4)	Satisfactory (3)	Needs Improvement (2)	Poor (1)
Analysis & Conclusions (5)	Logical, valid conclusions	Mostly valid	Partially supported	Weak/incorrect	No conclusions
Tool Suitability & Result Credibility (5)	Well evaluated & verified	Discussed, limited verification	Minimal discussion	No evaluation	No verification

Table 2.4i: Rubrics for Mini Project Review 2

Criterion (Max Marks)	Excellent (10)	Good (8)	Satisfactory (6)	Needs Improvement (4)	Poor (2)
Tool Proficiency (10)	Expert proficiency	Good proficiency	Adequate proficiency	Limited proficiency	No proficiency
Problem Solving (10)	Effectively solves problem	Mostly effective	Partially effective	Ineffective	No solution
Demonstration Clarity (10)	Clear & confident	Mostly clear	Moderately clear	Poor clarity	No clarity
Environmental Considerations (10)	Clearly addressed	Partially addressed	Minimal discussion	Neglected	No mention
Safety & Public Welfare (10)	Strong awareness	Good awareness	Basic awareness	Poor awareness	No awareness
Broader Engineering Context (10)	Strong linkage	Moderate linkage	Weak linkage	Very weak	No linkage

Table 2.4j: Rubrics for Mini Project Final Review

Criterion (Max Marks)	Excellent (20)	Good (16)	Satisfactory (12)	Needs Improvement (8)	Poor (4)
Technical Content & Results (20)	Accurate & well interpreted	Mostly accurate	Adequate	Incomplete	No valid results
Communication Skills (20)	Clear & engaging	Mostly clear	Moderately clear	Poor clarity	No clarity
Visual Aids & Demo (20)	Highly effective	Effective	Basic	Poor	None
Professional Practices (20)	Fully follows standards	Mostly follows	Partially follows	Rarely follows	No standards
Teamwork & Role Distribution (20)	Excellent coordination	Good coordination	Moderate coordination	Poor coordination	No coordination
Time Management (20)	Perfect	Minor deviation	Moderate deviation	Poor usage	Exceeded badly
Responsibility & Conduct (20)	Highly professional	Professional	Acceptable	Unprofessional	Indisciplined

2.5 Case Studies and Real-Life Examples (10) Total Marks 10.00

Institute Marks : 10.00

Department of Civil Engineering implements discipline-specific case studies and real-life examples of moderate to high complexity through site visits, self-study components, and guided analysis. Site visits to Indian Railways Institute of Civil Engineering (IRICEN), College of Military Engineering (CME), Indian Meteorological Department, water and waste management facilities, highway and institutional construction sites expose students to real engineering systems, safety practices, and operational decision-making. Case studies on structural systems, geotechnical investigations, sustainability, BIM–PM integration, GIS-based modelling, traffic engineering, and contract provisions enable analysis and evaluation of real-world engineering problems. These activities primarily address PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9, and PO10, and align with PSO1 and PSO2, and are assessed using a rubric-based evaluation to ensure measurable learning. The following approaches are adopted to incorporate case studies and real-life examples into the teaching–learning process.

- Classroom Integration (During Teaching–Learning)

  Real-life engineering situations are embedded directly into regular classroom instruction in the form of contextual examples and mini case discussions. While introducing core concepts, faculty draw upon actual projects, site conditions, failures, regulatory practices, and operational challenges to explain abstract ideas. This approach helps students visualize how theoretical principles are applied in practice, thereby improving conceptual clarity and retention.

- Learning through Structured Site Visits

  Site visits form a vital experiential component of the teaching–learning process, allowing students to observe live engineering systems, construction practices, institutional frameworks, and operational workflows. Each site visit is academically planned and linked to relevant course topics, followed by reflective activities such as interaction sessions, observation notes, case-based questions, or reports. Table 2.5a presents course-wise Case Studies and Real-Life Site-Based Learning and its mapping with CO, PO and PSOs.

Table 2.5a Course-wise Case Studies and Real-Life Site-Based Learning

Sr. No.	Course Name	Details of the Site	Key Learning Focus	Date	Type of Case Study	CO	Mapped PO & PSO
1	Railway Engineering	IRICEN, Pune	Railway infrastructure planning, permanent way systems, and construction practices	17-08-2024	Infrastructure-Based Applied Case Study	CO1, CO3, CO4, CO6	PO2, PO4, PO5, PSO1
2	Water Supply and Sanitation	Water Treatment Plant, Nigadi Pradikaran	Water treatment processes, distribution systems, and public utility management	09-09-2024	System-Based Operational Case Study	CO2, CO3	PO1, PO7, PSO2
3	Building Design and Construction	CME, Dapodi	Institutional infrastructure planning, construction standards, and safety norms	10-10-2024	Contextual Standards-Driven Case Study	CO2, CO3	PO6, PSO1
4	Environmental Impact Assessment & Climate Change	Indian Meteorological Department, Pune	Environmental data interpretation, climate indicators, impact assessment	10-10-2024	Analytical Data-Driven Case Study	CO4	PO7, PO12, PSO2

Sr. No.	Course Name	Details of the Site	Key Learning Focus	Date	Type of Case Study	CO	Mapped PO & PSO
5	Design of Steel Structures	Under-Construction Institutional Building, MITAOE Campus	Reinforcement detailing, site execution practices, and constructability issues	15-01-2025	Applied Real-Life Construction Case Study	CO2, CO3, CO4	PO4, PO11, PSO1
6	Solid & Industrial Waste Management	Waste-to-Energy Project & C&D Waste Management Plant, Moshi	Solid waste processing, landfill operations, energy recovery systems	27-02-2025	Sustainability-Focused Integrated Case Study	CO2	PO7, PO10, PSO2
7	Surveying & Geospatial Engineering	Survey of India, Pune	Surveying practices, geospatial data, CORS, and advanced mapping tools	28-02-2024	Technology-Oriented Professional Case Study	CO3	PO1, PO5, PSO1

These visits enable students to correlate classroom learning with actual engineering practice, institutional standards, safety protocols, sustainability measures, and quality control mechanisms. Such exposure significantly contributes to PO attainment related to engineering practice, ethics, sustainability, teamwork, and societal impact.

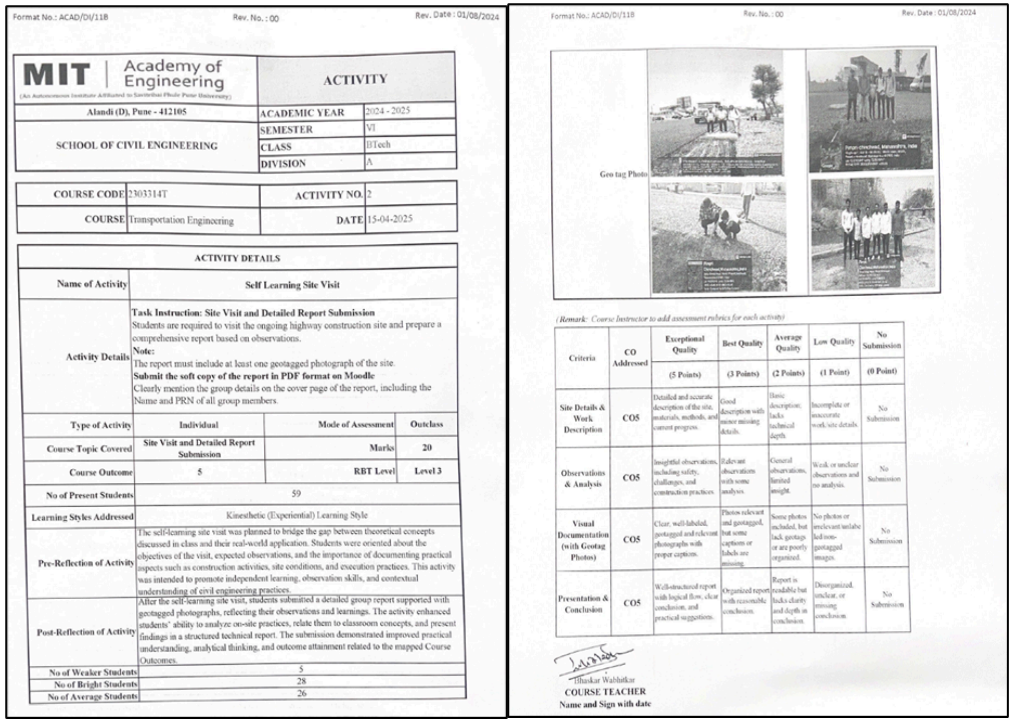
- Case Studies through Self-Study Components

The syllabus includes a structured self-study and further reading component, where students independently engage with case studies derived from real projects, industry reports, government initiatives, and institutional practices. These case studies are aligned with the course content and are discussed subsequently in class through guided reflection, quizzes, presentations, or assessed in ESE, Internal Assessments (IA), Continues Assessments (CA). This method promotes independent learning, critical thinking, and information synthesis, directly contributing to PO12 (Lifelong Learning) and PSOs related to professional competency. By engaging with authentic scenarios beyond the textbook, students develop the ability to interpret real constraints such as safety, sustainability, cost, regulations, and constructability. Table 2.5b highlights the systematic incorporation of self-study-based case studies across multiple courses with outcome and assessment mapping and Figure 2.5a depicts the self-study-based case study component for the course on transportation engineering.

Table 2.5b: Curriculum Embedded Case Studies: Self-Study Components

Course	Unit	Case Study Component	Type of Case Study	Related CO	PO–PSO Mapping	Assessment Method
Strength of Materials	Unit V	ILD for Trusses	Analytical Case Study	CO5	PO1, PO2, PSO1	ESE
Solid Waste Management	Unit II	Waste segregation, dumpsite mgmt., WtE plants	Comparative & Sustainability Case Study	CO2	PO2, PO3, PO7, PSO2	ESE
Geotechnical Engineering	Unit VI	Types of foundations	Exploratory Case Study	CO3, CO6	PO1, PO2, PSO1	IA
Building Design & Construction	Unit I	DCPR & high-rise safety provisions	Regulatory Case Study	CO1	PO6, PO1, PSO2	CA
Surveying & Geomatics	Unit I	DEM visualization	Technology-Driven Case Study	CO1	PO5, PO1, PSO1	IA
Construction Engineering & Management	Unit IV	BIM integration with PM processes	Industry-Oriented Case Study	CO4	PO3, PO5, PSO2	IA

Course	Unit	Case Study Component	Type of Case Study	Related CO	PO–PSO Mapping	Assessment Method
Design of RCC Structures	Unit III	RCC drawings & BBS	Practice-Based Case Study	CO2, CO3, CO4	PO1, PO2, PSO1	CA
Structural Analysis	Unit III	Block shear failure	Failure Analysis Case Study	CO3	PO2, PO4, PSO1	CA
Transportation Engineering	Unit V	Highway construction site	Live Site Case Study	CO5	PO3, PO7, PSO2	IA
Contracts Management	Unit IV	Review sample contract conditions and clauses.	Policy & Industry Case Study	CO4	PO6, PO8, PSO2	IA
Drone Survey	PR I	Drone image post-processing	Technology Case Study	CO3	PO5, PO4, PSO1	CA
Water Supply & Sanitation	Unit IV	Sewer appurtenances	System-Based Case Study	CO4	PO1, PO7, PSO2	ESE
Hydrology & Irrigation	Unit VI	GIS-based hydrological modeling	Software-Driven Case Study	CO3	PO5, PO2, PSO1	ESE
Sustainable Engineering	Unit V	Sustainable projects across disciplines	Sustainability Case Study	CO5	PO7, PO12, PSO2	IA
Data Analysis	PR I to VIII	Various Civil Engineering Material Testing Data	Analysis of real time material testing data	CO1, CO2, CO3 and CO4	PO1, PO2, PSO1	CA



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MIT | Academy of Engineering
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)
Alandi (D), Pune - 412105

ACTIVITY

SCHOOL OF CIVIL ENGINEERING	ACADEMIC YEAR	2024 - 2025
	SEMESTER	VI
	CLASS	BTech
	DIVISION	A

COURSE CODE	2303314T	ACTIVITY NO.	2
COURSE	Transportation Engineering	DATE	15-04-2025

ACTIVITY DETAILS

Name of Activity	Self Learning Site Visit		
Activity Details	**Task Instruction: Site Visit and Detailed Report Submission** Students are required to visit the ongoing highway construction site and prepare a comprehensive report based on observations. **Note:** The report must include at least one geotagged photograph of the site. **Submit the soft copy of the report in PDF format on Moodle** Clearly mention the group details on the cover page of the report, including the Name and PRN of all group members.		
Type of Activity	Individual	Mode of Assessment	Outclass
Course Topic Covered	Site Visit and Detailed Report Submission	Marks	20
Course Outcome	5	RBT Level	Level 3
No of Present Students	59		
Learning Styles Addressed	Kinesthetic (Experiential) Learning Style		
Pre-Reflection of Activity	The self-learning site visit was planned to bridge the gap between theoretical concepts discussed in class and their real-world application. Students were oriented about the objectives of the visit, expected observations, and the importance of documenting practical aspects such as construction activities, site conditions, and execution practices. This activity was intended to promote independent learning, observation skills, and contextual understanding of civil engineering practices.		
Post-Reflection of Activity	After the self-learning site visit, students submitted a detailed group report supported with geotagged photographs, reflecting their observations and learnings. The activity enhanced students' ability to analyze on-site practices, relate them to classroom concepts, and present findings in a structured technical report. The submission demonstrated improved practical understanding, analytical thinking, and outcome attainment related to the mapped Course Outcomes.		
No of Weaker Students	5		
No of Bright Students	28		
No of Average Students	26		

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Geo tag Photo:

(Remark: Course Instructor to add assessment rubrics for each activity)

Criteria	CO Addressed	Exceptional Quality (5 Points)	Best Quality (3 Points)	Average Quality (2 Points)	Low Quality (1 Point)	No Submission (0 Point)
Site Details & Work Description	CO5	Detailed and accurate description of the site, materials, methods, and current progress.	Good description with minor missing details.	Basic description; lacks technical depth.	Incomplete or inaccurate work site details.	No Submission
Observations & Analysis	CO5	Insightful observations, including safety, challenges, and construction practices.	Relevant observations with some analysis.	General observations, limited insight.	Weak or unclear observations and no analysis.	No Submission
Visual Documentation (with Geotag Photos)	CO5	Clear, well-labeled, geotagged and relevant photographs with proper captions.	Photos relevant and geotagged, but some captions or labels are missing.	Some photos included, but lack geotags or are poorly organized.	No photos or irrelevant/unlabelled non-geotagged images.	No Submission
Presentation & Conclusion	CO5	Well-structured report with logical flow, clear conclusion, and practical suggestions.	Organized report with reasonable conclusion.	Report is readable but lacks clarity and depth in conclusion.	Disorganized, unclear, or missing conclusion.	No Submission

Thakkar Wabhitkar
COURSE TEACHER
Name and Sign with date

Figure 2.5a: Case Studies through the Self-Study component for the transportation engineering

Case-study-based questions are mapped to relevant COs, and student performance data is used for CO and PO-PSO attainment analysis, ensuring alignment with Outcome-Based Teaching–Learning practices.

2.6 SWAYAM/NPTEL/MOOC/Self Learning (10) Total Marks 10.00

Institute Marks : 10.00

MIT AOE provides a strong institutional framework to promote self-learning through MOOCs and online learning platforms. The institute has an active NPTEL–SWAYAM Local Chapter, which facilitates student registration, academic mentoring, monitoring of progress, and certification support for MOOCs. Figure 2.6a depicts the recognition certificate awarded to the MIT AOE student chapter.

Figure 2.6a: Recognition certificate awarded to the MIT AOE student chapter

The Department of Civil Engineering follows the well-defined Institute-level SWAYAM Credit Transfer Scheme, aligned with UGC and AICTE regulations, which enables students to earn academic credits through certified online courses while ensuring relevance to POs and PSOs.

A. Number of students obtained MOOCs certification and mapping with POs and PSOs

Process and Implementation

SWAYAM courses are formally integrated into the undergraduate curriculum as:

- Programme Electives (PEC) and
- Multi-Disciplinary Minor (MDM) courses in the final year,

allowing students to earn up to 6 credits through duly recognized MOOCs.

All students are encouraged to enroll in SWAYAM courses. However, credit transfer is permitted only for Third Year and Final Year students for approved courses, and the credits will be reflected in Semester VIII. The Department identifies suitable SWAYAM/NPTEL courses every academic year based on curriculum relevance and industry requirements. These courses are approved by the Board of Studies and Academic Council. Students register on the SWAYAM portal using institute credentials and complete the courses under faculty mentorship, following the prescribed SOP for credit transfer.

Credits are transferred only after successful completion and certification, ensuring academic rigor and outcome attainment. Table 2.6a presents the CO–PO mapping as per the approved syllabus. Figure 2.6a provides a summary of SWAYAM courses for the year 2024-2025. Figure 2.6b depicts the SWAYAM certificate obtained in 2024-2025.

Table 2.6a: CO–PO Mapping for SWAYAM Course (as per approved syllabus)

CO	Description	Mapped POs	Justification
CO1	Demonstrate effective self-learning through completion of online modules, assignments, and final examination	PO12	Promotes independent learning and continuous professional development

CO2	Successfully complete SWAYAM courses and transfer credits following institutional and academic integrity norms	PO10, PO12	Enhances communication, professionalism, and lifelong learning

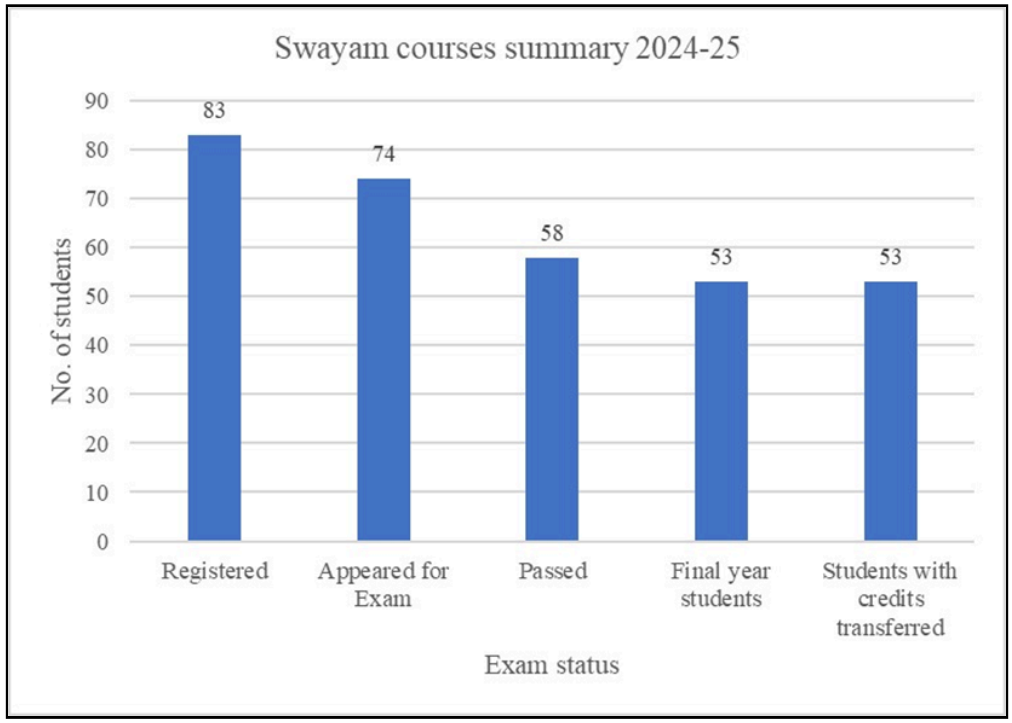


Figure 2.6a: Summary of SWAYAM courses for the year 2024-2025

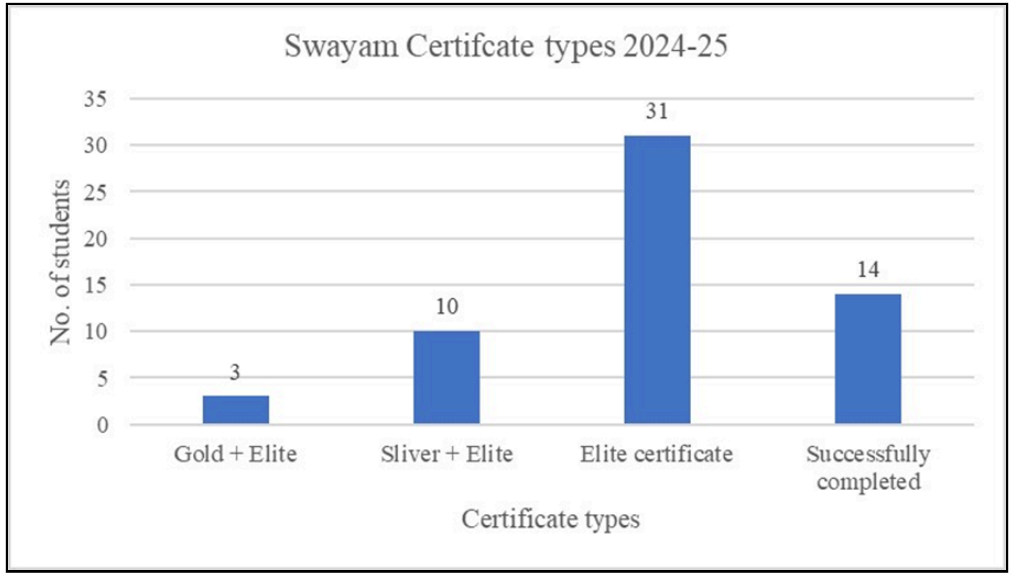


Figure 2.6b: SWAYAM certificate obtained in 2024-2025.

Table 2.6b and 2.6c present the Summary of Courses offered for credit transfer in 2023-24 (TY), 2024-25 (Btech), and the number of students who completed each course, and details of Students with credits transferred to transcripts in 2024-25

Table 2.6b: Credit Transfer Courses (2023–24 TY, 2024–25 B.Tech) and Student Completion Details

Sr.no	SCT courses offered	Mentor	Term of SCT Course completion	Course Duration	No. of students completed (BTech 24-25)
1	Advanced Reinforced Concrete Design	Nilesh Baglekar	Term I (23-24)	Jul – Oct 2023	0
2	Foundation Engineering	Bhasker Wabhitkar	Term I (23-24)	Jul – Oct 2023	0
3	Geotechnical Engineering II Foundation Engineering	Bhasker Wabhitkar	Term I (23-24)	Jul – Oct 2023	0
4	Air pollution and Control	Khushal Kanade	Term II (23-24)	Jan – Apr 2024	34
5	Maintenance and Repair of Concrete Structures	Sumit Patil/ Anagha Galagali	Term II (23-24)	Jan – Apr 2024	2
6	Wastewater Treatment and Recycling	Khushal Kanade	Term II (23-24)	Jan – Apr 2024	0
7	Advanced Reinforced Concrete Design	Nilesh Baglekar	Term I(24-25)	Jul – Oct 2024	0
8	Foundation Engineering	Bhasker Wabhitkar	Term I (24-25)	Jul – Oct 2024	0
9	Wastewater Treatment and Recycling	Khushal Kanade	Term I (24-25)	Jul – Oct 2024	5
10	Air pollution and Control	Khushal Kanade	Term II (24-25)	Jan – Apr 2025	12
11	Geotechnical Engineering II Foundation Engineering	Bhasker Wabhitkar	Term II (24-25)	Jan – Apr 2025	0
12	Remote Sensing Essentials	Muniappan N.	Term II (24-25)	Jan – Apr 2025	0
				TOTAL	**53**

Table 2.6c: Details of Students with credits transferred to transcript in 2024-25

Sr. No.	Name	PRN	Course Name
1	Ghoderao Akshada Abhijeet	202101030015	Air Pollution And Control
2	Shubham Sanjeevkumar Tiwari	202202030032	
3	Yash Sushil Sangale	202202030021	
4	Amogh Nitin Bedmutha	202202030039	
5	Rohit Jitendra Wankhede	202202030014	
6	Akash Ganesh Kachgunde	120200485	
7	Pawar Ashwajeet Harishchandra	202101030001	
8	Chaudhari Vaidehi Baban	202202030011	
9	Chavhan Sanskar Ashok	202202030020	
10	Chavan Sarthak Anil	202101030042	
11	Shraddha Sanjivkumar Gadge	202202030024	
12	Vedant Sunil Sontakke	202202030023	
13	Kure Balaji Sharad	202202030017	
14	Ingle Tejas Vinod	202101030024	
15	Khatri Chirag Vijay	202101030021	
16	Shaikh Furquanziya Shakeel	202101030035	
17	Sidharth Rajagopal	202101030028	
18	Patil Rajdeepsing Dinkar	202101030019	
19	Mandore Manas Sunil	202101030036	
20	Masooma Sultan	202202030037	
21	Mousim Sultan	202202030036	
22	Ambhore Vishwadeep Vasant	202202030003	
23	Bhatnate Ritesh Ashok	202202030005	
24	Kuwar Lokesh Baburao	202202030025	
25	Pogulwar Shantanu Kaveshwar	202202030002	
26	Deshmukh Bhupendra Yogesh	202202030008	
27	Athawale Abhijeet Gajanan	202101030025	
28	Sakunde Sandeep Gangadhar	202202030022	
29	Shirode Madhura Kishor	202202030038	
30	Gangode Prakash Nivruti	202202030004	

Sr. No.	Name	PRN	Course Name
31	Takate Uddhav Ambadas	202202030019	
32	Sudesh Dilip Sutar	202101030020	
33	Narawade Vishakha Kishor	202101030034	
34	Gawai Aditya Vijay	202202030001	
35	Kamble Parimeeta Anil	202202030010	
36	Sanket Gopal Dhamshedwar	120190566	
37	Puri Varsha Pramod	202202030018	
38	Bhalerao Aniket Manesh	202101030002	
39	Pandagare Rakhi Sudam	202202030033	
40	Sonwane Abhay Dipak	202202030035	
41	Surve Aditya	202101030022	
42	Hrushikesh Todkari	202101030008	
43	Krishnaraj Pawar	202101030011	
44	Sonam Dnyanoba Kendre	120200345	
45	Adhao Balkrushna Dnyaneshwar	202202030029	
46	Ghule Madhubala	202202030012	
47	Arti Dadasaheb Dharpale	202202030040	Wastewater Treatment And Recycling
48	Bhavsar Vedant Jitendra	120190570	
49	Bimrot Gajanan Ugamsing	202101030038	
50	Jagadale Mayuri Mahesh	202101030030	
51	Chaudhari Ganesh Shivling	202202030026	
52	Tushar Anirudh Mundhada	202202030007	Maintenance And Repair Of Concrete Structures

Upon successful completion of the course, students receive an NPTEL certificate. Figure 2.6c presents a sample certificate of SWAYAM course completion.

Figure 2.6c Certificate of Swayam course completion

The selected MOOCs strengthen core civil engineering competencies, sustainability awareness and modern tool usage, directly contributing to PO and PSO attainment.

B. Scope for Self-Learning & Facilities and their Use

MITAOE provides a robust ecosystem for self-learning, ensuring that students can effectively pursue MOOCs alongside regular academics.

Facilities and Support Provided

- High-speed campus internet and Wi-Fi
- Computer laboratories with extended access
- Central library with digital resources
- Faculty mentors / course coordinators for MOOCs
- Awareness sessions and circulars on SWAYAM opportunities

Figure 2.6d illustrates the Facilities and Support Provided for Self-Learning.

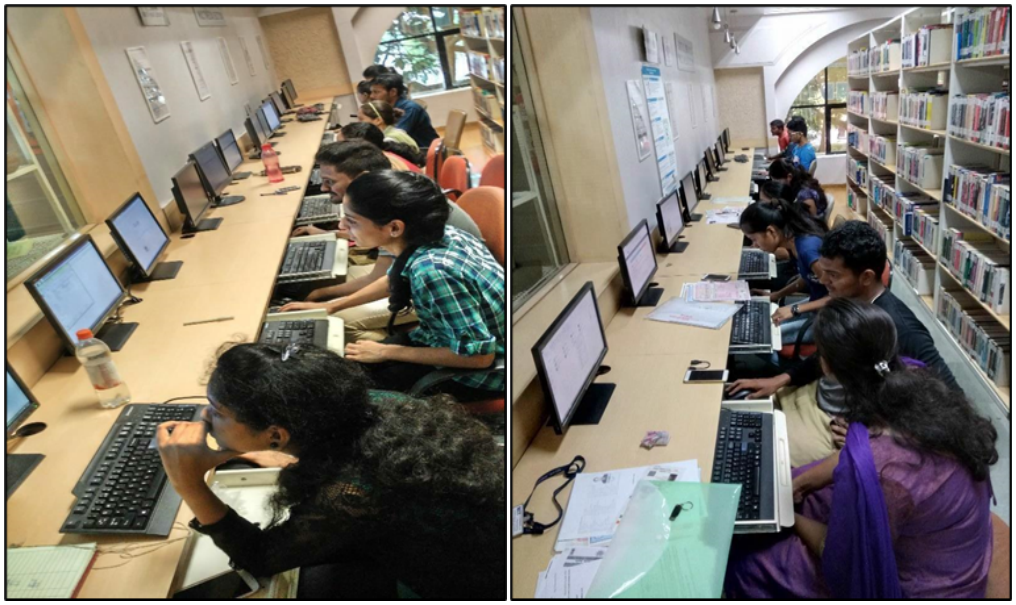


Figure 2.6d: Facilities and Support Provided for Self-Learning at MIT AOE

Monitoring and Academic Support

- Guidance for assignments, quizzes, and final examinations
- Structured documentation and verification for credit transfer
- Integration of MOOCs into curriculum as PEC/MDM courses

Outcome

These facilities and structured mentoring encourage:

1. Independent learning
2. Skill enhancement beyond curriculum
3. Better employability and adaptability
4. Lifelong learning attitude

2.7 Solving Complex Engineering Problems Incorporating Sustainability Goals (20) Total Marks 19.00

Institute Marks : 19.00

Civil Engineering inherently involves solving complex engineering problems characterized by multiple constraints related to environmental impact, societal needs, economic feasibility, safety, and sustainability. The department of Civil Engineering at MITAOE systematically integrates the United Nations Sustainable Development Goals (SDGs) (Figure 2.7a) across curriculum delivery, project-based learning, laboratory work, co-curricular activities, and research, enabling students to analyze, design, and implement sustainable engineering solutions in real-world contexts.

Figure 2.7a: SDGs recommended by the United Nations

A. Integration of Sustainability in Core Courses for Solving Complex Engineering Problems

Sustainability-oriented complex problem solving is embedded across core, elective, and value-added courses through problem-based learning (PBL), activity-based learning, and site-based case studies. Table 2.7a provides a comprehensive Course-wise Mapping of Complex Engineering Problems to the SDGs. CO's are designed to include sustainability, environmental ethics, and societal impact, and are mapped to relevant POs/PSO. Students are assessed through case studies, design problems, site-based assignments, laboratory experiments, and examinations focused on sustainable solutions.

Table 2.7a: Course-wise Mapping of Complex Engineering Problems with SDGs

Sr. No	Course Name	Type of Learning	Complex Engineering Problem Addressed	Relevant SDG
1	Smart Cities	Project-Based Learning	Design and implementation of an IoT-based Smart Parking System for congestion reduction in urban areas.	SDG 11, SDG 9
2	Concrete Technology	Problem-Based Learning + Experimental Learning	Optimization of sustainable concrete mix design for the required grade strength, considering durability, cost, trial failures, and partial cement replacement.	SDG 9, SDG 12
3	Railway Engineering	Integrated Design Problem	Design of the geometry of the permanent way, considering various parameters.	SDG 9
4	Construction Engineering & Management	Problem-Based Learning	Scheduling, monitoring, and progress tracking of a Cast-in-Situ G+2 building using MS Project under time-cost-resource constraints	SDG 11, SDG 9

5	Contracts Management	Simulation-Based Role Play (Activity-Based Learning)	Stakeholder identification, risk allocation, and contractual responsibility mapping in a complex infrastructure project with dispute resolution simulation.	SDG 16, SDG 9
6	Design of RCC Structures	Integrated Design Project	Design of earthquake-resistant multi-storey building considering seismic loads, ductility detailing, cost optimization, and safety compliance.	SDG 9, SDG 11
7	Structural Analysis	Analysis + Design-based Project	Evaluate the effect of firefighting/service openings on the strength and stability of existing reinforced concrete beams and propose suitable strengthening measures to ensure structural safety.	SDG 11
9	Environmental Science	Case Study + Field Study	Design a pedal-powered system that converts variable mechanical energy into stable, regulated electrical power for safe and efficient mobile charging, ensuring energy efficiency, durability, and sustainability.	SDG 7, SDG 09
10	Drone Surveying	Project-Based Learning	Preparation of high-resolution topographic maps from drone-acquired imagery for multi-scale urban analysis, involving geospatial data processing, to support complex urban engineering decision-making.	SDG 9, SDG 11, SDG 13
11	Geotechnical Engineering	Problem-Based Learning	Failure mechanisms and soil-improvement strategy for a G+1 building on cohesive soil near Kasarwadi–Nashik Phata, Pune (with minimum disturbance to adjacent structures)	SDG 9, SDG 11
13	Transportation Engineering	Project-Based Learning	Design of a traffic management plan for congested areas	SDG 11, SDG 13

B. Projects: Progressive Exposure to Complex Engineering Problems

The department ensures progressive exposure to complex engineering problems through structured Mini, Capstone, and Major Projects. Students address real-world challenges involving technical uncertainty, optimization, safety, environmental impact, and resource efficiency using modern engineering tools. The projects are aligned with relevant SDGs, demonstrating integration of sustainability within the curriculum and fostering socially responsible engineering graduates, as shown in Table 2.7b.

Table 2.7b: Progressive Exposure to Complex Engineering Problems through Student Projects with SDG Mapping

Sr. No.	Type of Project	Complex Engineering Problems Addressed	SDGs Mapped
1	**Mini Projects**	Urban flood mitigation; schedule delay analysis; GIS-based hazard mapping; low-cost testing equipment development; building LCA; C&D waste utilization; rural waste systems; ML-based structural analysis; traffic & accident studies; rainfall-induced landslides.	SDG 9, 11, 12, 13
2	**Capstone Projects**	Sustainable RMC practices; BIM for sustainability; cement-free/green concreting; seismic base isolation studies; e-waste systems; wastewater treatment efficiency; advanced environmental monitoring; waste segregation systems.	SDG 6, 9, 11, 12

3	**Major Projects**	Environmental impact assessment; sustainable water supply design; FEM-based structural optimization; advanced reinforcement & fragility analysis; BIM/AI-based construction safety; integrated waste management; circular resource recovery; green concrete & green building design; climate modelling using ML; advanced wastewater technology assessment.	SDG 6, 8, 9, 11, 12, 13

C. Integrated Design, Co-Curricular, and Activity-Based Learning

The department actively promotes sustainability through extension and outreach activities, enabling students to apply engineering knowledge in societal contexts. Table 2.7c summarizes the co-curricular and extension activities undertaken to promote sustainability awareness and their alignment with targeted SDGs.

Table 2.7c: Departmental Initiatives Addressing Sustainability through Academic and Outreach Activities

Sr. No.	Course / Activity	Nature of Engagement	Sustainability Contribution	SDGs Targeted
1	Building Design and Construction	Study of Building Bye-laws & Planning	Promotes sustainable urban planning, regulatory compliance, safe and inclusive infrastructure	SDG 4, SDG 11
2	Environmental Science	Student Ambassador Program	Awareness generation on environmental protection and climate responsibility	SDG 11, SDG 13, SDG 15
3	Railway Engineering	Visit to IRICEN	Exposure to sustainable railway infrastructure, safety systems, and energy-efficient transportation	SDG 9, SDG 4, SDG 11, SDG 13
4	Water Supply & Sanitation Engineering	Visit to Water Treatment Plant, Pune	Understanding safe drinking water supply, public health protection, and water resource management	SDG 3, SDG 4, SDG 6, SDG 11
5	Environmental Impact Assessment & Climate Change	Visit to Indian Meteorological Department, Pune	Climate data analysis, disaster preparedness, and environmental monitoring	SDG 4, SDG 9, SDG 11, SDG 13
6	Smart Cities	IoT for Smart City Development	Smart infrastructure, energy optimization, sustainable urban management	SDG 4, SDG 9, SDG 11
7	Solid & Industrial Waste Management	Visit to Waste-to-Energy & C&D Waste Plant, Moshi	Waste valorization, circular economy practices, landfill reduction	SDG 7, SDG 9, SDG 11, SDG 12
8	World Water Day Celebration	Awareness Campaign	Promotes water conservation and responsible resource management	SDG 6, SDG 13
9	Tree Plantation Drives	Environmental Initiative	Enhances green cover, biodiversity conservation, carbon sequestration	SDG 13, SDG 15
10	Short Films on Sustainability	Student Creative Activity	Awareness on water scarcity and sustainable lifestyle practices	SDG 6, SDG 12, SDG 11
11	Guest & Expert Sessions	Industry/Expert Interaction	Exposure to global environmental challenges and sustainable development practices	SDG 4, SDG 13, SDG 17
12	Workshops on Sustainability	Skill-Based Training	Capacity building in waste, water, and energy management	SDG 9, SDG 12
13	Green Club Engagement	Student-Led Environmental Campaigns	Active participation in sustainability initiatives and community outreach	SDG 4, SDG 13, SDG 17

Figures 2.7b illustrate sustainability-focused co-curricular and extension activities such as World Water Day celebration, a short film on water conservation, an expert session on waste management, and a workshop on solar energy, conducted to enhance student awareness and engagement with SDGs.

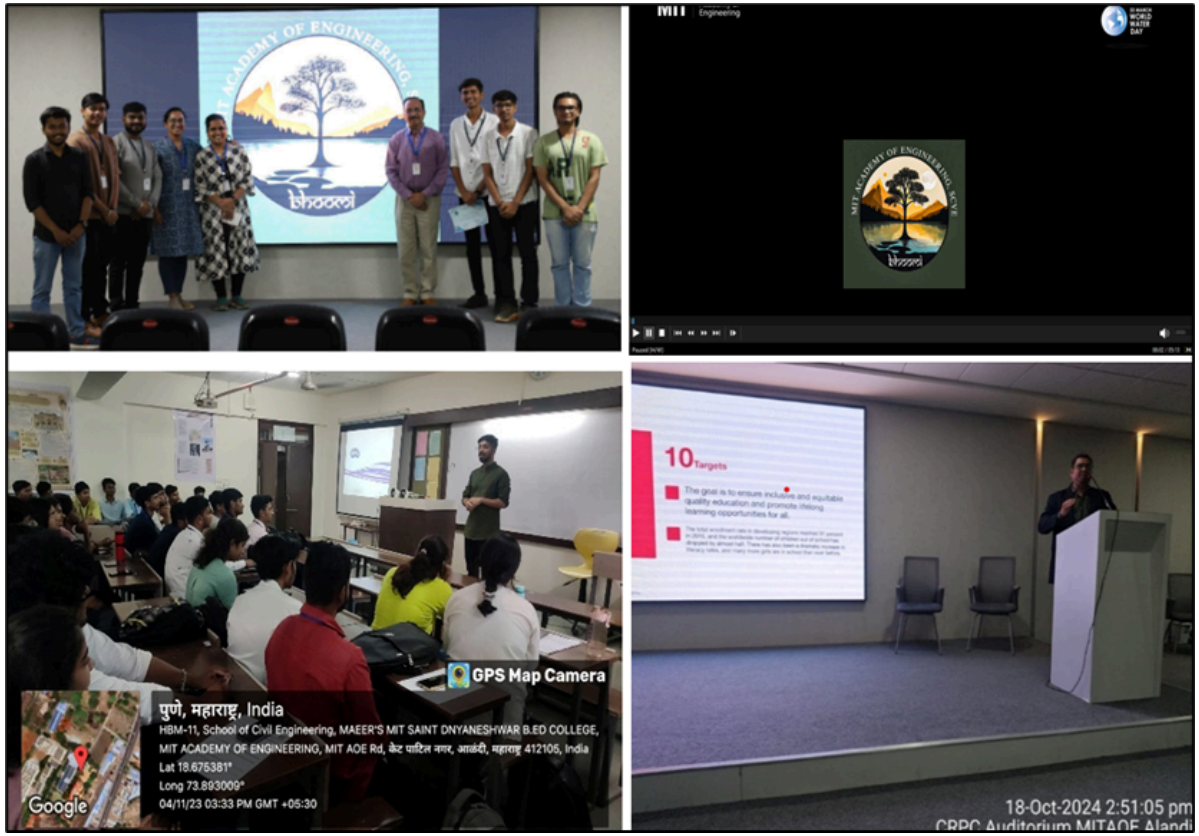


Figure 2.7b: Sustainability-Focused Co-Curricular and Extension Activities

D. Research, Innovation, and Hackathon-Based Learning

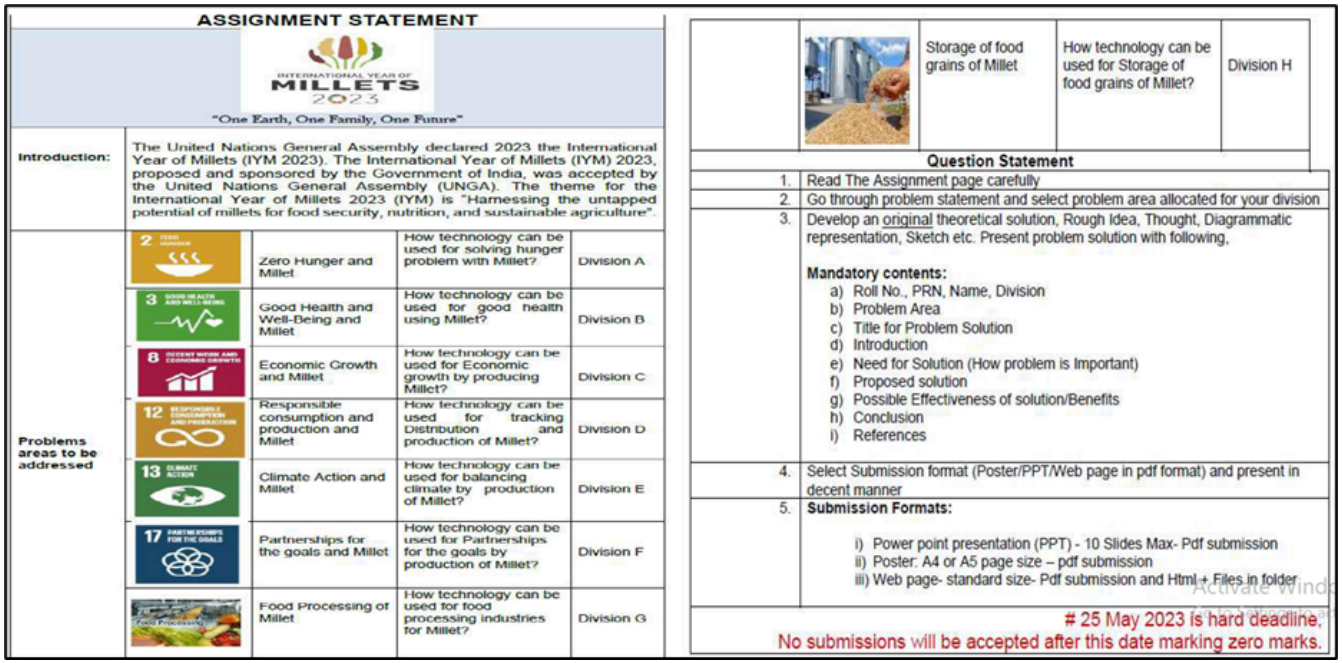
Faculty and students actively engage in research and innovation activities related to sustainability, including:

- Seasonal Water Testing of Indrayani River and providing feedback to concerned authorities
- Low-carbon construction technologies
- Smart water management systems
- Climate-resilient infrastructure solutions

Students participate in hackathons, innovation challenges, workshops, and paper presentations focused on sustainable engineering solutions, thereby strengthening their analytical, design, and problem-solving skills.

E. First Year Foundation for Sustainability Thinking

At the foundational level, sustainability is introduced through the First Year course “Creative Technology”, wherein students engage in solving complex, open-ended engineering problems aligned with the United Nations SDGs through the theme of the *International Year of Millets*. Students are required to identify real-world sustainability challenges related to food security, health, economic growth, climate action, responsible consumption, and partnerships, and propose technology-driven solutions. Moreover, continuous assessment components, including an activity on sustainability and an activity on United Nations SDGs, are included, thereby ensuring early development of sustainability awareness and systems thinking from the beginning of the engineering program. Figure 2.7c demonstrates an SDG-based assignment designed to develop students’ ability to solve complex sustainability-oriented engineering problems.



ASSIGNMENT STATEMENT

INTERNATIONAL YEAR OF MILLETS 2023

"One Earth, One Family, One Future"

Introduction: The United Nations General Assembly declared 2023 the International Year of Millets (IYM 2023). The International Year of Millets (IYM) 2023, proposed and sponsored by the Government of India, was accepted by the United Nations General Assembly (UNGA). The theme for the International Year of Millets 2023 (IYM) is "Harnessing the untapped potential of millets for food security, nutrition, and sustainable agriculture".

Problems areas to be addressed

Zero Hunger and Millet	How technology can be used for solving hunger problem with Millet?	Division A
Good Health and Well-Being and Millet	How technology can be used for good health using Millet?	Division B
Economic Growth and Millet	How technology can be used for Economic growth by producing Millet?	Division C
Responsible consumption and production and Millet	How technology can be used for tracking Distribution and production of Millet?	Division D
Climate Action and Millet	How technology can be used for balancing climate by production of Millet?	Division E
Partnerships for the goals and Millet	How technology can be used for Partnerships for the goals by production of Millet?	Division F
Food Processing of Millet	How technology can be used for food processing industries for Millet?	Division G
Storage of food grains of Millet	How technology can be used for Storage of food grains of Millet?	Division H

Question Statement

1. Read The Assignment page carefully
2. Go through problem statement and select problem area allocated for your division
3. Develop an original theoretical solution, Rough Idea, Thought, Diagrammatic representation, Sketch etc. Present problem solution with following,

   Mandatory contents:
   a) Roll No., PRN, Name, Division
   b) Problem Area
   c) Title for Problem Solution
   d) Introduction
   e) Need for Solution (How problem is Important)
   f) Proposed solution
   g) Possible Effectiveness of solution/Benefits
   h) Conclusion
   i) References
4. Select Submission format (Poster/PPT/Web page in pdf format) and present in decent manner
5. **Submission Formats:**
   i) Power point presentation (PPT) - 10 Slides Max- Pdf submission
   ii) Poster: A4 or A5 page size – pdf submission
   iii) Web page- standard size- Pdf submission and Html + Files in folder

25 May 2023 is hard deadline.
No submissions will be accepted after this date marking zero marks.

Figure 2.7c: SDG-Based Assignment on Sustainable Engineering Solution

F. Continuous Improvement and Governance

The PAQIC periodically reviews:

- Integration of SDGs in curriculum and projects
- Effectiveness of sustainability-oriented learning activities

Based on feedback, emerging topics such as circular economy, green infrastructure, climate-resilient design, and sustainable materials are progressively incorporated, ensuring continuous improvement.

2.8 Steps Taken for Enhancing Industry Institute Partnerships (15)

Total Marks 14.00

Institute Marks : 14.00

The Civil Engineering department is committed to preparing graduates for employment by providing quality technical education and nurturing them into globally competent and industry-ready professionals. In view of the rapidly changing demands of the construction and infrastructure sectors, continuous and structured industry–institute interaction is essential for aligning academic delivery with professional practice.

Industry engagement plays a crucial role in understanding evolving industry requirements, integrating practical perspectives into curriculum delivery, and enhancing students' technical, professional, and entrepreneurial competencies. Recognizing this need, the department has established a systematic framework for Industry–Institute Interaction through strategic collaborations and sustained initiatives.

The department ensures meaningful industry participation through the following mechanisms:

- **Industry involvement in curriculum design and revision**, incorporating industry feedback to enhance relevance and applicability
- **Industry involvement in partial delivery of regular courses**, through expert lectures, case studies, and technical sessions
- **Industry-supported laboratories**, providing students access to industry-grade equipment, software, and practical training
- **Industrial visits and study tours**, offering firsthand exposure to real-time construction practices and project execution
- **Industrial internships and summer training programmes**, enabling students to gain hands-on industry experience

In addition, the department strengthens industry engagement through:

- **Hands-on workshops and skill clinics** aligned with current industry tools and technologies
- **Value-added courses** based on emerging industry needs
- **Alumni engagement and career guidance sessions**
- **Faculty–industry immersion programmes**, including FDPs, workshops, and professional certifications
- **Collaboration with placement companies** to enhance employability outcomes

The effectiveness of these initiatives is reflected in strong student participation, including 182 enrolments in Summer Internship Programmes and 127 enrolments in Semester-Long Internships. Collectively, these efforts ensure that students acquire industry-relevant skills, practical exposure, and professional competence, supporting outcome-based education and continuous improvement. Figure 2.8a depicts the key industry engagement initiatives undertaken to enhance practical exposure and employability since 2022.

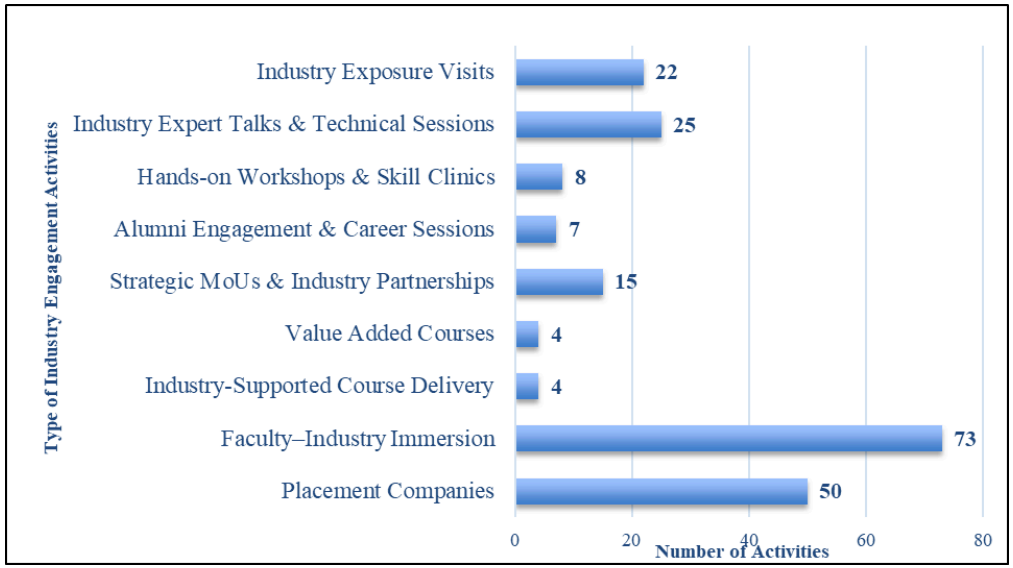


Figure 2.8a: Summary of Industry Engagement and Exposure Activities

A. Industry involvement in the partial delivery of any regular courses for students

The institute facilitates industry participation in the partial delivery of regular courses through guest lectures, expert sessions, hands-on demonstrations, and case study discussions by industry professionals. This involvement provides students with exposure to current industry practices, tools, standards, and real-world problem-solving approaches, thereby enhancing employability and industry readiness. Details of industry experts and the topics covered are presented in Table 2.8a, while Table 2.8b summarizes the expert sessions and hands-on activities conducted.

Table 2.8a: Industry involvement in the delivery courses

Sr. No.	Industry Expert	Industry	Course	Hours	COs Mapped
1	Dr. Sivakumar V	Centre for Development of Advanced Computing (CDAC), Pune	Quantum Geographic Information System (QGIS)	52	CO1, CO2, CO4
2	Mr. Sanjay Dhote	Survey of India, Government Of India	Drone Surveying	50	CO1, CO2, CO3

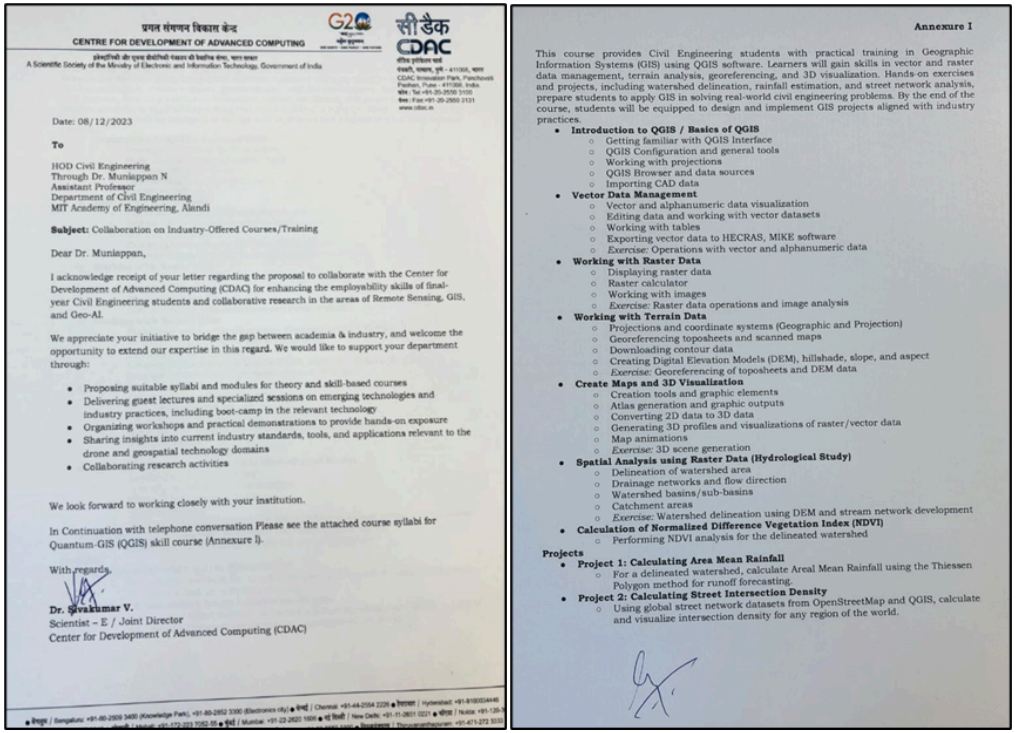
Table 2.8b: Expert Lectures and Workshops by Industry

Activity	Topic	Name of Industry Person	Designation	Date
Expert lectures	Basics of Financial Management	Mr. Ashish Thete, CEO and Founder of GDK Educational Institute	Founder & CEO, GDK Educational Institute	20-09-2024
	Future Skills for Civil Engineers: Preparing for Tomorrows Challenges	Dr. Jaiprakash Shroff	Chairman Kushal Credai Pune Metro, Owner & Chairman of Shroff Group	20-09-2024
	Geometric Design of Railways	Mr. Sagar Kolapkar	MoRT&H Certified Road Safety Auditor	17-10-2024
	Industrial Practises of Steel Structures and career opportunities	Mr. Pavan Tikate	Manager Shapoorji Pallonji PVT LTD Pune.	19-10-2024
	Online resources for Academic and research (IEEE resources)	Mr. Gaurav Vinayak Date	EBSCO Information services PVT. LTD	23-01-2025
	Business Blueprint Seminar	Mr. Amol Parhad	Founder & CEO of The Amprar Group	26-01-2025
	Changemakers' Meet: Lead the change with Saksham	Amitkumar Mishra	Saksham, an NGO dedicated to teaching underprivileged children and empowering them with education and life skills	13-02-2025
	BIM: Transforming Design, Construction & Beyond	Dr. Aidi Hizami	Certified Construction Project Manager (CCPM) CIDB, Head, Bentley BIM Advancement Lab, University Putra Malaysia	05-03-2025
	Advanced concrete for today and tomorrow	Rajpal Singh	Head Technical Services, Birla Shakti Cement LTD	21-11-2024

Activity	Topic	Name of Industry Person	Designation	Date
Workshop	Student Solar Ambassador Workshop	Dr. Sachin Shingwan	Solar Man of India, consultant for Corporate Social Responsibility (CSR) Projects	18-10-2024
	Building Bye Laws & Planning	Mr. Chetan More	MAHA Rera Real Estate Trainer, Freelancer, Entrepreneur, Academician NICMAR	11-09-2024
	Drone Surveying	Shri.D C Ambhore	Officer Surveyor, Survey of India	02-01-2025

B. Industry offered courses/training

The Department of Civil Engineering at MIT AOE consistently implements industry-delivered training cum certification as a structured academic initiative to enhance students' industry relevance and employability. The course QGIS is offered by CDAC for Final Year students. Figure 2.8b presents the industry collaboration letter from CDAC along with the annexure detailing the QGIS skill development course structure, demonstrating industry involvement in specialized training and skill enhancement of students.



प्रगत संगणन विकास केंद्र
CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING
A Scientific Society of the Ministry of Electronics and Information Technology, Government of India

सी डैक
CDAC

Date: 08/12/2023

To

HOD Civil Engineering
Through Dr. Muniappan N
Assistant Professor
Department of Civil Engineering
MIT Academy of Engineering, Alandi

Subject: Collaboration on Industry-Offered Courses/Training

Dear Dr. Muniappan,

I acknowledge receipt of your letter regarding the proposal to collaborate with the Center for Development of Advanced Computing (CDAC) for enhancing the employability skills of final-year Civil Engineering students and collaborative research in the areas of Remote Sensing, GIS, and Geo-AI.

We appreciate your initiative to bridge the gap between academia & industry, and welcome the opportunity to extend our expertise in this regard. We would like to support your department through:

- Proposing suitable syllabi and modules for theory and skill-based courses
- Delivering guest lectures and specialized sessions on emerging technologies and industry practices, including boot-camp in the relevant technology
- Organizing workshops and practical demonstrations to provide hands-on exposure
- Sharing insights into current industry standards, tools, and applications relevant to the drone and geospatial technology domains
- Collaborating research activities

We look forward to working closely with your institution.

In Continuation with telephone conversation Please see the attached course syllabi for Quantum-GIS (QGIS) skill course (Annexure I).

With regards,

Dr. Sivakumar V.
Scientist – E / Joint Director
Center for Development of Advanced Computing (CDAC)

Annexure I

This course provides Civil Engineering students with practical training in Geographic Information Systems (GIS) using QGIS software. Learners will gain skills in vector and raster data management, terrain analysis, georeferencing, and 3D visualization. Hands-on exercises and projects, including watershed delineation, rainfall estimation, and street network analysis, prepare students to apply GIS in solving real-world civil engineering problems. By the end of the course, students will be equipped to design and implement GIS projects aligned with industry practices.

- **Introduction to QGIS / Basics of QGIS**
  - Getting familiar with QGIS Interface
  - QGIS Configuration and general tools
  - Working with projections
  - QGIS Browser and data sources
  - Importing CAD data
- **Vector Data Management**
  - Vector and alphanumeric data visualization
  - Editing data and working with vector datasets
  - Working with tables
  - Exporting vector data to HECRAS, MIKE software
  - *Exercise:* Operations with vector and alphanumeric data
- **Working with Raster Data**
  - Displaying raster data
  - Raster calculator
  - Working with images
  - *Exercise:* Raster data operations and image analysis
- **Working with Terrain Data**
  - Projections and coordinate systems (Geographic and Projection)
  - Georeferencing toposheets and scanned maps
  - Downloading contour data
  - Creating Digital Elevation Models (DEM), hillshade, slope, and aspect
  - *Exercise:* Georeferencing of toposheets and DEM data
- **Create Maps and 3D Visualization**
  - Creation tools and graphic elements
  - Atlas generation and graphic outputs
  - Converting 2D data to 3D data
  - Generating 3D profiles and visualizations of raster/vector data
  - Map animations
  - *Exercise:* 3D scene generation
- **Spatial Analysis using Raster Data (Hydrological Study)**
  - Delineation of watershed area
  - Drainage networks and flow direction
  - Watershed basins/sub-basins
  - Catchment areas
  - *Exercise:* Watershed delineation using DEM and stream network development
- **Calculation of Normalized Difference Vegetation Index (NDVI)**
  - Performing NDVI analysis for the delineated watershed

Projects

- **Project 1: Calculating Area Mean Rainfall**
  - For a delineated watershed, calculate Areal Mean Rainfall using the Thiessen Polygon method for runoff forecasting.
- **Project 2: Calculating Street Intersection Density**
  - Using global street network datasets from OpenStreetMap and QGIS, calculate and visualize intersection density for any region of the world.

Figure 2.8b: Industry Collaboration Letter and Course Details for QGIS Skill Development Program by CDAC

In addition, the department conducts Autodesk Revit training and certification every academic year for Third Year Civil Engineering students, providing early exposure to Building Information Modeling (BIM) tools widely used in the construction industry. The training is designed and delivered by industry professionals and authorized training partners, conducted in a structured non-credit format, and supported by formal documentation and certification. The program is delivered through live online instructional modules, reinforced with practical assignments and project-based exercises, and culminates in an industry-recognized certification examination.

Table 2.8c summarizes the year-wise participation of students in Autodesk Revit training and certification, while Figure 2.8c provides sample assessment records and industry-issued certificates as evidence of implementation.

Table 2.8c: Year-wise Student Participation in Industry Certification Programs

Academic Year	No of Students for Training and Certification
2024-25	55
2023-24	43
2022-23	46

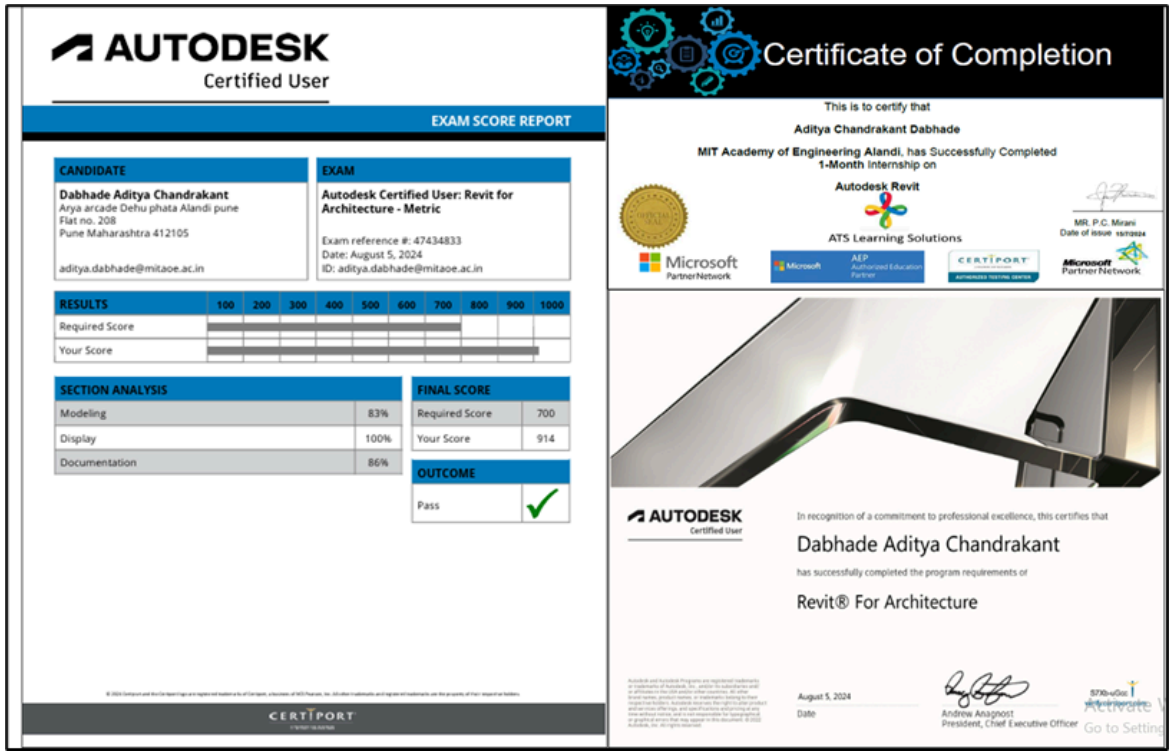
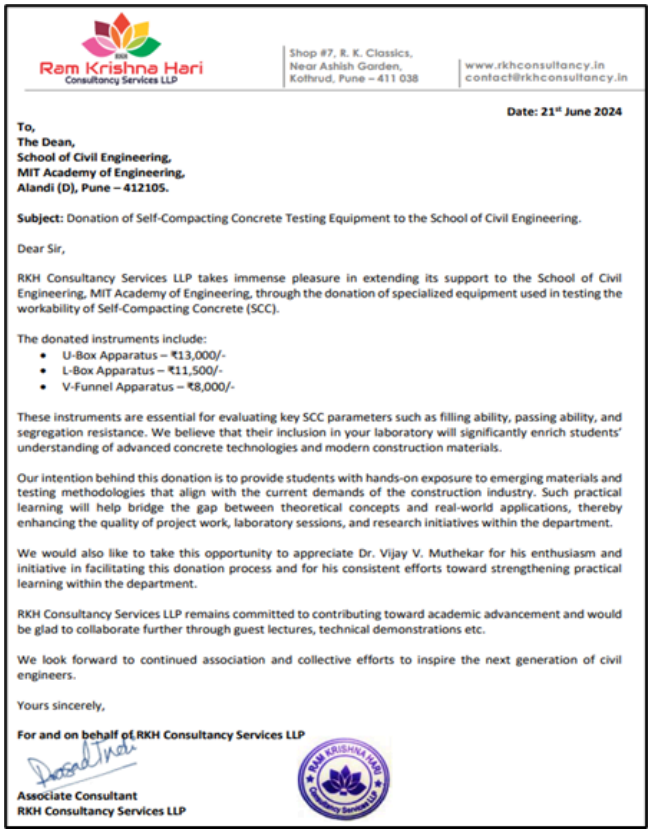


Figure 2.8c: Sample Industry Training Assessment Records and Certifications

C. Industry-supported laboratories

The Department of civil engineering has established industry-supported laboratory facilities through active collaboration with construction and consultancy organizations, with the objective of strengthening hands-on learning, applied research, and industry-relevant skill development.

- Ram Krishna Hari (RKH) Consultancy Services LLP has contributed specialized instruments for assessing the workability of Self-Compacting Concrete (SCC) as part of laboratory development under an industry–academia collaboration. The instruments, valued at ₹32,500, have been installed in the Testing of Materials (TOM) Laboratory and are effectively utilized from Academic Year 2024–25 onwards for laboratory experiments, student projects, and advanced testing demonstrations.



Ram Krishna Hari
Consultancy Services LLP

Shop #7, R. K. Classics,
Near Ashish Garden,
Kothrud, Pune – 411 038

www.rkhconsultancy.in
contact@rkhconsultancy.in

Date: 21st June 2024

To,
The Dean,
School of Civil Engineering,
MIT Academy of Engineering,
Alandi (D), Pune – 412105.

Subject: Donation of Self-Compacting Concrete Testing Equipment to the School of Civil Engineering.

Dear Sir,

RKH Consultancy Services LLP takes immense pleasure in extending its support to the School of Civil Engineering, MIT Academy of Engineering, through the donation of specialized equipment used in testing the workability of Self-Compacting Concrete (SCC).

The donated instruments include:

- U-Box Apparatus – ₹13,000/-
- L-Box Apparatus – ₹11,500/-
- V-Funnel Apparatus – ₹8,000/-

These instruments are essential for evaluating key SCC parameters such as filling ability, passing ability, and segregation resistance. We believe that their inclusion in your laboratory will significantly enrich students' understanding of advanced concrete technologies and modern construction materials.

Our intention behind this donation is to provide students with hands-on exposure to emerging materials and testing methodologies that align with the current demands of the construction industry. Such practical learning will help bridge the gap between theoretical concepts and real-world applications, thereby enhancing the quality of project work, laboratory sessions, and research initiatives within the department.

We would also like to take this opportunity to appreciate Dr. Vijay V. Muthekar for his enthusiasm and initiative in facilitating this donation process and for his consistent efforts toward strengthening practical learning within the department.

RKH Consultancy Services LLP remains committed to contributing toward academic advancement and would be glad to collaborate further through guest lectures, technical demonstrations etc.

We look forward to continued association and collective efforts to inspire the next generation of civil engineers.

Yours sincerely,

For and on behalf of RKH Consultancy Services LLP

Associate Consultant
RKH Consultancy Services LLP

Figure 2.8d: RKH Industry Donation Letter for SCC Testing Equipment

- A consortium of nearly 20 Ready Mix Concrete (RMC) plants has supported student micro projects by sponsoring materials and infrastructure required for concrete casting, curing, and testing activities, with a total contribution valued at ₹5.5 lakhs. This support enabled students to work on real-world concrete mix designs, performance evaluation, and quality assessment, thereby enhancing experiential learning and practical competence in materials engineering.

LEAD RMC
7710870202
leadrmc02@gmail.com
Sr. No. 307/1A/1B, D Y Patil Road, Lohagaon, Pune - 47.
www.leadrmc.com

Date -20 Nov 2025

LETTER OF APPRECIATION

-TO WHOM IT MAY CONCERN–

This is to acknowledge and sincerely appreciate the dedicated efforts of the following students during their practical learning at **LEAD RMC PLANT.**

Samarth Santosh Bhintade. PRN – 202402030011
Nayna Sanjay Mahajan. PRN – 202301030008
Aishwarya Sanjay Sarode. PRN – 202301030016
Kshitija Santosh Poman. PRN – 202402030009

The students actively participated in the casting of M40 Self Compacting Concrete (SCC) specimens, including cubes, beams, and cylinders. The casting work was carried out on 03 October 2025 to 05 October 2025 at our plant under the supervision of our technical and quality control team.

They also performed U-Box and V-Funnel tests to study the flowability and passing ability of SCC.

They also conducted compressive strength tests at 7, 14, 21, and 28 days, gaining a clear understanding of strength development and concrete performance.

Throughout the activity, the team displayed strong dedication, teamwork, curiosity, discipline, and sound technical knowledge. Their genuine interest in learning and their responsible handling of testing procedures reflected a professional approach to practical work.

The students maintained a positive attitude, worked with focus, and showed confidence while performing tasks and interpreting results. Their active participation made the training session both productive and insightful.

We truly value their commitment and learning spirit and wish them continued growth and success in their academic and professional journey ahead.

Director

Plant Manager

SUPERTECH RMC
Plant Address :- Gat No 56, Near Hiramata Temple, Burdewasti, Charholi B.K. Tal. - Haveli, Dist- Pune Pin - 412105, Email-ID:-supertechrmc1@gmail.com

Date :- 20 Nov 2025

LETTER OF APPRECIATION

This is to certify that the following students of **MIT Academy of Engineering, Alandi, Pune, Department of Civil Engineering**, have successfully completed a **Ready-Mix Concrete (RMC) Plant Visit and Practical Session at SUPERTECH RMC on 25th September 2025.**

Group Members:

1. **Shivkumar Rathod – 202301030023**
2. **Jyoti Bhaurale – 202402030012**
3. **Aman Shaikh – 202301030003**
4. **Om Bhosle – 202301030038**

During the visit, the students participated in **Concrete Mix Design for M30 Grade**, OPC 33 Grade observed the RMC production process, and carried out quality control tests. They cast **12 cubes, 12 beams, and 12 cylinders** for testing at **7, 14, 21, and 28 days.**

The mix consisted of OPC 33 Grade Cement (438 kg), Fine Aggregate (633 kg), 10 mm Coarse Aggregate (456 kg), and 20 mm Coarse Aggregate (684kg) with a Water Cement Ratio of 0.45.

Average Strength Results (at 28 Days):

Compressive Strength: 27.7067 MPA

Flexural Strength: 3.5743 MPA

Split Tensile Strength: 2.2543 MPA

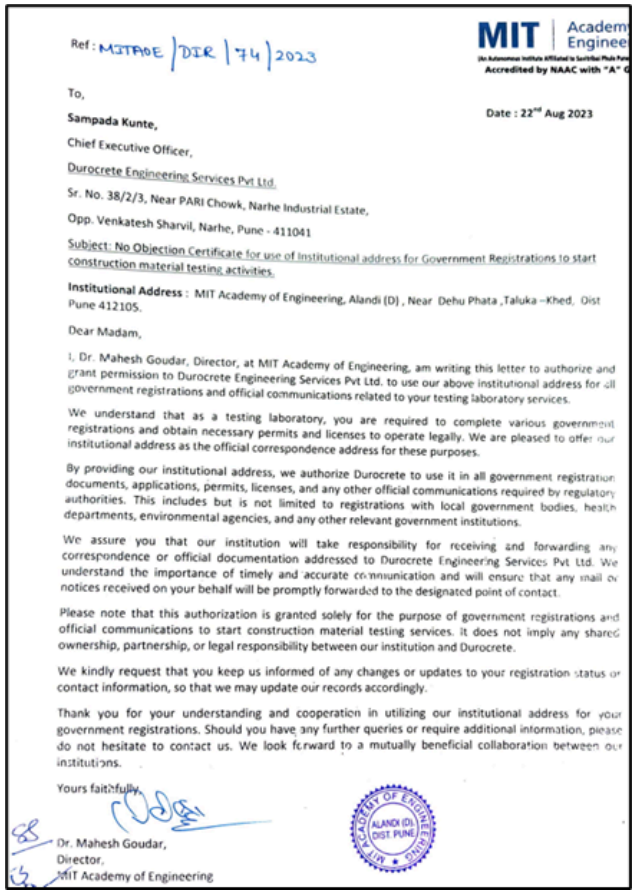
The students demonstrated excellent teamwork, technical knowledge, and practical understanding during the session.

We wish them success in all future endeavors.

Authorized Signatory
SUPERTECH RMC

Figure 2.8e: Student Certificates from RMC Plants Sponsoring Materials and Infrastructure

- "Centre of Excellence for Testing of Materials Laboratory" has been developed in coordination with M/s Durocrete Engineering Services Pvt. Ltd., Pune. This Centre of Excellence facilitates exposure to industry-standard testing procedures, quality control practices, and advanced material characterization techniques, thereby strengthening industry-oriented laboratory learning and supporting outcome-based education.



Ref : MITAOE /DIR /74/2023

MIT | Academy Engineering

Accredited by NAAC with "A"

To,

Date : 22nd Aug 2023

Sampada Kunte,

Chief Executive Officer,

Durocrete Engineering Services Pvt Ltd.

Sr. No. 38/2/3, Near PARI Chowk, Narhe Industrial Estate,

Opp. Venkatesh Sharvil, Narhe, Pune - 411041

Subject: No Objection Certificate for use of institutional address for Government Registrations to start construction material testing activities.

Institutional Address : MIT Academy of Engineering, Alandi (D) , Near Dehu Phata ,Taluka –Khed, Dist Pune 412105.

Dear Madam,

I, Dr. Mahesh Goudar, Director, at MIT Academy of Engineering, am writing this letter to authorize and grant permission to Durocrete Engineering Services Pvt Ltd. to use our above institutional address for all government registrations and official communications related to your testing laboratory services.

We understand that as a testing laboratory, you are required to complete various government registrations and obtain necessary permits and licenses to operate legally. We are pleased to offer our institutional address as the official correspondence address for these purposes.

By providing our institutional address, we authorize Durocrete to use it in all government registration documents, applications, permits, licenses, and any other official communications required by regulatory authorities. This includes but is not limited to registrations with local government bodies, health departments, environmental agencies, and any other relevant government institutions.

We assure you that our institution will take responsibility for receiving and forwarding any correspondence or official documentation addressed to Durocrete Engineering Services Pvt Ltd. We understand the importance of timely and accurate communication and will ensure that any mail or notices received on your behalf will be promptly forwarded to the designated point of contact.

Please note that this authorization is granted solely for the purpose of government registrations and official communications to start construction material testing services. It does not imply any shared ownership, partnership, or legal responsibility between our institution and Durocrete.

We kindly request that you keep us informed of any changes or updates to your registration status or contact information, so that we may update our records accordingly.

Thank you for your understanding and cooperation in utilizing our institutional address for your government registrations. Should you have any further queries or require additional information, please do not hesitate to contact us. We look forward to a mutually beneficial collaboration between our institutions.

Yours faithfully,

Dr. Mahesh Goudar,
Director,
MIT Academy of Engineering

ALANDI (D) DIST PUNE

Figure 2.8f: Institutional Approval for Industry Testing and Collaboration

D. Impact analysis and actions taken thereof

Industry–institute interaction activities such as expert lectures, industrial visits, and internships enhanced students' practical understanding of engineering applications. Students showed improved technical awareness, communication skills, and readiness for professional practice. The above initiatives resulted in significant improvement in industry alignment, student preparedness, and professional competence.

- **Industry Curriculum Growth:** The share of industry-related courses increased from 18.75% (2019 PAT) to 31% (2023 NEP) due to the introduction of Vocational and Skill Enhancement Course, Ability Enahancement Course, Management / Entrepreneurship / Economics Courses, Multi-Disciplinary Minor, Value Added Courses, projects, and internships, enhancing curriculum relevance.
- **Industry-Led Learning:** Approximately 70% of students benefited from industry-led course delivery and expert sessions, leading to improved application of theoretical concepts to real-world problems.
- **Experiential Site Learning:** Industrial visits and site-based learning benefited nearly 60–65% of students, enhancing understanding of construction practices, safety management, and project execution.
- **Structured Internship Framework:** The structured internship framework (SIP → SLIP → YLIP) with increased credits (4 → 12 → 22 credits) led to deeper industry engagement and improved employability.
- **Higher Placement Conversion:** Internship-to-placement conversion improved from 42% to 80%, with 64% conversion in long-duration internships, indicating enhanced industry confidence.
- **Faculty Industry Engagement:** Around 35–40% of faculty members participated in industry interaction and immersion activities, resulting in improved course delivery and integration of industry practices.
- **Increased Research & Innovation:** Innovation and applied research output increased, with publications and patents rising from 2 (2023–24) to 12+ (2025–26).

Actions Taken Thereof

Based on the impact analysis, the department initiated the following continuous improvement actions:

- Strengthened industry participation in curriculum review and academic planning processes.
- Increased the number of industry expert lectures, workshops, and skill clinics per academic year.
- Enhanced industry-supported laboratories with updated software and tools.
- Expanded long-duration internship opportunities and strengthened MoUs with industry partners.
- Encouraged industry-relevant seminar and project topics and promoted internship-based final-year projects.
- Motivated faculty participation in industry immersion and training programmes.
- Systematically utilized industry and alumni feedback to update courses, electives, and value-added programs.

3 OUTCOME-BASED ASSESSMENT (120)

Total Marks 107.00

3.1 Evaluation of Continuous Assessment: Assignments, Unit Tests, Mid-Term, etc. (10)

Total Marks 9.00

Institute Marks : 9.00

A. Process for Setting and Evaluation of Internal Semester Question Papers

At MITAOE, the internal assessment process is standardized and documented to ensure transparency, fairness, and alignment with Course Outcomes (COs).

- **Internal Assessment Planning:**
  - Internal assessment plan is prepared by the course faculty as per the approved course conduction plan and syllabus.
  - Questions/Quiz/Activities are designed using Revised Bloom's Taxonomy levels, ensuring appropriate cognitive depth.
  - (For sample assignment / activities / quiz, refer Fig 3.1a, b, c and d)
  - Each Questions/Quiz/Activities are explicitly mapped to relevant Course Outcomes (COs).
- **Verification and Approval:**
- Questions/Quiz/Activities and CO mapping are reviewed by the Course Instructor / Subject Expert.
- Final approval is given by the forefront area expert / course champion, ensuring compliance with academic standards.
- Faculty prepare detailed model answers / marking schemes prior to evaluation.
- Evaluation is carried out uniformly as per the approved scheme to maintain consistency.
- Answer scripts are preserved as documentary evidence.
- Model Answers and Evaluation

B. Quality of Questions and Appropriateness of Mapping with Course Outcomes (COs)

- Internal assessment questions/quiz/activities are:
  - Course-specific, mapped with COs and relevant Program outcome syllabus aligned.
  - Designed to assess multiple levels of learning as per RBT.
  - Proper distribution of questions ensures adequate weightage to all COs defined for the course.

C. Assessment of CO Coverage in IA & MSE.

- **Internal assessment questions/quiz/activities Mid-Semester Examination**:
  - Internal assessment is planned and conducted covering all COs of respective course.
  - MSE question paper is designed to cover specific course units as per the guidelines from exam section and corresponding COs.

D. Sharing of Post-Evaluation Feedback with Students for Performance Improvement

- **Post-Evaluation Feedback Mechanism:**
  - Evaluated answer scripts of MSE are shown and discussed with students in class.
  - Common mistakes, expected answers, and model solutions are discussed.
  - Students receive constructive feedback on conceptual gaps and problem-solving approaches.
  - Remedial actions such as extra tutorial sessions, doubt-clearing classes, and practice problems are planned and conducted for concerned students.

MIT | Academy of Engineering (An Autonomous Institute Affiliated to Savitribai Phule Pune University)		ASSIGNMENT(S)	
Alandi (D), Pune - 412105		ACADEMIC YEAR	2024 - 2025
SCHOOL OF CIVIL ENGINEERING		SEMESTER	IV
		CLASS	SY Btech
		DIVISION	NA
COURSE CODE	23032016T	ASSIGNMENT NO	1
COURSE	SA	DATE	2025-02-13

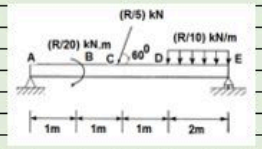
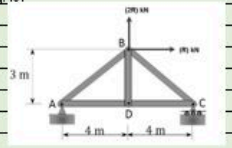
QUE. NO.	QUESTION DESCRIPTION [with marks distribution]	RBT Level	CO NO.	Marcks
1	Analyse the beam shown in fig. and determine support reactions. Draw SFD, BMD and approx. deflected shape. Take R = Your three digit Roll No. e.g. 101 	Level 3	1	5
2	Analyse the truss shown in fig. by joint method and determine forces in all the members.Tabulate the result mentioning magnitude and nature of forces. Take R = Your three digit Roll No. e.g. 101 	Level 3	1	5

Fig 3.1a: Sample copy of Assignment

Criteria	CO Addressed	criteria Description (10 Points)	Exceptional Quality	Best Quality	Average Quality	Low Quality
Criteria 1	CO1	Solution procedure(4)	Entire procedure is correct and all steps followed.(4)	Procedure is correct but steps not followed properly (3)	Procedure is partially correct and steps are missing (2)	Neither the procedure is folloded nor the step are correct(0)
Criteria 2	CO1	Presentation Quality and Timly Submission (3)	Given task completed within time and presentation is excellent(3)	Submitted in time but presention quality is average (2)	Not submitted in time and presention quality is average (1)	Not submitted in time and presention quality is LOW (0)
Criteria 3	CO1	Calculations and Answers (3)	All the calculations and the answers are correct. (3)	Partial (50%) calculations and the answers are correct. (2)	Partial (30%) calculations and the answers are correct. (1)	All the caculations and answers are wrong(0)

Fig 3.1b: Sample copy of Assignment Rubrics

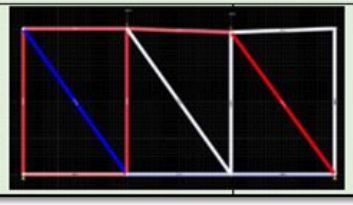
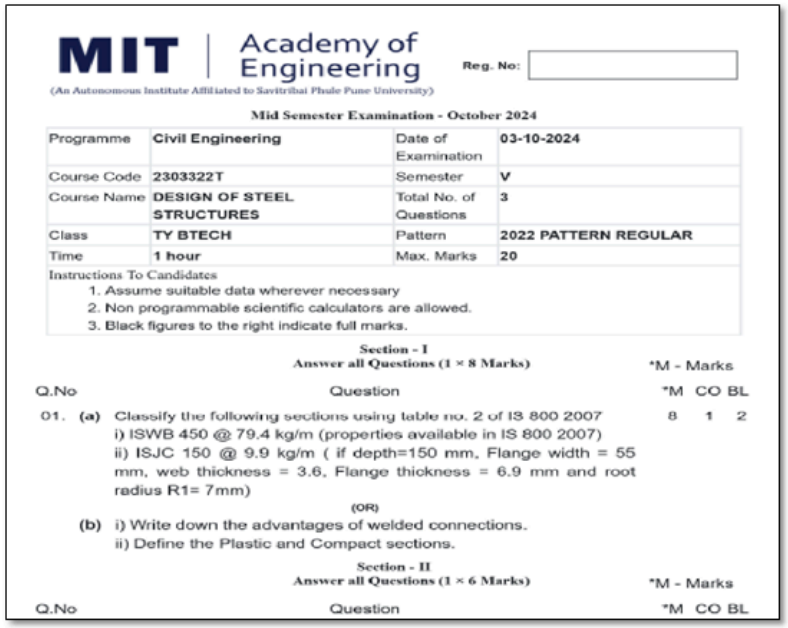
Name of Activity	**TRUSS ANALYSIS USING SOFTWARE**		
Activity Details	**1) To generate the truss geometry in SW-FRAME software tool. 2) Cutting the members of appropriate sizes 3) Connections and supports 5) Applying loads and checking the response 6) Interpritation of results obtained**		
Type of Activity	**Individual / Collaborative**	**Mode of Assessment**	**Inclass/OutClass/ Online**
Course Topic Covered	**Rotations and translations of frames**	**Marks**	**10**
Course Outcome	**CO5**	**RBT Level**	**Level 5**
No of Present Students	72		
Learning Styles Addressed	Intuitive/Visual/Reflexive		
Pre-Reflection of Activity	Interested in knowing the different software tools for structural analysis		
Post-Reflection of Activity	Able to anlyse the given structure using software tools		
No of Weaker Students	15		
No of Bright Students	9		
No of Average Students	46		
Geo tag Photo			

Fig 3.1c: Sample copy of Activity

Criteria	CO Addressed	Exceptional Quality	Best Quality	Average Quality	Low Quality
			(5 Points)	(3 Points)	(1 Points)
Criteria 1	CO2	Quality of the work	Quality of materials and workmanship is exceptional.	Quality of materials and workmanship is satisfactory.	Quality of materials and workmanship is poor.
Criteria 2	CO2	Response of model to loads	Model is showing perfectly appropriate response to the loads.	Model is showing partially appropriate response to the loads	Model is showing unsatisfactory response to the loads

Fig 3.1d: Sample copy of Activity Rubrics



MIT | Academy of Engineering

(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

Reg. No:

Mid Semester Examination - October 2024

Programme	Civil Engineering	Date of Examination	03-10-2024
Course Code	2303322T	Semester	V
Course Name	DESIGN OF STEEL STRUCTURES	Total No. of Questions	3
Class	TY BTECH	Pattern	2022 PATTERN REGULAR
Time	1 hour	Max. Marks	20

Instructions To Candidates
1. Assume suitable data wherever necessary
2. Non programmable scientific calculators are allowed.
3. Black figures to the right indicate full marks.

Section - I
Answer all Questions (1 × 8 Marks)

*M - Marks

Q.No		Question	*M	CO	BL
01.	(a)	Classify the following sections using table no. 2 of IS 800 2007 i) ISWB 450 @ 79.4 kg/m (properties available in IS 800 2007) ii) ISJC 150 @ 9.9 kg/m (if depth=150 mm, Flange width = 55 mm, web thickness = 3.6, Flange thickness = 6.9 mm and root radius R1= 7mm)	8	1	2
		(OR)			
	(b)	i) Write down the advantages of welded connections. ii) Define the Plastic and Compact sections.			

Section - II
Answer all Questions (1 × 6 Marks)

*M - Marks

Q.No	Question	*M	CO	BL

Fig 3.1e: Sample copy of MSE question paper

MIT ACADEMY OF ENGINEERING
Alandi (D.), Pune – 412 105, MS, India
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)
T.Y.B. Tech Semester- V (2024 - 2025)
MID SEMSETER EXAMINATION
PAPER SHOWING RECORD
CIVIL DEPARTMENT
DESIGN OF STEEL STRUCTURES (Max Marks -20)
(Dtd.-03/10/2024)

Seat No	Q.1		Q.2	Q.3	Total	Sign of Student
	A	B	A	A	0	
202201030014	8	0	5	0	13	
202201030016	0	4	2	0	6	
202201030019	0	5	2	0	7	
202201030023	0	7	3	0	10	
202201030031	1	0	3	0	4	
202201030036	0	4	5	1	10	
202302030001	0	7	4	0	11	
202302030002	0	7	5	1	13	
202302030009	8	0	5	1	14	
202302030010	0	6	4	0	10	
202302030013	0	8	3	0	11	
202302030014	0	7	5	6	18	

Fig 3.1 f: Sample copy of MSE Assessment

3.2 Evaluation of the Semester End Exam (SEE) Question Paper (10) Total Marks 9.00

Institute Marks : 9.00

The End Semester Examination (ESE) Question Paper for the Civil Engineering program at MITAOE is systematically designed and evaluated to ensure alignment with the Program Outcomes (POs), Course Outcomes (COs), and Bloom's Taxonomy (BT) levels. The evaluation process emphasizes quality, relevance, and the ability of the assessment to measure student attainment effectively. The process adheres to the Examination Rules and Regulations prepared and approved by the Examination Section of MIT AOE and aligned with Savitribai Phule Pune University (SPPU) norms.

A) Process for Setting and Evaluation of Semester-End Examination (ESE) Question Paper

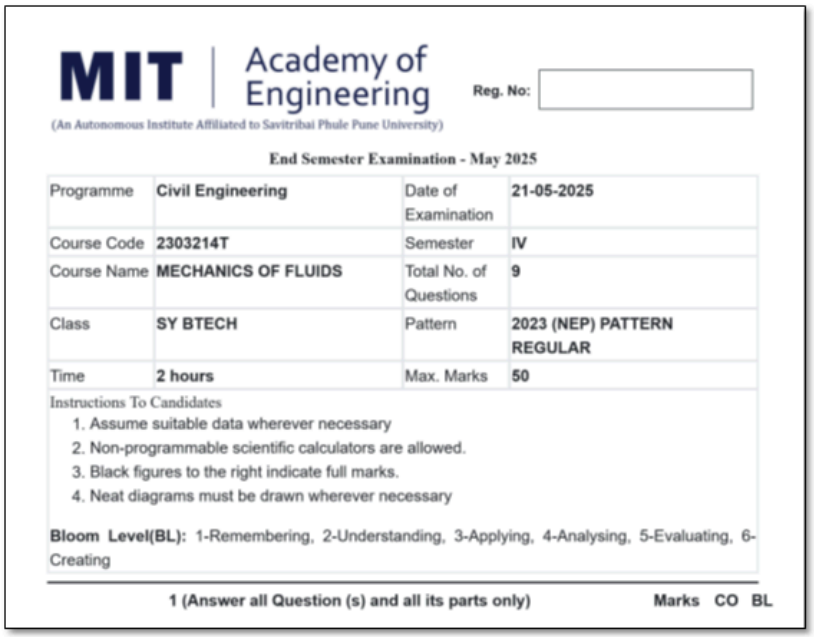
The Civil Engineering Department at MITAOE follows a systematic and standardized process to ensure that the ESE question papers reflect academic rigor, syllabus coverage, and Outcome-Based Education (OBE) requirements.

1. Question Paper Setting

- The Course Teacher prepares the ESE question paper in the prescribed format, ensuring adequate coverage of all course content and adherence to Bloom's Taxonomy levels. (Fig. 3.2a shows the sample evidence of ESE paper)
- Each question is framed based on mapped Course Outcomes (COs) to ensure constructive alignment between teaching, learning, and assessment.
- A paper-setter panel consisting of Course Champion/Teacher and experienced senior faculty maintains confidentiality and academic integrity during the drafting and moderation process.

2) Moderation Process

- The question papers submitted by the Course Champion/Teacher undergo internal moderation/review by experienced senior faculty to verify CO mapping, difficulty distribution, technical correctness, and relevance, etc.
- The Moderated Question Paper once corrected with all suggestion, it is freeze and will be available to the Examination Section in Print ready format.



MIT | Academy of Engineering

Reg. No:

(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

End Semester Examination - May 2025

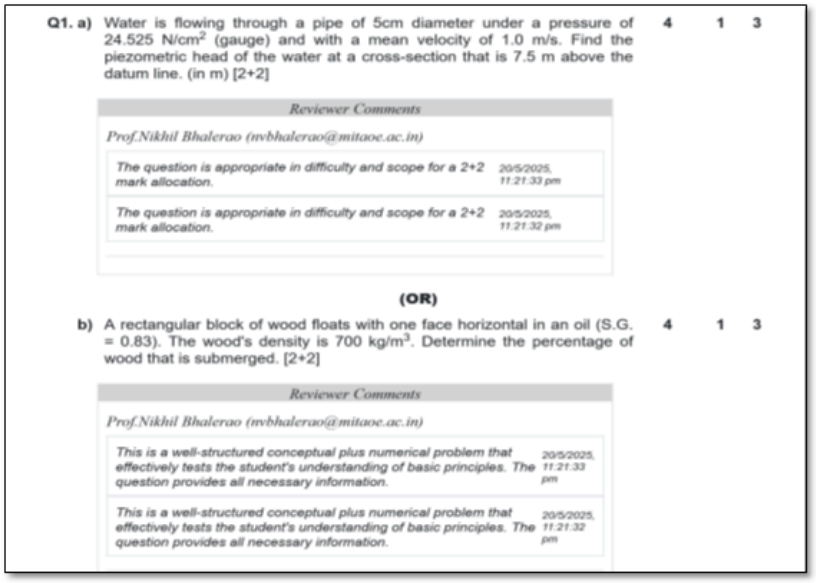
Programme	**Civil Engineering**	Date of Examination	**21-05-2025**
Course Code	**2303214T**	Semester	**IV**
Course Name	**MECHANICS OF FLUIDS**	Total No. of Questions	**9**
Class	**SY BTECH**	Pattern	**2023 (NEP) PATTERN REGULAR**
Time	**2 hours**	Max. Marks	**50**

Instructions To Candidates

1. Assume suitable data wherever necessary
2. Non-programmable scientific calculators are allowed.
3. Black figures to the right indicate full marks.
4. Neat diagrams must be drawn wherever necessary

Bloom Level(BL): 1-Remembering, 2-Understanding, 3-Applying, 4-Analysing, 5-Evaluating, 6-Creating

1 (Answer all Question (s) and all its parts only) **Marks CO BL**



Q1. a) Water is flowing through a pipe of 5cm diameter under a pressure of 24.525 N/cm^2 (gauge) and with a mean velocity of 1.0 m/s. Find the piezometric head of the water at a cross-section that is 7.5 m above the datum line. (in m) [2+2] — 4 1 3

Reviewer Comments

Prof.Nikhil Bhalerao (nvbhalerao@mitaoe.ac.in)

The question is appropriate in difficulty and scope for a 2+2 mark allocation. — 20/5/2025, 11:21:33 pm

The question is appropriate in difficulty and scope for a 2+2 mark allocation. — 20/5/2025, 11:21:32 pm

(OR)

b) A rectangular block of wood floats with one face horizontal in an oil (S.G. = 0.83). The wood's density is 700 kg/m^3. Determine the percentage of wood that is submerged. [2+2] — 4 1 3

Reviewer Comments

Prof.Nikhil Bhalerao (nvbhalerao@mitaoe.ac.in)

This is a well-structured conceptual plus numerical problem that effectively tests the student's understanding of basic principles. The question provides all necessary information. — 20/5/2025, 11:21:33 pm

This is a well-structured conceptual plus numerical problem that effectively tests the student's understanding of basic principles. The question provides all necessary information. — 20/5/2025, 11:21:32 pm

Fig 3.2a: Sample copies of ESE question paper

3) Evaluation Methodology

- Post-examination, answer scripts are evaluated based on pre-defined rubrics, marking schemes, and step-wise solutions to enhance fairness and objectivity. (Refer Fig 3.2b for ESE online evaluation).
- The Course Champion/Team Member carry out the moderation of evaluated answer scripts as per the criterion given by the examination section to ensure uniformity in awarding marks across all students.

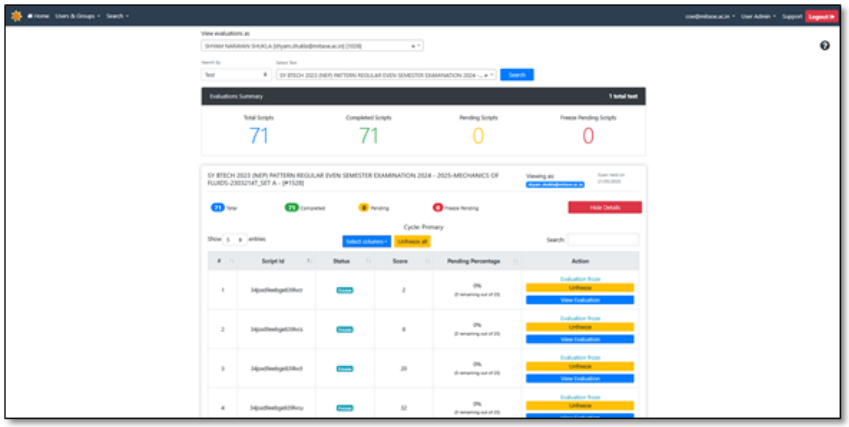


Fig 3.2b: Sample copy of ESE online evaluation.

B. Quality of Questions and Appropriateness of CO Mapping

MITAOE emphasizes high-quality, conceptually strong, and application-oriented ESE questions to measure student attainment effectively.

1. **Quality of Questions**

- Questions are designed to test a range of competencies such as conceptual understanding, analytical thinking, problem-solving, design ability, and interpretation of engineering data.

- Numerical problems reflect real-world applications relevant to Civil Engineering domains such as structural, transportation, geotechnical, construction management and environmental engineering.

2. **Bloom's Taxonomy Coverage**

- The paper maintains balanced distribution across cognitive levels:
- Remember & Understand (RBT 1 – RBT2)
- Apply & Analyse (RBT 3 – RBT 4)
- Evaluate & Create (RBT 5 – RBT 6)

3. **Appropriateness of CO Mapping**

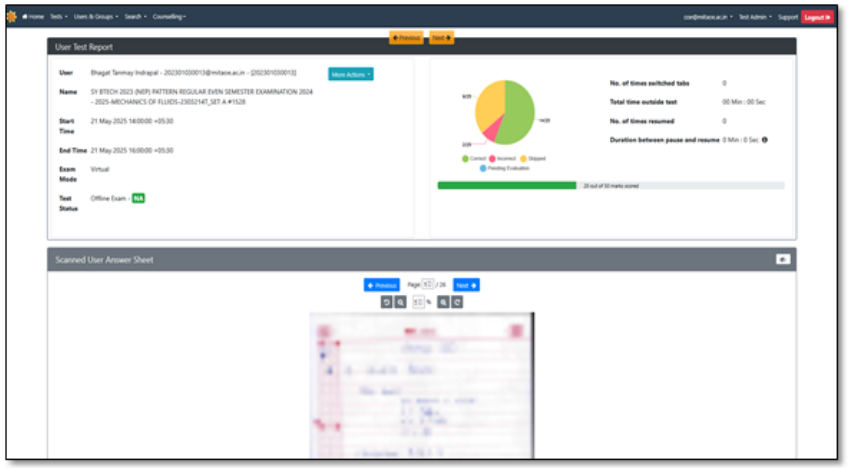
- Each question is explicitly mapped to the respective Course Outcome (CO) and indirectly to relevant Program Outcomes (POs) and PSOs.
- This mapping ensures that all COs are assessed adequately through a well-structured question pattern.
- Post-evaluation, CO attainment levels are computed using the students' question-wise performance, which feeds into the continuous improvement process.

C. Transparency of Post-Evaluation Process

Transparency is a key strength of the assessment system at MITAOE. Multiple mechanisms ensure fairness, clarity, and student confidence in the evaluation process.

1. **Answer Script Verification**

- Students having query in the evaluation of answer scripts are allowed to verify their evaluated answer scripts during a scheduled paper review session, ensuring transparency in awarding marks. (Refer Fig 3.2c for sample of answer script verification)



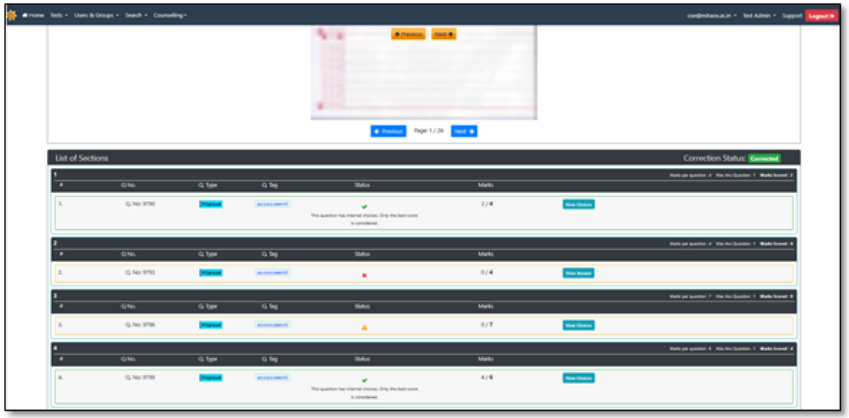


Fig 3.2c. Sample of answer script verification

- Any corrections or re-evaluation requests are addressed as per institute guidelines, the sample evidence of revaluation is shown in Fig 3.2d.

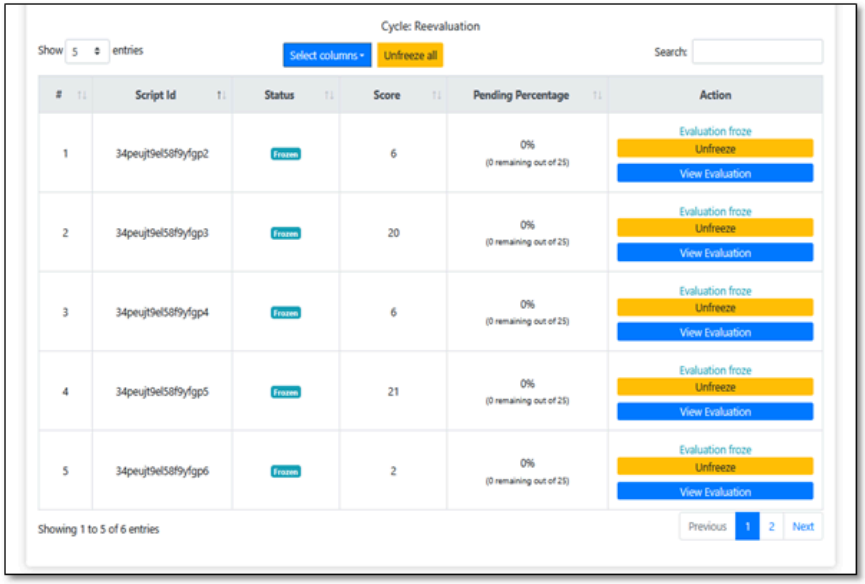


Fig 3.2d: Sample evidence of revaluation

2. Result Sharing

- Course wise marks and grades are available for the students after declaration of result on the Enterprise resource planning (ERP) system under their individual's login. Refer the image (Fig 3.2e) below for the evidence.

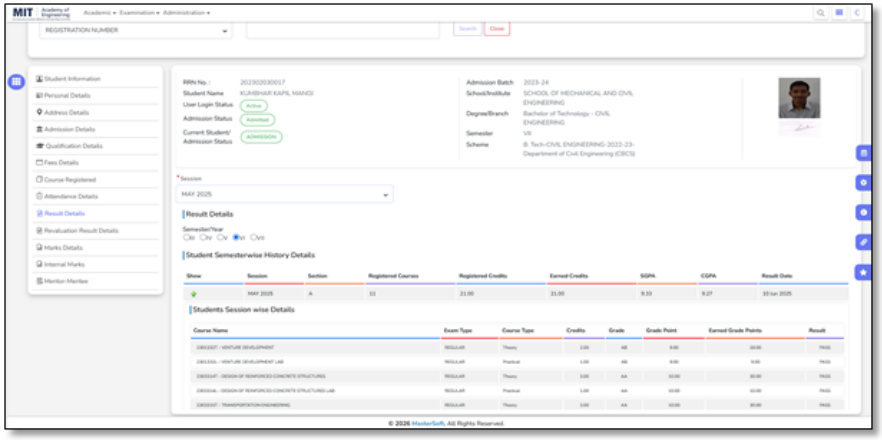


Fig 3.2e: Sample of result sharing to student login.

- Question wise marks are shared with faculty members for academic review, measuring the course attainment and necessary action.

3. **Grievance Redressal**

- A transparent grievance redressal mechanism is available for students to raise concerns regarding evaluation or marking.
- All grievances are documented and addressed promptly, ensuring complete fairness.

3.3 Evaluation of Laboratory Work and Workshop (Continuous and SEE) (10) Total Marks 8.00

Institute Marks : 8.00

The Department of Civil Engineering, MITAOE follows a structured and outcome-based evaluation process for laboratory and workshop courses through Continuous Assessment (CA) and End Semester (ESE):

Each laboratory course is supported by a standard laboratory manual that includes:

- Experiment objectives and procedures
- Data collection, analysis, and result interpretation

Laboratory assessments are well-structured and designed to address:

- Cognitive domain (conceptual understanding)
- Psychomotor domain (experimental and tool-handling skills)
- Affective domain (discipline, teamwork, safety practices)

Continuous Assessment is carried out based on:

- Performance during experiment execution
- Observation of skills and safety compliance
- Laboratory record maintenance
- Question answering

Rubrics are developed for each laboratory experiment aligned with:

- Laboratory Course Outcomes (COs)
- Program Outcomes (POs) and Program Specific Outcomes (PSOs)

Rubric criteria assess:

- A sample rubric for an experiment is shown below. Refer to Table 3.3a for more details.

Table 3.3a: Sample example of rubrics.

Criteria	CO Addressed	Exceptional Quality (10 Points)	Best Quality (8 Points)	Average Quality (5 Points)	Low Quality (2 Point)	Lowest Quality (1 Point)
1. Participation in Task	CO1 CO2 CO3 CO4 CO5	Actively participates and contributes innovative ideas.	Regularly participates and shares relevant input.	Occasionally participates and contributes.	Rarely participates or contributes.	Does not participate or contribute.
2. On Time Submission of Deliverables	CO1 CO2 CO3 CO4 CO5	Always submits on or before the deadline with excellent quality.	Submits on time with good quality.	Submits on time but with average quality.	Submits late but quality is acceptable.	Does not submit or submits late with inferior quality.
3. Team Collaboration	CO1 CO2 CO3 CO4 CO5	Takes initiative, encourages peers, and fosters team synergy.	Cooperates well with team members and provides support.	Participates in team work when prompted.	Minimal engagement with the team.	Shows no effort to collaborate or hinders team work.
4. Application of Knowledge	CO1 CO2 CO3 CO4 CO5	Demonstrates in-depth understanding and applies concepts correctly.	Applies concepts correctly with minor support.	Shows basic understanding but makes occasional errors.	Struggles to apply concepts and needs frequent support.	Shows no understanding or incorrect application of concepts.

Sample continuous assessment sheet for all the experiments of lab course BIM-II from TY curriculum is shown below & c for lab and theory respectively in below mentioned Fig 3.3b & 3.3c,

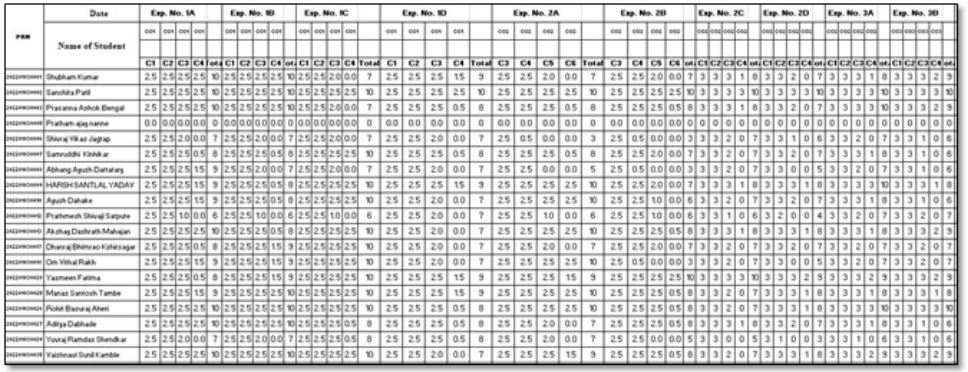


Fig 3.3b: Sample Continuous Assessment sheet for Lab.

Sr. NO.	PRN No	Name	CO1				CO2				CO3				CO4				CO5			
			Max Marks	S	%	Y/N	Max Marks	S	%	Y/N	Max Marks	S	%	Y/N	Max Marks	S	%	Y/N	Max Marks	S	%	Y/N
1	202201030001	Shubham Kumar	4		50	Y	4		50	Y	4		50	Y	4		50	Y	4		50	Y
2	202201030002	Sanchita Patil	7		88	Y	7		88	Y	7		88	Y	7		88	Y	7		88	Y
3	202201030003	Prasanna Ashok Bengal	4		50	Y	4		50	Y	4		50	Y	4		50	Y	4		50	Y
4	202201030005	Pratham ajay nanne	0		0	N	0		0	N	0		0	N	0		0	N	0		0	N
5	202201030006	Shivraj Vikas Jagtap	3.6		45	N	3.6		45	N	3.6		45	N	3.6		45	N	3.6		45	N
6	202201030007	Samruddhi Kinhikar	6		75	Y	6		75	Y	6		75	Y	6		75	Y	6		75	Y
7	202201030008	Abhang Ayush Dattatary	3.6		45	N	3.6		45	N	3.6		45	N	3.6		45	N	3.6		45	N
8	202201030009	HARSH SANTLAL YADAV	4		50	Y	4		50	Y	4		50	Y	4		50	Y	4		50	Y
9	202201030010	Ayush Dahake	2		25	N	2		25	N	2		25	N	2		25	N	2		25	N
10	202201030012	Prathmesh Shivaji Satpute	2		25	N	2		25	N	2		25	N	2		25	N	2		25	N
11	202201030013	Akshay Dashrath Mahajan	3.6		45	N	3.6		45	N	3.6		45	N	3.6		45	N	3.6		45	N
12	202201030017	Dhanraj Bhimrao Kshirsagar	2		25	N	2		25	N	2		25	N	2		25	N	2		25	N
13	202201030018	Om Vithal Rakh	4		50	Y	4		50	Y	4		50	Y	4		50	Y	4		50	Y
14	202201030020	Yasmeen Fatima	7		88	Y	7		88	Y	7		88	Y	7		88	Y	7		88	Y
15	202201030025	Manas Santosh Tambe	7		88	Y	7		88	Y	7		88	Y	7		88	Y	7		88	Y
16	202201030026	Rohit Basuraj Aheri	6		75	Y	6		75	Y	6		75	Y	6		75	Y	6		75	Y
17	202201030027	Aditya Dabhade	2		25	N	2		25	N	2		25	N	2		25	N	2		25	N
18	202201030029	Yuvraj Ramdas Shendkar	7		88	Y	7		88	Y	7		88	Y	7		88	Y	7		88	Y
19	202201030035	Vaishnavi Sunil Kamble	5		63	Y	5		63	Y	5		63	Y	5		63	Y	5		63	Y
20	202201030039	Mansi rajendra kawade	7		88	Y	7		88	Y	7		88	Y	7		88	Y	7		88	Y

Fig 3.3 c: Sample Continuous Assessment sheet for theory

3.4 Evaluation of Industrial Training/ Internship (Continuous and SEE) (10) Total Marks 9.00

Institute Marks : 9.00

3.4.1. Relevance of Internships / Industrial Training in terms of POs

The Department of Civil Engineering, MIT Academy of Engineering (MITAOE), has institutionalized credit-based internships at multiple stages of the B. Tech. program to ensure progressive development of professional competencies and effective attainment of Program Outcomes (POs).

The program offers three credit-based Student Internship Programs (SIP) for Second Year (2 credits), Third Year (2 credits), and Final Year (4 credits) students, conducted during June–July every academic year. Apart from these, the students are provided with opportunities to pursue Semester Long Internship Programs (SLIP) in each semester of the final year (8 credits). The various credit based internships offered by the program for students are reflected in Fig 3.4a.

Experiential Learning Course Student's Internship (Summer/Semester Long) (ELC SI): 4 Courses and 16 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2303296	Internship (Life And Soft Skills)	2
2.	2303396	Summer Internship (Technical)	2
3.	2303496	Summer Internship (Technical)	4
4.	2303497	Semester Long Internship/ Capstone Project/ Student Exchange	8

Figure 3.4a**:** Various credit-based internships offered to students at every year of program

These internships are governed by approved course syllabi with clearly defined Course Outcomes (COs), assessment mechanisms, and outcome mapping.

The internships enable students to:

- Apply engineering knowledge in real industrial and professional environments (PO1, PO2)
- Understand organizational structures, professional practices, and ethical responsibilities (PO6, PO8)
- Develop teamwork, communication, adaptability, and time-management skills (PO9, PO10)
- Engage in self-directed learning and reflection for continuous professional development (PO12)

Thus, internships act as a critical experiential learning component, reinforcing classroom learning through hands-on exposure, industry interaction, and professional practice, making them highly relevant for PO attainment.

CO–PO Mapping for Credit-Based Internships

The following Internship CO mapping (Table 3.4a) demonstrates that internships substantially contribute to the attainment of professional, technical, and lifelong learning outcomes

Table 3.4a: CO-PO Mapping for all credit-based Internships

Internship Level	Course name	Representative Course Outcomes (COs)	Mapped POs
SY SIP (2 credits)	Internship (Life & Soft Skills)	CO.1: Utilize online learning platforms effectively to acquire technical skills and engage in lifelong learning.	PO1, PO 5, PO12
		CO.2: Apply professional behavioural practices, including teamwork, time management, and ethical decision-making, in diverse settings.	PO6, PO8, PO9
		CO.3: Reflect on and evaluate personal growth and adaptability through experiential learning and living experiences.	PO6, PO8, PO9, PO10
		CO.4: Analyse emerging industry trends and develop actionable strategies to meet professional and career-related goals.	PO5, PO6
		CO.5: Formulate well-defined problem statements by critically examining real-world challenges and proposing innovative approaches.	PO2, PO3
		CO.6: Demonstrate effective communication skills by preparing and delivering professional presentations and writing clear, concise reports.	PO10

Internship Level	Course name	Representative Course Outcomes (COs)	Mapped POs
TY SIP (2 credits)	Internship (technical)	CO.1: Develop and implement advanced technical competencies through hands-on training and industry-relevant technical certification programs, demonstrating expertise in applying acquired knowledge to solve complex challenges.	PO3, PO4, PO5
		CO.2: Design and execute professional behavioural frameworks, integrating teamwork, time management, and ethical decision-making to address multifaceted technical and industrial scenarios.	PO8, PO9, PO11
		CO.3: Evaluate and synthesize personal growth and adaptability by critically analysing experiential learning, technical training outcomes, and real-world industry exposure to inform strategic career decisions.	PO6, PO8, PO9, PO10
		CO.4: Create innovative and actionable strategies to address emerging industry trends by conducting comprehensive analyses and integrating advanced technical and professional knowledge.	PO2, PO3, PO4, PO5
		CO.5: Formulate and critically evaluate complex problem statements by integrating multidisciplinary approaches to develop and propose innovative, solution-driven methodologies for real-world challenges.	PO4, PO5
		CO.6: Design and deliver professional technical presentations and comprehensive reports, effectively communicating advanced technical insights and solutions to diverse audiences, supported by technical certifications and practical expertise.	PO10
Final Year SIP (4 credits)	Summer Internship	CO1: Analyse and evaluate the organizational structure and workflow of a professional setup to identify opportunities for optimization and innovation.	PO11
		CO2: Design and develop innovative products, systems, or software by integrating interdisciplinary knowledge and addressing real-world challenges.	PO2, PO3
		CO3: Lead and collaborate effectively within multidisciplinary teams to achieve project objectives, demonstrating strategic decision-making and problem-solving skills.	PO4, PO9
		CO4: Critically evaluate and refine industry-relevant practices through hands-on experience, enhancing professional competence and adaptability.	PO5, PO12
		CO5: Formulate comprehensive and innovative engineering problem statements by synthesizing technical knowledge and industry insights.	PO3

Internship Level	Course name	Representative Course Outcomes (COs)	Mapped POs
Final year SLIP Term I/II (8 credits)	Industry Practicum/Semester Long Internship	CO.1: Analyse real-world engineering problems and propose effective solutions using domain-specific knowledge.	PO1, PO2, PO3, PO4
		CO.2: Evaluate suitable problem-solving methodologies and modern tools to address practical engineering challenges.	PO1, PO2, PO3, PO4, PO5
		CO.3: Demonstrate the ability to work effectively in cross-cultural and multidisciplinary teams within a professional environment.	PO6, PO9, PO10
		CO.4: Develop and demonstrate teamwork, leadership, and communication skills required for collaborative and individual tasks.	PO9, PO10, PO11
		CO.5: Apply ethical principles and commit to professional responsibilities and norms in engineering practice.	PO6, PO8
		CO.6: Demonstrate awareness of the need for, and engage in, independent and lifelong learning to remain relevant in technological and professional domains.	PO11

Rubrics Used for Assessing Internship Performance and Mapping with POs

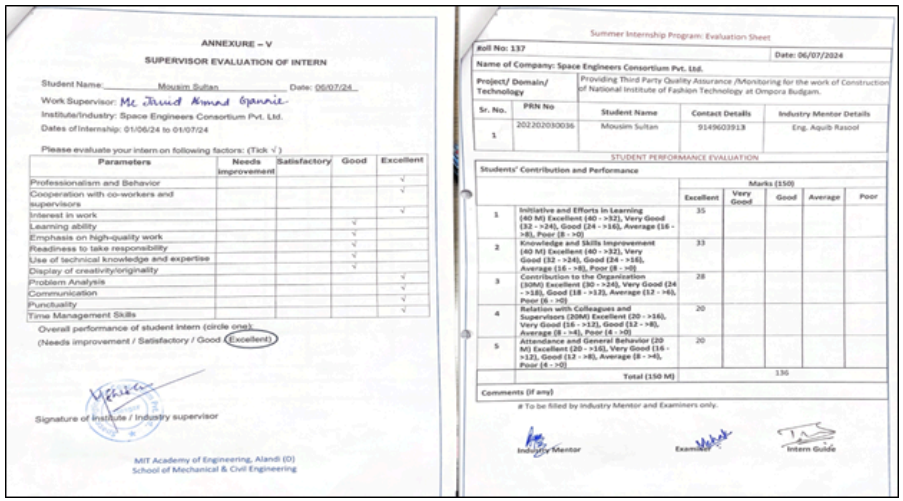
The department follows a structured, rubric-based evaluation system for assessing student performance during internships. A common, well-defined rubric is used across all credit-based Student Internship Programs (SIP), ensuring uniformity, transparency, and outcome-based assessment.

Upon completion of the internship, students are required to submit the following documents for grading and evaluation:

- Annexure V: Supervisor Evaluation of Intern
- Internship Report
- Internship Completion Certificate (Refer Fig 3.4b)

The students then individually present their internship work in front of a panel of faculty evaluators on the SIP evaluation sheet.

These documents form the basis for continuous assessment and End Semester Evaluation (ESE) using approved rubrics.



ANNEXURE – V

SUPERVISOR EVALUATION OF INTERN

Student Name: Mousim Sultan Date: 06/07/24

Work Supervisor: Mr. Javed Ahmad Ganaie

Institute/Industry: Space Engineers Consortium Pvt. Ltd.

Dates of Internship: 01/06/24 to 01/07/24

Please evaluate your intern on following factors: (Tick √)

Parameters	Needs improvement	Satisfactory	Good	Excellent
Professionalism and Behavior				√
Cooperation with co-workers and supervisors				√
Interest in work				√
Learning ability			√	
Emphasis on high-quality work			√	
Readiness to take responsibility			√	
Use of technical knowledge and expertise			√	
Display of creativity/originality			√	
Problem Analysis				√
Communication				√
Punctuality				√
Time Management Skills				√

Overall performance of student intern (circle one):

(Needs improvement / Satisfactory / Good (Excellent))

Signature of Institute / Industry supervisor

MIT Academy of Engineering, Alandi (D)
School of Mechanical & Civil Engineering

Summer Internship Program: Evaluation Sheet

Roll No: 137 Date: 06/07/2024

Name of Company: Space Engineers Consortium Pvt. Ltd.

Project/ Domain/ Technology: Providing Third Party Quality Assurance /Monitoring for the work of Construction of National Institute of Fashion Technology at Ompora Budgam.

Sr. No.	PRN No	Student Name	Contact Details	Industry Mentor Details
1	2022020300 36	Mousim Sultan	9149603913	Eng. Aquib Rasool

STUDENT PERFORMANCE EVALUATION

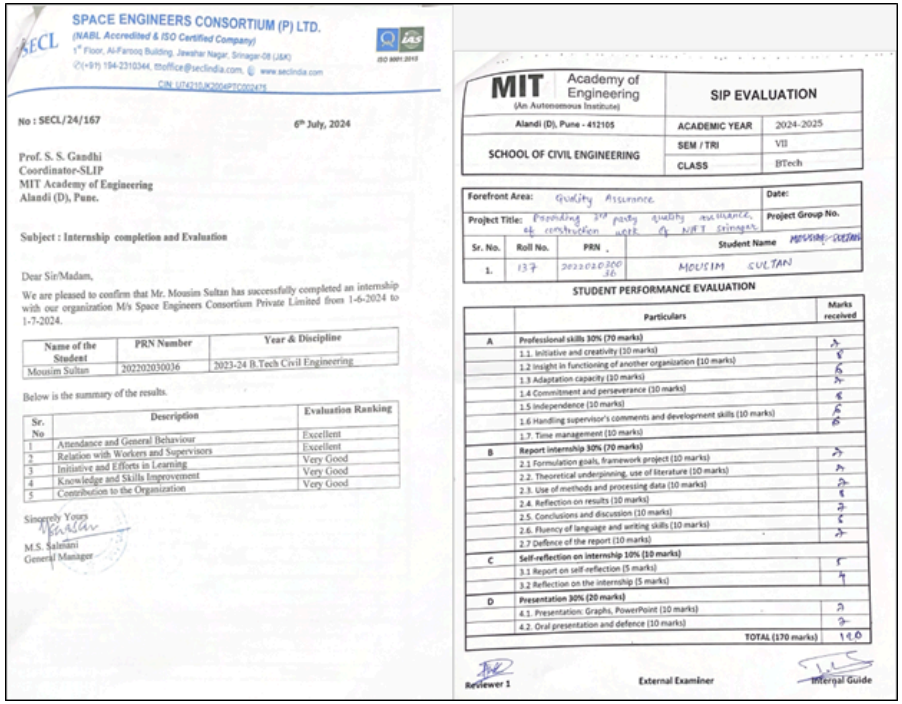
Students' Contribution and Performance

		Marks (150)				
		Excellent	Very Good	Good	Average	Poor
1	Initiative and Efforts in Learning (40 M) Excellent (40 - >32), Very Good (32 - >24), Good (24 - >16), Average (16 - >8), Poor (8 - >0)	35				
2	Knowledge and Skills Improvement (40 M) Excellent (40 - >32), Very Good (32 - >24), Good (24 - >16), Average (16 - >8), Poor (8 - >0)	33				
3	Contribution to the Organization (30M) Excellent (30 - >24), Very Good (24 - >18), Good (18 - >12), Average (12 - >6), Poor (6 - >0)	28				
4	Relation with Colleagues and Supervisors (20M) Excellent (20 - >16), Very Good (16 - >12), Good (12 - >8), Average (8 - >4), Poor (4 - >0)	20				
5	Attendance and General Behavior (20 M) Excellent (20 - >16), Very Good (16 - >12), Good (12 - >8), Average (8 - >4), Poor (4 - >0)	20				
	Total (150 M)	136				

Comments (if any)

To be filled by Industry Mentor and Examiners only.

Industry Mentor Examiner Intern Guide



SPACE ENGINEERS CONSORTIUM (P) LTD.
(NABL Accredited & ISO Certified Company)
1st Floor, Al-Farooq Building, Jawahar Nagar, Srinagar-08 (J&K)
(+91) 194-2310344, theoffice@seclindia.com, www.seclindia.com
CIN: U74210JK2004PTC002476

No : SECL/24/167 — 6th July, 2024

Prof. S. S. Gandhi
Coordinator-SLIP
MIT Academy of Engineering
Alandi (D), Pune.

Subject : Internship completion and Evaluation

Dear Sir/Madam,

We are pleased to confirm that Mr. Mousim Sultan has successfully completed an internship with our organization M/s Space Engineers Consortium Private Limited from 1-6-2024 to 1-7-2024.

Name of the Student	PRN Number	Year & Discipline
Mousim Sultan	202202030036	2023-24 B.Tech Civil Engineering

Below is the summary of the results.

Sr. No	Description	Evaluation Ranking
1	Attendance and General Behaviour	Excellent
2	Relation with Workers and Supervisors	Excellent
3	Initiative and Efforts in Learning	Very Good
4	Knowledge and Skills Improvement	Very Good
5	Contribution to the Organization	Very Good

Sincerely Yours
M.S. Salmani
General Manager

MIT Academy of Engineering
(An Autonomous Institute)
Alandi (D), Pune - 412105

SIP EVALUATION

SCHOOL OF CIVIL ENGINEERING	ACADEMIC YEAR	2024-2025
	SEM / TRI	VII
	CLASS	BTech

Forefront Area: Quality Assurance — Date:
Project Title: Providing 3rd party quality assurance, at construction work @ NIT Srinagar — Project Group No.

Sr. No.	Roll No.	PRN	Student Name
1.	137	2022020300 36	MOUSIM SULTAN

STUDENT PERFORMANCE EVALUATION

	Particulars	Marks received
A	**Professional skills 30% (70 marks)**	
	1.1. Initiative and creativity (10 marks)	8
	1.2 Insight in functioning of another organization (10 marks)	8
	1.3 Adaptation capacity (10 marks)	7
	1.4 Commitment and perseverance (10 marks)	8
	1.5 Independence (10 marks)	8
	1.6 Handling supervisor's comments and development skills (10 marks)	8
	1.7. Time management (10 marks)	
B	**Report internship 30% (70 marks)**	
	2.1 Formulation goals, framework project (10 marks)	7
	2.2. Theoretical underpinning, use of literature (10 marks)	7
	2.3. Use of methods and processing data (10 marks)	7
	2.4. Reflection on results (10 marks)	8
	2.5. Conclusions and discussion (10 marks)	7
	2.6. Fluency of language and writing skills (10 marks)	6
	2.7 Defence of the report (10 marks)	7
C	**Self-reflection on internship 10% (10 marks)**	
	3.1 Report on self-reflection (5 marks)	5
	3.2 Reflection on the internship (5 marks)	4
D	**Presentation 30% (20 marks)**	
	4.1. Presentation: Graphs, PowerPoint (10 marks)	9
	4.2. Oral presentation and defence (10 marks)	7
	TOTAL (170 marks)	149

Reviewer 1 — External Examiner — Internal Guide

Figure 3.4b: Annexure V, Supervisor evaluation sheet, Internship completion certificate and SIP evaluation sheet

Internship evaluation is conducted through:

- Continuous Assessment (professional skills, progress, report quality), Refer Table 3.4c.
- End Semester Evaluation (ESE) through self-reflection and presentation.

The evaluation rubrics assess professional skills, technical competence, analytical ability, communication, ethics, and self-reflection, all of which are directly aligned with Program Outcomes. Student performance is documented using standardized SIP Evaluation Sheets, maintained in course files as evidence.

Table 3.4c: Common rubric for all credit-based internships

Criteria	CO Addressed	PO Addressed	Exceptional Quality (4)	Best Quality (3)	Average Quality (2)	Low Quality (1)	Lowest Quality (0)
Professional Skills 30% (initiative, adaptability, understanding of organization & work culture independence, time management, handling feedback)	CO1	PO9, PO10, PO11	Highly proactive, independent, well-adapted; excellent time and feedback management	Proactive with minor guidance	Moderately proactive; needs guidance	Low initiative and adaptability	No professional skills shown

Internship Report 30%– Goals, Methods, Literature, Results, Reflection & Conclusions	CO2	PO3, PO4, PO12	Clear goals, strong methods, relevant literature	Clear goals and methods	Partially clear	Poorly structured	Not addressed
Self-Reflection & Learning Outcomes 10%	CO3	PO12	Deep self-reflection with clear learning and growth	Meaningful reflection	Basic reflection	Superficial reflection	No reflection
Presentation & Defence 30% (slides, oral communicatio n, Q&A)	CO4	PO10	Clear, confident, well-structured presentation	Clear presentatio n	Understandable	Unclear delivery	Unable to present

The rubric descriptors clearly define performance levels, ensuring objective assessment of learning outcomes. Evaluations are conducted by internal faculty mentors and industry supervisors, strengthening the authenticity and rigor of assessment.

The designed evaluation of internships using clearly defined rubrics, documented assessment sheets, and explicit PO mapping ensures that internships at MITAOE are academically rigorous, outcome-oriented, and aligned with NBA requirements. The process effectively measures student learning, professional growth, and attainment of targeted Program Outcomes.

3.5 Evaluation of Projects (20) Total Marks 18.00

Institute Marks : 18.00

The presented flowchart Fig 3.5a illustrates the systematic and outcome-based major and minor project implementation process adopted by the Department of Civil Engineering, in alignment with NBA's Outcome-Based Education (OBE) framework. The department operates through four forefront specialization areas, namely Structural Engineering, Environmental Engineering, Geotechnical Engineering, and Transportation & Construction Management, ensuring comprehensive domain coverage and relevance to industry and societal needs. The process begins with the framing and dissemination of guidelines for major project work, which are approved at the departmental level and communicated to all final-year students. These guidelines clearly define project objectives, expected outcomes, timelines, evaluation rubrics, ethical standards, and alignment with Program Outcomes (POs) and Program Specific Outcomes (PSOs), as mandated by NBA. Subsequently, project team formation is carried out based on students' areas of interest, corresponding to the four specialization domains. This ensures learner-centric project allocation and promotes depth of knowledge. The next step involves mapping students' interests with faculty specialization, enabling effective allocation of project guides from the relevant domain Structural, Environmental, Geotechnical, or Transportation & Construction Management. This mapping strengthens mentorship quality and ensures technical rigor. The finalization of the project title is undertaken after considering the nature of the project, feasibility, ethical considerations, cost implications, sustainability aspects, and explicit mapping with POs and PSOs, satisfying NBA's emphasis on relevance and attainability of outcomes. Approved projects then proceed through periodic reviews and evaluations, conducted by internal and external experts. These reviews assess technical progress, innovation, societal relevance, and attainment of defined outcomes. The process culminates in final project report submission and oral examination, where students demonstrate technical competence, problem-solving ability, communication skills, and ethical responsibility. Post-evaluation, an analysis of outcome attainment is carried out to assess the effectiveness of the project process in achieving COs, POs, and PSOs. Importantly, the flowchart incorporates a feedback and continuous improvement loop, where the analysis of outcomes feeds back as inputs for revision of project guidelines, evaluation strategies, and mentoring practices in subsequent academic cycles. This closed-loop mechanism demonstrates compliance with NBA's requirements for continuous improvement, governance, transparency, and stakeholder responsiveness. Overall, the structured process ensures that major projects in the Civil Engineering program are academically rigorous, industry-relevant, outcome-oriented, and continuously improved, thereby contributing effectively to graduate attributes envisioned by NBA.

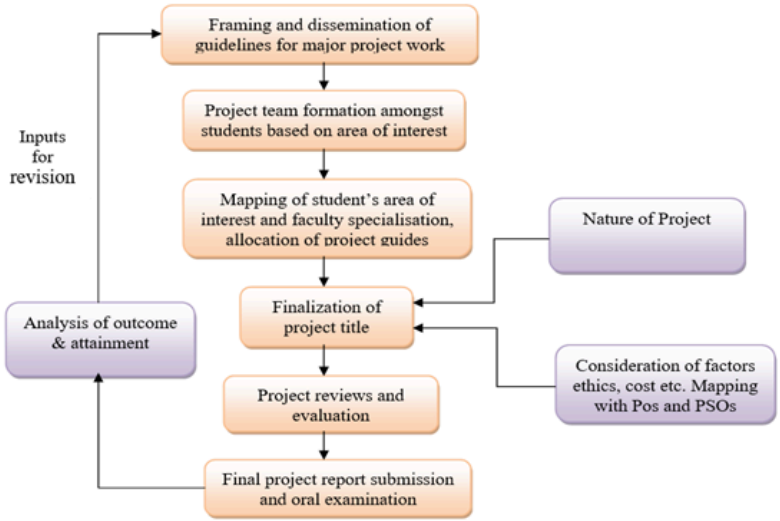


Fig 3.5a: Project Identification, Guide Allocation, Monitoring & Evaluation Process

Project Evaluation Process

The evaluation of minor and major projects is conducted in two distinct phases to ensure continuous assessment and comprehensive end-term review.

Phase 1: Internal Reviews

- Review 1 and Review 2 are scheduled during the semester for continuous monitoring of project progress, the sample evaluation minor scheme is given in Table 3.5a.
- These reviews are conducted by panel members from relevant forefront areas, under the supervision of the Project Coordinator.
- Evaluation is based on standardized rubrics provided by the Project Coordinator to ensure objectivity, consistency, and alignment with learning outcomes.

Phase 2: Final Examination

- At the end of the semester, a final evaluation is carried out by an external expert from industry or a reputed academic institution.
- The expert assesses each project group using the same predefined rubrics, ensuring impartiality and benchmarking against professional and academic standards.
- This two-phase evaluation system ensures structured, transparent, and outcome-based assessment, supporting continuous improvement and attainment of program-specific objectives.

Table 3.5a: Evaluation Scheme for The Minor Project

Description	Review 1	Review 2	Final Review

Assessment criteria	Rubric 1 for project review 1	Rubric 2 for project review 2	External Examination (Rubric 3 for Final examination of project work)

Following guidelines are provided for the conduction of reviews:

Review 1: This will be planned at the beginning of the semester Within 20 days of semester commencement). The Review 1 will be a purely synopsis presentation, which will be taken by the Panel members. The assessment of this review will be considered for Internal evaluation. For this student shall prepare the presentation on selected project ideas according to their area of interest. The brief presentation with clear aim and objectives of the project shall be presented In front of the panel members after taking the approval from the respective project guide. The sample copy of rubrics for review is presented in Table 3.5b.

Table 3.5b: Rubrics for Review 1(minor Project)

Criterion (with Max Marks)	Mapped CO(s)	5 (Excellent) 4.5–5	4 (Good) 4.0–4.4	3 (Satisfactory) 3.0–3.9	2 (Limited) 2.0–2.9	1 (Poor) 0–1.9
Problem Statement (5 marks)	**CO.1**	Clearly defines a significant, real-world problem with thorough background, need analysis, and justification.	Defines a relevant problem with good context; justification is present but could be deeper.	Problem is identifiable but lacks strong real-world relevance or detailed justification.	Problem is vague, poorly contextualized, or marginally relevant.	Problem statement is unclear, missing, or irrelevant.
Project Objective & Scope (5 marks)	**CO.1, CO.2**	Objectives are SMART; scope is precisely defined with clear deliverables and boundaries.	Objectives are clear and mostly measurable; scope is well-defined with minor ambiguities.	Objectives and scope are stated but lack specificity or full SMART alignment.	Objectives are broad/unrealistic; scope is unclear or poorly bounded.	Objectives missing or vague; scope not defined.
Project Planning (5 marks)	**CO.2**	Comprehensive plan with detailed timeline, task breakdown, resource allocation, and risk foresight.	Clear plan with timeline, tasks, and resources; minor gaps in details or risk planning.	Basic plan exists with major tasks and timeline; lacks depth in resources or risk.	Planning is minimal, unrealistic, or poorly structured.	No coherent planning evident.
Application of Project Management Tools (5 marks)	**CO.2**	Expert use of appropriate tools (e.g., Gantt, WBS) fully integrated into planning, tracking, and visualization.	Effective use of relevant tools; adequately supports planning and monitoring.	Basic application of tools; used but not fully leveraged for project control.	Limited or inappropriate tool selection; minimal functional application.	No PM tools used or incorrectly applied.

Review 2:

This will be planned after 1 month of review 1. The aim of the review 2 is to look into the progress of the student after review 1. The assessment of this review will be considered for Term work evaluation. The panel members shall check whether the student has answered and compiled the queries raised in review 1. The objective of review 2 is to identify the progress of the student group in line with their methodology planned. Following points can be considered for Review 2 presentation (Refer Table 3.5c):

- Study of data
- Modeling/prototype- Design
- Design calculations
- Numerical Simulation /Mathematical model
- Finalization of design

Table 3.5c: Rubrics for Review 2 (minor Project)

Criterion (with Max Marks)	Mapped CO(s)	5 (Excellent) 4.5–5	4 (Good) 4.0–4.4	3 (Satisfactory) 3.0–3.9	2 (Limited) 2.0–2.9	1 (Poor) 0–1.9
Project Modelling (5 marks)	**CO.1, CO.4**	Model is comprehensive, accurate, and integrates multiple design ideas. Clearly demonstrates systematic problem-solving and simulation/validation where applicable.	Model is well-developed and logical, with good integration of ideas and minor gaps in detail or validation.	Basic model present; represents core functions but lacks depth, integration, or adequate validation.	Model is overly simplistic, incomplete, or contains significant inaccuracies.	Model is missing, irrelevant, or fails to represent the project.
Block Diagram (3 marks → scaled to 5)	**CO.1, CO.4**	Diagram is highly detailed, logically structured, and clearly shows all system components, interfaces, and data flow. Excellent visual clarity and alignment with design.	Diagram is clear and mostly complete; shows major components and connections with good organization.	Basic diagram included; represents main components but lacks some detail, labelling, or clarity.	Diagram is minimal, poorly organized, or missing key elements or connections.	Diagram is absent, incorrect, or incomprehensible.
Flow Chart (2 marks → scaled to 5)	**CO.1, CO.2**	Flowchart is detailed, accurately represents the complete process/workflow, and uses correct symbols and logical sequencing. Enhances understanding of planning and execution.	Flowchart is clear and logical; covers main process steps with appropriate symbols and flow.	Basic flowchart present; outlines the process but may lack some detail, clarity, or standardization.	Flowchart is incomplete, confusing, or includes logical errors in sequencing.	Flowchart is missing, irrelevant, or fundamentally flawed.

Project Final Examination:

Final Examination will be scheduled after review 2 as per the schedule provided by examination section. This examination will be carried out under the supervision of Project guide and appointed External examiner. For final examination, student shall complete the project report in all aspect including formatting. Each group shall prepare the report duly signed by project guide, head of the department, director and the external examiner. Along with this student are required to prepare two extra copies of the project report duly signed by above mentioned authorities. Students shall submit all the data related to project work in soft copy to their guides which shall include project report, A3 size poster, Presentation and annexure. The assessment points for Final examination will be based on CO. The rubrics for final review of projects are given in Table 3.5d, f, g, h.

Criterion	Mapped CO(s)	5 (Excellent) 4.5–5	4 (Good) 4.0–4.4	3 Satisfactory) 3.0–3.9	2 (Limited) 2.0–2.9	1 (Poor) 0–1.9
Project Technical Complexity (5 marks)	CO.1, CO.2	Sophisticated Engineering: Multidisciplinary integration with novel approaches;	Strong Technical Solution: Good complexity with sound engineering approach;	Adequate Technical Design: Moderate complexity;	Basic Technical Level: Minimal complexity;	Inadequate Technical Approach: Trivial problem-solving;
Cost Analysis & Resource Management (5 marks)	CO.1, CO.5	Comprehensive Economic Planning: Detailed cost breakdown with complete justification;	Effective Budget Management: Clear cost estimation for major components; reasonable resource allocation;	Basic Financial Planning: Approximate costing provided; minimal resource planning	Limited Economic Consideration: Vague cost references;	No Financial Planning: Cost analysis ignored;
Environmental & Sustainability Integration (5 marks)	CO.1, CO.3	Holistic Sustainable Design: Full lifecycle environmental assessment;	Strong Environmental Consideration: Good sustainability integration;	Basic Sustainability Elements: Environmental impacts acknowledged;	Superficial Environmental Treatment: Environmental factors briefly mentioned;	No Environmental Consideration:
Societal Impact & Ethical Compliance (5 marks)	CO.3, CO.4	Comprehensive Societal Analysis: Clear beneficiary identification with stakeholder mapping;	Good Societal Relevance: Relevant community application;	Some Societal Connection: Basic community impact considered;	Limited Societal Value: Superficial societal mention;	No Societal or Ethical Dimension: Purely technical exercise;
Team Collaboration & Synergy (5 marks)	CO.4, CO.5	Exceptional Team Dynamics: Clear role distribution with balanced, equitable contribution;	Effective Team Collaboration: Well-defined roles and responsibilities;	Functional Teamwork: Roles somewhat defined;	Poor Team Coordination: Unclear roles;	Dysfunctional Team: No real collaboration;
Professional Communication & Documentation (5 marks)	CO.4, CO.5	Professional Quality Communication: Exceptionally well-structured reports;	Clear Professional Communication: Well-organized reports and documentation;	Adequate Communication: Reports cover required sections;	Poor Communication Quality: Disorganized documentation;	Unacceptable Communication : Reports missing or severely incomplete;
Project Management & Execution (5 marks)	CO.2, CO.5	Masterful Project Control:	Good Project Management: Clear planning and scheduling;	Basic Management Execution:	Weak Project Control:	No Management Framework:;
Adaptability & Continuous Improvement (5 marks)	CO.5	Progressive Development Approach:	Responsive Project Adaptation: Regular progress monitoring implemented;	Basic Monitoring System: Reactive issue management	Poor Responsiveness: Issues poorly managed or ignored;	No Adaptive Capacity:
Quality Assurance & Standards Compliance (5 marks)	CO.2, CO.3, CO.5	Excellence in Quality Standards: Rigorous testing protocols with validation;	Good Quality Implementation: Awareness and application of relevant standards;	Basic Quality Consideration: Some standards mentioned; limited testing conducted;	Minimal Quality Focus: Standards largely ignored;	No Quality Framework: Standards completely disregarded;

The Course Articulation Matrix provided in Table 3.5e & Table 3.5i is a structured mapping tool that demonstrates how each Course Outcome (CO) for this subject contributes to the broader Program Outcomes (POs) and Program-Specific Outcomes (PSOs). The numbers in the matrix—3, 2, and 1—indicate the strength of alignment, where 3 represents a high correlation, 2 a moderate correlation, and 1 a low correlation. For instance, CO1 shows a strong alignment (rating of 3) with core engineering competencies such as engineering knowledge (PO1), problem analysis (PO2), and design development (PO3), while having a lower correlation with aspects like societal and environmental impact (PO5) and lifelong learning (PO12). CO5 stands out as the most comprehensive, demonstrating a high correlation with nearly all POs and PSOs, reflecting its integral role in fostering teamwork, ethics, communication, and project management skills essential for the program. This matrix ensures that the course design systematically supports the programs educational objectives, fulfilling accreditation requirements by providing a clear, measurable link between course-level learning outcomes and the overall goals of the degree program.

Table 3.5e: Course articulation matrix (minor Project)

COURSE ARTICULATION MATRIX														
CO	PROGRAM OUTCOMES												PROGRAM SPECIFIC OUTCOMES	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	2	1			3	3	3		1		
CO2	3	3	3	3	3	3	3	3	3	1	3	3	3	1
CO3	2	3	3	3	3		2	3	3	3	2	2	2	1
CO4	3	3	3	3	2	2	2	3	3	2	3	3	2	1
CO5	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Table 3.5f: Rubrics for review 1 (Major Project)

Criterion (with Max Marks)	Mapped CO(s)	5 (Excellent) 4.5–5.0	4 (Good) 4.0–4.4	3 (Satisfactory) 3.0–3.9	2 (Limited) 2.0–2.9	1 (Poor) 0–1.9
Problem Statement and Objectives (5 marks)	CO.1, CO.3	Problem Statement: Clearly defined, context-rich, real-world relevant. Objectives: Specific, measurable, aligned with engineering principles and societal/ethical considerations	Problem Statement: Well-defined with clear relevance. Objectives: Mostly measurable and aligned, minor gaps in ethical/societal linkage.	Problem Statement: Identifiable but lacks depth or context. Objectives: Stated but vague; limited connection to principles or impact.	Problem Statement: Vague or marginally relevant. Objectives: Broad, unrealistic, or poorly defined.	Problem Statement: Missing or irrelevant. Objectives: Absent or completely misaligned.
Implementation Plan & Action (Algorithms/Techniques/Models/ Mathematical Understanding/Implementation) (5 marks)	CO.1, CO.2, CO.5	Plan is highly detailed, technically sound, and systematic. Demonstrates strong mathematical/scientific foundation, appropriate modern tools, and clear project management (timeline/resource allocation).	Plan is clear and logical with good technical/methodological choices. Shows adequate tool usage and project management structure.	Plan is basic but workable. Some technical/mathematical understanding shown, but lacks depth or thorough tool integration.	Plan is unclear, incomplete, or technically flawed. Minimal methodological or managerial structure.	Plan is missing, incoherent, or shows no technical/mathematical understanding.

Table 3.5g Rubrics for Review2 (Major Project)

Criterion (with Max Marks)	Mapped CO(s)	5 (Excellent) 4.5–5.0	4 (Good) 4.0–4.4	3 (Satisfactory) 3.0–3.9	2 (Limited) 2.0–2.9	1 (Poor) 0–1.9
Results and Implementation (5 marks)	CO.1, CO.2, CO.5	Results: Accurately presented, complete, and clearly linked to objectives. implementation: Technically robust, fully functional, and efficiently executed with proper resource/timeline adherence.	Results: Well-presented and mostly complete. Implementation: Largely functional with minor gaps in efficiency or execution.	Results: Basic presentation with some data but lacks clarity or completeness. Implementation: Partially functional; execution shows noticeable shortcomings.	Results: Incomplete, unclear, or inconsistent with objectives. Implementation: Poorly executed, largely non-functional, or mismanaged.	Results: Missing or irrelevant. Implementation: Not demonstrated or completely ineffective.
Observations (3 marks → scaled to 5)	CO.2, CO.3	Observations are comprehensive, systematically recorded, and clearly reflect both technical performance and societal/environmental/ethical insights where relevant.	Observations are detailed and well-documented, with minor gaps in depth or contextual awareness.	Basic observations are noted but lack detail, systemization, or contextual relevance.	Observations are minimal, vague, or largely unrelated to the project's core outcomes.	Observations are missing or irrelevant.
Inferences and Discussion (on algorithms/techniques/models/testing) (2 marks → scaled to 5)	CO.2, CO.4	Inferences are insightful, analytically strong, and clearly derived from results/observations. Discussion demonstrates critical evaluation of methods, tools, and alternatives.	Logical inferences drawn; discussion is clear and adequately evaluates the techniques/models used.	Basic inferences are stated; discussion is present but descriptive rather than analytical.	Inferences are weak or poorly reasoned; discussion is superficial or off-topic.	No meaningful inferences or discussion provided.

Table 3.5h: Rubrics for Final review (major Project)

Criterion & Marks	Mapped CO(s)	Excellent (4-5 marks)	Good (3-4 marks)	Satisfactory (2-3 marks)	Limited (1-2 marks)	Poor (0-1 marks)
Technical Complexity & Innovation (5 marks)	CO.1, CO.2	5: Sophisticated multidisciplinary solution;	4: Strong technical solution with good complexity;	3: Moderate complexity;	2: Minimal complexity;	1: Trivial solution; lacks engineering rigor
Cost & Sustainability Integration (6 marks)	CO.1, CO.3, CO.5	6: Comprehensive economic analysis with sustainability focus;	5: Clear cost estimation with sustainability aspects;	4: Basic costing with some sustainability mention;	3: Vague financial/environmental references;	2: No economic/environmental planning
Societal & Ethical Impact (5 marks)	CO.3, CO.4	5: Comprehensive societal analysis;	4: Relevant community application;	3: Basic community impact considered;	2: Superficial societal mention;	1: Societal and ethical dimensions ignored
Team Collaboration & Communication (8 marks)	CO.4, CO.5	8: Exceptional team synergy;	7: Effective team collaboration; well-organized documentation;	6: Functional teamwork;	5: Poor coordination;	4: Dysfunctional team;
Project Management & Objectives (8 marks)	CO.1, CO.2, CO.5	8: All objectives fully met/exceeded;	7: Most objectives achieved; clear planning and scheduling;	6: Basic objectives met;	5: Significant objectives not met;	4: Fails to achieve core objectives
Technical Defence & Quality Standards (5 marks)	CO.2, CO.3, CO.4, CO.5	5: Exceptional depth in responses; strong awareness;	4: Accurate, logical answers;	3: Adequate responses;	2: Vague/incorrect answers;	1: Unable to answer;
Professional Documentation (3 marks)	CO.1, CO.3, CO.4	3: Exceptionally structured comprehensive report;	2: Well-organized complete documentation;	1: Covers required sections adequately	0: Disorganized, incomplete documentation	0: Missing/severely incomplete

Table 3.5 i: ARTICULATION MATRIX

COURSE ARTICULATION MATRIX														
CO	PROGRAM OUTCOMES												PROGRAM SPECIFIC OUTCOMES	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		3	3	2	1			3	3	3		1		
CO2		3	3			3	3			1	3			1
CO3	2	3					2				2	2	2	1
CO4	2	2	2	2	2	2			3	2			2	1
CO5					3	3	3				3	3	3	3

3.6 Evidence of Addressing Sustainable Development Goals (SDG) (10) Total Marks 9.00

Institute Marks : 9.00

The Civil Engineering program at MITAOE demonstrates systematic and hierarchical integration of the United Nations Sustainable Development Goals (SDGs) through curriculum design, student projects, co-curricular activities, and societal outreach. This approach ensures adequate depth and breadth of SDG coverage in alignment with Outcome-Based Education (OBE). SDGs are embedded in the core, elective courses of the Civil Engineering curriculum mentioned below Table 3.6a.

Table 3.6a: List of courses mapped with SDG goals.

Sr. No.	***Description***	***Targeted Sustainable Development Goals (SDGs)***
1	Transportation Engineering	SDG 9 – Industry, Innovation and Infrastructure SDG 11 – Sustainable Cities and Communities SDG 13 – Climate Action
2	Smart Cities	SDG 9 – Industry, Innovation and Infrastructure SDG 11 – Sustainable Cities and Communities
3	Water Supply and Sanitation Engineering	SDG 6 – Clean Water and Sanitation SDG 11 – Sustainable Cities and Communities
4	Environmental Impact Assessment & Climate Change	SDG 13 – Climate Action SDG 15 – Life on Land
5	Solid and Industrial Waste Management	SDG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production SDG 15 – Life on Land

Course Outcomes (COs) include sustainability elements and are mapped with POs and PSOs related to environment, ethics, and societal responsibility. Civil engineering education aims to address complex engineering problems while incorporating sustainability goals, aligning with the United Nations Sustainable Development Goals (SDGs). This is achieved through Minor-projects, major projects, capstone projects. These activities enhance student's ability to analyse, design, and implement solutions that are technically sound, economically viable, and environmentally sustainable. Refer Table 3.6b for projects of students.

Table 3.6b: SDGs mapped with projects.

Sr. No	**Title**	**Name of Students**	**POs**	**PSOs**	**Mapped SDG**
1	Life cycle assessment of residential Building	Patil Aditya Wadve Omkar Zombade Shreyas Kakde Akshay	PO1, PO2, PO3, PO7, PO12	PSO1, PSO2	SDG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production
2	Life Cycle Assessment of Industrial Building	Aishwarya Jadhav Om Bhoyar	PO1, PO2, PO3, PO7, PO12	PSO1, PSO2	SDG 9 – Industry, Innovation and Infrastructure SDG 12 – Responsible Consumption and Production
3	Overview of Sustainable Rural Waste Management Practices	Rangari Sushant Bhaware Kunal Patil Madhur Shitre Rajan	PO2, PO4, PO6, PO7, PO8	PSO2	SDG 6 – Clean Water and Sanitation SDG 11 – Sustainable Cities and Communities

4	Review of construction and demolition waste in pune region	Jyoti Bhaurale Rushikesh Borkar Harshal Thosare Krushna Lad	PO2, PO3, PO5, PO7, PO10	PSO1	SDG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production
5	Design Implementation of Vermicomposting System for sustainable organic waste management in Rural Areas	Ghatol Pallavi Suryavanshi Gayatri Thakare Krishna Bhagat Tanmay	PO3, PO4, PO6, PO7, PO9	PSO2	SDG 2 – Zero Hunger SDG 12 – Responsible Consumption and Production SDG 15 – Life on Land
6	Utilization of Construction and Demolition waste in the construction industry.	Parihar Ansh Arun Bhardwaj Dheeraj	PO2, PO3, PO5, PO7, PO10	PSO1, PSO2	SDG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production
7	Design and implementation of sustainable water supply system for ruler community	Rohit Aheri Om Rakh Dhanraj Kshirsagar Aditya Chandrakant Dabhade	PO2, PO3, PO6, PO7, PO9	PSO1, PSO2	SDG 6 – Clean Water and Sanitation SDG 11 – Sustainable Cities and Communities
8	Design and implementation of sustainable water supply system for college campus or rural communities	Niraj Patil Ajinkya Dnyaneshwar Kedare Chaitanya Dilip Parab Prajwal Wankhade	PO1, PO2, PO3, PO6, PO7	PSO1, PSO2	DG 6 – Clean Water and Sanitation SDG 9 – Industry, Innovation and Infrastructure
9	Revitalization of Indrayani Riverfront & Integrated Approach towards Urban development & Environmental Sustainability	Nikhil Rahinj Pratik Khadse Rahul Nagave	PO2, PO3, PO4, PO6, PO7, PO10	PSO1, PSO2	SDG 11 – Sustainable Cities and Communities SDG 15 – Life on Land
10	Optimizing resource recovery in urban waste streams through circular economic principles	Manas Tambe Medankar Omkar Yuvraj Shendkar	PO2, PO3, PO4, PO7, PO12	PSO1, PSO2	DG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production

11	Optimizing economic feasibility for Zero Liquid Discharge in STP	Jay Satao Rutvik Kankirad Prasad Busamwar Sarthak Kakar Piyush Thakare	PO2, PO3, PO4, PO5, PO7	PSO1, PSO2	SDG 6 – Clean Water and Sanitation SDG 12 – Responsible Consumption and Production
12	Development of green concrete	Ashutosh Verma Jadhav Raj Kiran Takle Om	PO1, PO2, PO3, PO7, PO12	PSO1, PSO2	SDG 9 – Industry, Innovation and Infrastructure SDG 12 – Responsible Consumption and Production
13	Designing and Modelling of Green Building	Paras Singh Shubham Kumar Harsh Yadav Vedant Swami Ayush Dahake	PO1, PO2, PO3, PO5, PO7	PSO1, PSO2	SDG 11 – Sustainable Cities and Communities SDG 13 – Climate Action
14	Fostering Sustainability : Pioneering greywater solution for rural empowerment	Tiwari Shubham Sangale Yash Bedmutha Amogh Athawale Abhijeet Chavan Sarthak	PO2, PO3, PO6, PO7, PO9	PSO1, PSO2	SDG 6 – Clean Water and Sanitation SDG 11 – Sustainable Cities and Communities
15	A comprehensive study of sustainable solutions for wastewater treatment as a resource : Investigating Opportunities for Recycle & Reuse	Sakunde Sandeep Chaudhari Vaidehi Chavhan Sanskar Vedant Sontakke Shirode Madhura	PO2, PO4, PO5, PO7, PO12	PSO1, PSO2	SDG 6 – Clean Water and Sanitation SDG 12 – Responsible Consumption and Production
16	Implementation of Biogas Plant in MIT Academy of Engineering Alandi	Gangode Prakash Takate Uddhav Sudesh Sutar	PO3, PO4, PO6, PO7, PO9	PSO1, PSO2	SDG 7 – Affordable and Clean Energy SDG 12 – Responsible Consumption and Production

The department promotes sustainability awareness through structured co-curricular initiatives such as Industrial visits, workshops, and expert talks on sustainable construction, smart infrastructure, BIM, renewable energy, and climate-responsive design. Student participation in innovation challenges, technical competitions, and hackathons related to sustainability and smart solutions, these are provided in Table 3.6c.

Table 3.6c: Student Participation in various activities mapped with SDGs.

Sr. No.	Name of Course	Course Code	Activity (FA1/FA2/IE1/IE2 or any other)	Targeted SDG
1	Building Design and Construction	2303213	Building Bye Laws & Planning	SDG - 4, 11
2	Environmental Science	2301286	Student Ambassador Program	SDG- 11, 13, 15
3	Railway Engineering	CV473	Visit to IRICEN	SDG-9,4,11,13
4	Water Supply & Sanitation Engineering	2303312	Site visit to Water Treatment Plant, Pune	SDG- 3,4,6,11
5	Environmental Impact Assessment & Climate Change	CV423	Site Visit to Indian Meteorological Department, Pune	SDG- 4, 9, 11,13
6	Smart Cities	2303331	IOT for Smart City Development	SDG- 4,9,11
7	Solid and Industrial Waste Management	2303327	Waste to Energy Project and Construction and Demolition Waste Management Plant, Moshi	SDG-7,9,11,12

SDGs are further addressed through institutional and departmental outreach initiatives:

The School of Civil Engineering at MITAOE actively integrates sustainability-oriented activities through the Green Club MITAOE, established under the guidelines of DTE, Mumbai and UNICEF's Youth Engagement & Water Stewardship Program (2023–25). The department ensures wide student participation in several institutional and departmental events aligned with the United Nations Sustainable Development Goals (SDGs) as given in Table 3.6d. These initiatives foster environmental responsibility, community engagement, and practical exposure to sustainable engineering concepts.

Active participation in NSS and Green Club MITAOE activities such as:

- Tree plantation drives
- Water conservation campaigns and World Water Day celebrations
- Sustainability awareness programs, short films, and workshops

Table 3.6d: Student Participation in various outreach initiatives mapped with SDGs.

Activity	Description / Contribution	SDGs Targeted
World Water Day Celebration	Awareness on water conservation, resource Management, images are given in Fig 3.6a	SDG6, SDG13
Tree Plantation Drives	Green cover, biodiversity, carbon absorption	SDG 13, SDG 15
Short Films on Sustainability	Water scarcity awareness, sustainable lifestyle	SDG 6, SDG 12, SDG 11
Guest Sessions & Expert Session	Exposure to global environmental challenges	SDG 4, SDG 13, SDG 17
Workshops on Sustainability	Training on waste, water & energy management, Refer Fig 3.6b for further action.	SDG 9, SDG 12
Green Club Engagement	Student participation in environmental campaigns	SDG 4, SDG 13, SDG 17

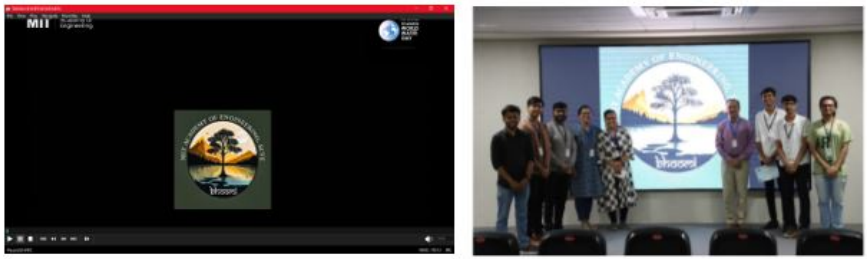


Fig. 3.6 a World Water Day Celebration

Fig 3.6 b: Expert Session on Rethinking of Waste Management & One Day Workshop on Solar Energy

3.7 Attainment of Course Outcomes (25) Total Marks 23.00

3.7.1. Describe the Assessment Tools and Processes Used to Gather the Data for the Evaluation of Course Outcome (5)

Institute Marks : 5.00

The Civil Engineering Department at MITAOE has established a systematic process for assessment and attainment of Course Outcomes (COs). COs are defined at the course level and appropriately mapped with Program Outcomes (POs) and Program Specific Outcomes (PSOs). Assessment of COs is carried out using both direct and indirect methods. Direct assessment includes Internal Assessment / Continuous Internal Evaluation (IA/CIE), Mid-Semester Examination (MSE), End-Semester Examination (ESE), and Laboratory/Project evaluation. All assessment components are mapped to the respective Course Outcomes and used for computation of direct CO attainment. Indirect assessment of COs is carried out through the Course Exit Survey, which captures students' feedback on attainment of Course Outcomes. Final CO attainment is computed using a predefined weightage of direct and indirect assessment methods. Based on the attainment levels, gap analysis is carried out and appropriate corrective actions are taken to ensure continuous quality improvement. The assessment tools and process are described through flowchart in Fig 3.7a.

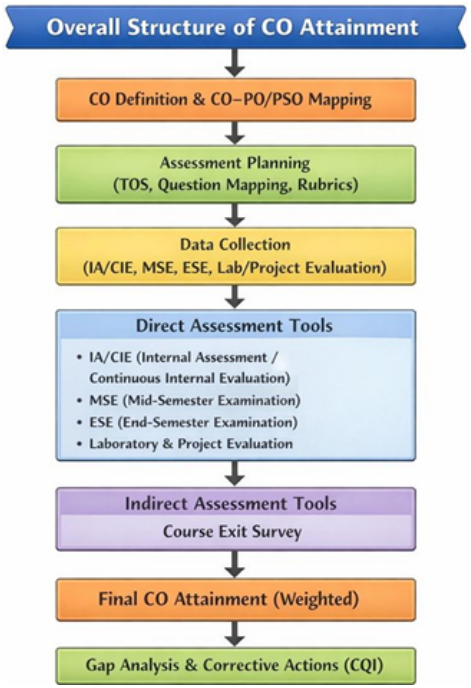


Fig. 3.7a: Flowchart of Assessment Tools and Processes used to Gather the Data for the Evaluation of Course Outcome.

3.7.2 Record the Attainment of Course Outcomes of all Courses with Respect to Set Attainment Levels (20)

Institute Marks : 18.00

The Civil Engineering Department at MITAOE systematically records Course Outcome (CO) attainment for all theory, laboratory, and project-based courses using a structured methodology aligned with predefined benchmarks. CO attainment is evaluated using both Direct and Indirect assessment methods. Direct attainment is computed from student performance in CIE/IA, MSE, ESE, and laboratory/project evaluations using CO-wise question and rubric mapping. Indirect attainment is obtained through Course Exit Feedback, mapped to respective COs and normalized as per institute practice. CO attainment levels are determined based on the percentage of students meeting the target performance and are categorized into predefined attainment levels. Final CO attainment is calculated using weighted aggregation of direct and indirect attainment (typically 80% direct and 20% indirect). Course-wise attainment summaries are recorded semester-wise, indicating benchmark achievement status. The attainment results are reviewed by the Course Coordinator and course champion and appropriate continuous improvement actions are identified and implemented for courses where benchmarks are not achieved. This entire process is presented through flowchart in Fig 3.7.2.a. The detailed attainment levels for course outcomes of every course is presented in Table 3.7.2b.

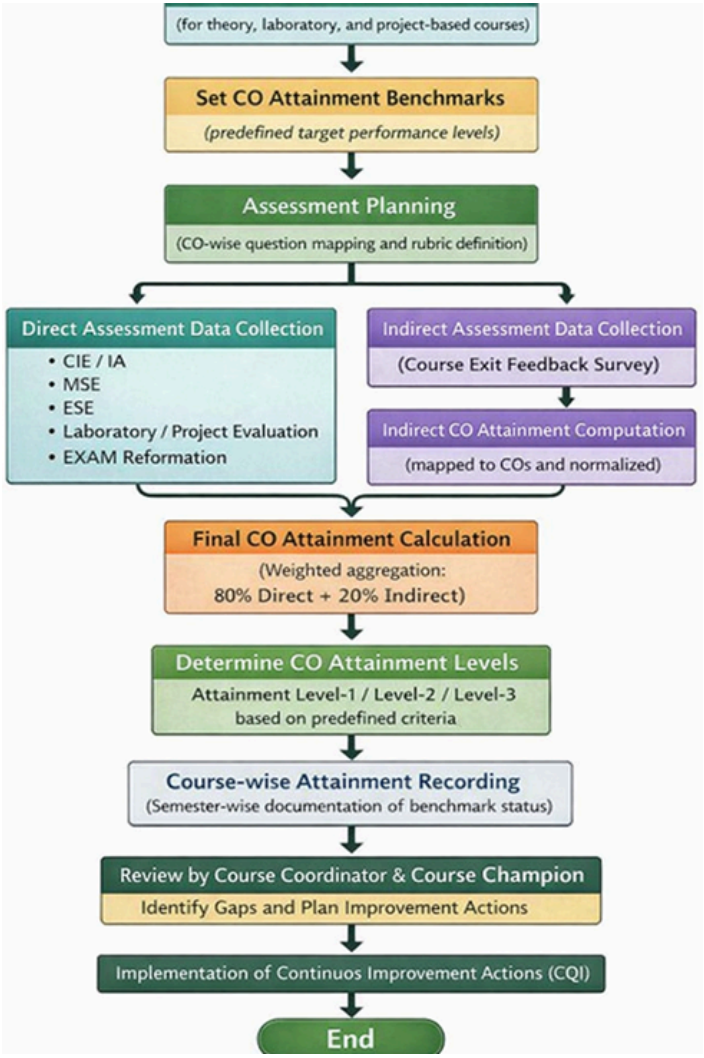


Fig. 3.7.2.a: Flowchart of assessment of course outcomes

Table 3.7.2.b: COs and attainment levels for all courses of the program

Course Code	Course Name	CO Number	Course Outcomes	Target for COs (%)	Target Achieved (%)	Attainment Level	Result
AS-106	Engineering Physics	CO1	To evaluate the importance of order of all physical quantities and compare the order of size of different objects	40	67.5	3	Y
		CO2	To apply the theoretical knowledge of optics to understand the physics behind engineering applications	40	67.5	3	Y
		CO3	To apply that light is transverse in nature	40	65.0	3	Y
		CO4	To demonstrate the necessity of quantum mechanics and the distinction between the do- mains of classical and quantum mechanics	40	37.5	0	N
		CO5	To evaluate and apply the Schrdingers equation to the motion of an electron orbiting round the shell	40	37.5	0	N
		CO6	To apply the concepts of Quantum Physics in different branches of engineering	40	45.0	1	Y
AS-107	Statistics and Integral Calculus	CO1	Assess stastical problems	40	60.0	3	Y
		CO2	Solve probability distribution problem	40	60.0	3	Y
		CO3	Evaluate complex integrals	40	62.5	3	Y
		CO4	Sketch curve by analysing the equation of curves	40	35.0	0	N
		CO5	Evaluate multiple integrals	40	35.0	0	N
		CO6	Apply knowledge of multiple integrals to solve engineering problems	40	35.0	0	N
CH-101	Science of Nature	CO1	Explain natural biological processes and their technical aspects in view of optimizing Engineering solutions	40	80.0	3	Y
		CO2	Explain important inventions that changed the human life and their impact on engineering.	40	12.5	0	N
		CO3	Apply the basic knowledge of chemistry to solve the engineering problems.	40	80.0	3	Y
		CO4	Categorize the different engineering materials and to solve engineering problems.	40	80.0	3	Y
		CO5	Apply basic concepts of analytical techniques for analysis of various chemical compounds.	40	57.5	3	Y
		CO6	Identify different methodologies for water quality analysis for industrial application.	40	45.0	2	Y

CS-101	Logic Development -C Programming	CO1	List the various data types, control structures and looping structures supported by C language.	50	92.3	3	Y
		CO2	Differentiate between various data types supported by C language.	50	92.3	3	Y
		CO3	Implement the solutions for various algorithms in C language.	50	92.3	3	Y
		CO4	Analyse various parameter passing methods to functions in C language.	50	92.3	3	Y
CS-102	Applications Programming -Python	CO1	Debug syntax and semantics in Python programs.	50	67.50	3	Y
		CO2	Demonstrate proficiency in handling strings and le system.	50	67.50	3	Y
		CO3	Implement the programs using core data structures like Lists and Dictionaries.	50	62.50	3	Y
		CO4	Interpret the concepts of Object Oriented Programming in Python	50	62.50	3	Y
		CO5	Develop solution for real life problems using Python.	50	67.50	3	Y
EX-102	Electrical and Electronics Engineering	CO1	Develop the Renewable energy system (PV) as per given specifications.	50	88.6	3	Y
		CO2	Distinguish behaviour of single phase A.C. circuits and three phase A.C. circuits.	50	88.6	3	Y
		CO3	Analyse analogue circuits applications.	50	88.6	3	Y
		CO4	Design Digital circuits.	50	85.7	3	Y
		CO5	Demonstrate the use of Instrumentation system in various fields.	50	85.7	3	Y
		CO6	Analyse electrical machines used in typical domestic and industrial sector based on application.	50	85.7	3	Y
AS-105	Calculus & Differential Equations	CO1	Solve First order and First degree ordinary differential equations.	40	37.5	0	N
		CO2	Analyse and solve real world phenomenon governed by First order ordinary differential equations.	40	40.0	1	Y
		CO3	Apply concepts of linear differential equations of second and higher order to solve systems in engineering world.	40	40	1	Y
		CO4	Infer the problems based on properties of partial differentiation.	40	17.5	0	N
		CO5	Examine the applications of partial differentiation.	40	17.5	0	N
		CO6	Solve and examine the solution of partial differential equations by theoretical methods.	40	17.5	0	N

HP-103	English for Engineers	CO1	Interpret texts written in English.	45	57.5	2	Y
		CO2	Apply English grammar rules correctly.	45	57.5	2	Y
		CO3	Choose and employ appropriate words from AWL and NAWL in communication.	45	57.5	2	Y
		CO4	Develop sentence and text in English coherently and formally.	45	57.5	2	Y
		CO5	Demonstrate overall improvement in communication skills.	45	57.5	2	Y
		CO6	Analyse and infer from written, audio and video texts.	45	57.5	2	Y
ME-104	Engineering Graphics	CO1	Develop and/or comprehend a simple engineering drawing in both First and Third angle orthographic projections	40	58.8	2	Y
		CO2	Interpret engineering drawings	40	58.8	2	Y
		CO3	Apply visualization skills to development of surfaces	40	58.8	2	Y
		CO4	Analyse engineering drawings	40	58.8	2	Y
		CO5	Decide annotations for two dimensional drawings	40	58.8	2	Y
		CO6	Create manual drawing & CAD data using SP46 standards	40	58.8	2	Y
ME-106	Design Thinking	CO1	Recall fundamental principles of design thinking.	50	90.3	3	Y
		CO2	Explain all the dimensions of user and his needs using design thinking approach.	50	90.3	3	Y
		CO3	Outline user centric problem by using information gathering techniques.	50	90.3	3	Y
		CO4	Compare multiple solutions through ideation process .	50	90.3	3	Y
		CO5	Interpret most appropriate solution for defined user centric problem.	50	90.3	3	Y
		CO6	Develop the most optimum solution.	50	90.3	3	Y
ME221	Material Engineering	ME221.CO.1	Relate the applications of various engineering materials and heat treatment processes in material processing industry.	55	83.6	3	Y
		ME221.CO.2	Interpret the specifications, composition, concepts and fundamental properties of engineering materials applied in industrial/research field.	55	83.6	3	Y
		ME221.CO.3	Select the suitable materials, manufacturing process for specified application to meet the product performance requirements within its product service life.	55	83.6	3	Y
		ME221.CO.4	Analyse the suitable material testing and characterization technique to ensure service life for specific product without any failure or deterioration in its performance.	55	83.6	3	Y

CV204	Geotechnical Engineering	CV204.CO.1	Grade engineering properties of soil based on index property by performing relevant experiments.	50	56.72	2	Y
		CV204.CO.2	Explain seepage & flow net.	50	52.25	2	Y
		CV204.CO.3	Choose suitable method for improvement in soil characteristics.	50	56.13	2	Y
		CV204.CO.4	Apply basic soil mechanics principle to calculate various stresses induced in soil.	50	56.13	2	Y
		CV204.CO.5	Calculate the stability of slopes	50	47.32	1	Y
		CV204.CO.6	Evaluate bearing capacity of different types of soils.	50	41.10	1	Y
CV205	Building Design & Construction	CV205.CO.1	Design functionally a single/multi-storied building for various components of residential/commercial units.	60	66.67	2	Y
		CV205.CO.2	Implement relevant bye laws in functional design of buildings in a prescribed locality in India.	60	48.76	0	N
		CV205.CO.3	Select suitable types of basic building material and masonry used for construction of various types of buildings	60	56.22	1	Y
		CV205.CO.4	Explain various components of buildings namely forms of floors, roofs, doors, windows, arches, lintels, staircases.	60	82.09	3	Y
		CV205.CO.5	Select suitable type of formwork and scaffolding.	60	62.19	3	Y
		CV205.CO.6	Describe green building concept and Rating Systems.	60	62.19	3	Y
CV206	Mechanics of Solids	CV206.CO.1	Enlist and explain different types of actions on a structural component.	50	38.90	0	N
		CV206.CO.2	Draw axial force diagrams for axially loaded members, shear force diagrams and bending moment diagrams for statically determinate beams and twisting moment diagram for statically determinate shafts.	50	38.90	0	N
		CV206.CO.3	Draw bending stress distribution diagram for beams and shear stress distribution diagrams for beams and shafts.	50	38.90	0	N
		CV206.CO.4	Calculate load corresponding to elastic instability for columns with various end conditions.	50	61.10	2	Y
		CV206.CO.5	Calculate principal stresses and absolute maximum shear stresses at various locations of a structural component using analytical method and Mohr’s circle whichever is suitable.	50	61.10	2	Y
		CV206.CO.6	Select particular shape of cross section to economically carry calculated bending/shear stresses under flexure/shear.	50	61.10	2	Y

CV230	Minor Project Design	CV230.CO.1	Delineate the problem to be solved.	50	86.60	3	Y
		CV230.CO.2	Comprehend the paramount of the health, safety and welfare of the public in the practice of engineering profession.	50	86.60	3	Y
		CV230.CO.3	Embark project planning and design.	50	86.60	3	Y
		CV230.CO.4	Inculcate problem solving skills and critically analyse the options available to solve the problem.	50	86.60	3	Y
		CV230.CO.5	Cognize the importance of documentation and report writing.	50	90	3	Y
CV232	Skill Development Course-1 REVIT	CV232.CO.1	Describe building information modelling methodology and its bene ts.	50	73.60	3	Y
		CV232.CO.2	Draw all Architectural components.	50	73.60	3	Y
		CV232.CO.3	Design detail views, add 3D and 2D elements and detail components.	50	73.60	3	Y
		CV232.CO.4	Create construction documentation.	50	73.60	3	Y
AS203	Applied Mathematics	AS203.CO.1	Evaluate the Laplace and Inverse Laplace transform and will solve the differential equations.	50	49	1	Y
		AS203.CO.2	Rewrite the periodic and non-periodic functions as a series of sines and cosines	50	49	1	Y
		AS203.CO.3	Differentiate a vector valued function in plane or space	50	49	1	Y
		AS203.CO.4	Solve and compute the area and volume of the objects.	50	45	1	Y
		AS203.CO.5	Apply the numerical methods to problems of calculus and differential equations	50	47	1	Y
		AS203.CO.6	Execute the program codes using MATLAB	50	45	1	Y

CV214	Mechanics of Fluids	CV214.CO.1	Interpret the properties and behaviour of the fluid at rest and in motion.	55	71.80	3	Y
		CV214.CO.2	Utilize equations of motion for various flow conditions and compute discharge of the flows.	55	71.80	3	Y
		CV214.CO.3	Analyse laminar and turbulent flows through pipes considering the losses.	55	71.80	3	Y
		CV214.CO.4	Evaluate various parameters related to the flow around immersed bodies.	55	67.60	3	Y
		CV214.CO.5	Explain different terms related to open channel flow along with critical flow.	55	67.60	3	Y
		CV214.CO.6	Analyse the different types of open channel flow using various governing equations.	55	70.40	3	Y
CV215	Surveying & Geospatial Engineering	CV215.CO.1	Apply the techniques of levelling to solve engineering problems.	50	91.30	3	Y
		CV215.CO.2	Interpret principles of trigonometry for surveying using standardized methods.	50	91.30	3	Y
		CV215.CO.3	Survey traversing and triangulation by implementing the basic principles of surveying.	50	91.30	3	Y
		CV215.CO.4	Construct different types of curves for alignment of roads and railways and layout civil engineering structure on field.	50	39.1	0	N
		CV215.CO.5	Interpret spatial data and perform analysis by using modern surveying tools	50	43.5	0	N
		CV215.CO.6	Analyse field data to minimize errors using mathematical models.	50	33.3	0	N
CV216	Structural Analysis	CV216.CO.1	Determine internal forces in structure and sketch deflected shapes.	60	57	2	Y
		CV216.CO.2	Determine displacements of determinate structures	60	53	2	Y
		CV216.CO.3	Analyse indeterminate structures by force methods.	60	65	3	Y
		CV216.CO.4	Analyse indeterminate structures by displacements methods	60	61	3	Y
		CV216.CO.5	Analyse determinate structures for moving loads	60	48	1	Y
		CV216.CO.6	Estimate the collapse load for indeterminate structures.	60	41	1	Y

ET235	Rapid Prototyping	ET235.CO.1	Consolidate the techniques, skills and modern engineering tools.	50	93.10	3	Y
		ET235.CO.2	Apply acquired skills to the construction of a prototype project.	50	93.10	3	Y
		ET235.CO.3	Develop a prototype project by performing tasks in team.	50	93.10	3	Y
		ET235.CO.4	Demonstrate the work carried out in a team.	50	93.10	3	Y
CV240	Minor Project Implementation	CV240.CO.1	Select appropriate method for making of solution.	50	68.70	3	Y
		CV240.CO.2	Compare various engineering tools/technique to develop solution.	50	68.70	3	Y
		CV240.CO.3	Justify the selected method/tools opted for making of solution.	50	68.70	3	Y
		CV240.CO.4	Develop tangible solution to dened problem.	50	68.70	3	Y
		CV240.CO.5	Test the developed solution.	50	68.70	3	Y
		CV240.CO.6	Document solution in the form of Project report / IPR drafts.	50	68.70	3	Y
HP202	Professional Skill	HP202.CO.1	Express themselves effectively in routine and real-world interactions through verbal and written communication.	60	72.86	3	Y
		HP202.CO.2	Show Confident Public Speaking skills.	60	72.86	3	Y
		P202.CO.3	To showcase leadership qualities during tough tasks, make decisions and actions effectively within time.	60	72.86	3	Y
CV305	Concrete Technology	CV305.CO.1	Describe different type’s concrete ingredients with their properties.	60	73.01	2	Y
		CV305.CO.2	Illustrate properties of concrete using various IS tests.	60	76.67	2	Y
		CV305.CO.3	Produce a concrete with specific mix.	60	77.29	2	Y
		CV305.CO.4	Explain special types of concrete techniques.	60	86.02	3	Y
		CV305.CO.5	Describe different concrete related equipment.	60	77.98	2	Y
		CV305.CO.6	Analyse Methods of Concrete Repair.	60	77.27	2	Y

CV306	Drinking Water & Sanitary Engineering	CV306.CO.1	Analyse the characteristics of water and wastewater	60	70.13	2	Y
		CV306.CO.2	Estimate the quantity of drinking water and domestic wastewater generated	60	75.02	3	Y
		CV306.CO.3	Design the various units of water treatment plant	60	54.10	0	N
		CV306.CO.4	Design the water distribution system and sewerage system	60	64.54	1	Y
		CV306.CO.5	Design the various units of sewerage treatment plant	60	69.49	2	Y
CV307	Design of Steel Structure	CV307.CO.1	Explain the various design philosophies	60	78.23	2	Y
		CV307.CO.2	Design connections of structural elements for the actions they are subjected to, using limit state method.	60	73.39	2	Y
		CV307.CO.3	Design axially loaded steel elements using Limit state method.	60	73.39	2	Y
		CV307.CO.4	Design steel elements subjected to bending and shear using Limit state method.	60	64.52	1	Y
CV325	Open Elective-01 Construction Planning and Management	CV311.CO.1	Relate various project managerial and planning concepts with onsite work.	60	92.42	3	Y
		CV311.CO.2	Analyse the technique of project scheduling & network analysis	60	90.91	3	Y
		CV311.CO.3	Utilize the methods of project controlling & inventory management	60	80.30	3	Y
		CV311.CO.4	Contrast on earned value management with administrative incentive schemes	60	92.42	3	Y
		CV311.CO.5	Illustrate various concepts and methods for quality and safety management	60	84.85	3	Y
		CV311.CO.6	Functionally design a schedule for a residential building	60	57.58	1	N

CV326	Open Elective-01 Solid Waste Management	CV326.CO.1	Describe the functional elements of a solid waste management system	60	65.54	1	Y
		CV326.CO.2	Identify the methods of collection, storage, transportation of solid waste	60	70.15	2	Y
		CV326.CO.3	Evaluate recovery, treatment and disposal alternatives according to properties of solid waste.	60	68.53	2	Y
		CV326.CO.4	Understand basic concepts in hazardous waste management & integrated waste management for urban area	60	66.72	2	Y
		CV326.CO.5	Recognize relevant smart technique for collection, transport, disposal of waste	60	66.89	2	Y
		CV326.CO.6	Acquire knowledge on waste to energy productions in the perspective of suitable development	60	62	2	Y
CS361	Project Management	CS361.CO.1	Identify the Project Management Knowledge Areas and Processes.	55	85.01	3	Y
		CS361.CO.2	Classify the responsibilities while designing the Project Master Plan.	55	95.26	3	Y
		CS361.CO.3	Outline the Cost Estimating and Cost Escalation Process.	55	63.33	2	Y
		CS361.CO.4	Demonstrate and highlight The Processes of Project Quality Management.	55	63.86	2	Y
		CS361.CO.5	Analyse Project Management Maturity and Maturity Models	55	57.19	1	Y
CV342	Skill Development Course – 2 (ETABS)	CV342.CO.1	Prepare structural framing plan.	55	70	2	Y
		CV342.CO.2	Assigning material properties, boundary conditions and loading to structural elements.	55	68.33	2	Y
		CV342.CO.3	Analyse the R.C. and steel structures for various load combinations.	55	75	2	Y
		CV342.CO.4	Interpret the results of software.	55	61.67	1	Y
		CV342.CO.5	Design the structural elements (reinforced or fabricated) for static and dynamic loading asper Indian standards.	55	78.33	3	Y
		CV342.CO.6	Articulate importance of software’s in research and industry by simulation work.	55	75	2	Y

CV350	Project Design	CV350.CO.1	Delineate the problem to be solved	60	76.85	2	Y
		CV350.CO.2	Inculcate problem solving skills by critically analysing real world needs, possible solutions and challenges	60	76.85	2	Y
		CV350.CO.3	Carry out systematic literature review, planning and project design	60	76.85	2	Y
		CV350.CO.4	Cognize the importance of documentation and report writing	60	76.85	2	Y
CV312	Design of Reinforced Concrete Structure	CV312.CO.1	Describe the concept of elastic, ultimate, working stress and limit state method of design for reinforced concrete structures.	50	58.76	1	Y
		CV312.CO.2	Design one way, two way, rectangular slab, singly and doubly reinforced Rectangular beam and flanged beam by Limit State Method.	50	80.92	3	Y
		CV312.CO.3	Design RC members for combined bending shear and torsion using Limit State Method.	50	100	3	Y
		CV312.CO.4	Design short columns for various conditions.	50	75.70	3	Y
		CV312.CO.5	Design axially and eccentrically loaded rectangular footing.	50	75.78	3	Y
		CV312.CO.6	Analyse the prestress concrete sections.	50	58.55	1	Y
CV313	Transportation Engineering	CV313.CO.1	Explain basic transportation planning process	50	74.29	3	Y
		CV313.CO.2	Design systems for traffic operations	50	40.31	0	N
		CV313.CO.3	Design highway geometry	50	85.22	3	Y
		CV313.CO.4	Design bituminous mixes	50	63.47	2	Y
		CV313.CO.5	Explain basics of bridge engineering	50	88.75	3	Y
		CV313.CO.6	Demonstrate use of BIS, IRC MORTH codes	50	88.75	3	Y

CV314	Water Resources Engineering	CV314.CO.1	Analyse hydro-meteorological data.	55	61	1	Y
		CV314.CO.2	Estimate of reservoir capacity and yield	55	57	1	Y
		CV314.CO.3	Design irrigation canals and canal network.	55	72	2	Y
		CV314.CO.4	Estimate aquifer parameters.	55	65	1	Y
		CV314.CO.5	Apply system analysis techniques and solve complex problems in water resources engineering.	55	56	1	Y
		CV314.CO.6	Develop rainfall-runoff models.	55	58	1	Y
CV332	Open Elective-02 Operation Research	CV332.CO.1	Solve the Linear Programming problems for minimizing the project cost and maximizing its profit	60	72	3	Y
		CV332.CO.2	Apply LPP to Transportation problems which is essential for a Civil Engineer & solve assignment problems for optimal assignment of men/equipment.	60	75	3	Y
		CV332.CO.3	Make decision of replacing equipment/machinery at optimal time.	60	74	3	Y
		CV332.CO.4	Organize an appropriate order of operations.	60	76	3	Y
		CV332.CO.5	Decide strategy for business growth using game theory.	60	66	2	Y
		CV332.CO.6	Decide optimum service level by applying queuing theory.	60	62	2	Y
CV333	Open Elective-02 Unit Operations for Liquid Waste/Effluent Treatment	CV333.CO.1	Identify and solve complex engineering problems	60	68.89	1	Y
		CV333.CO.2	Suggest and apply the suitable treatment processes for industrial effluent same in the field of application	60	64.44	1	Y
		CV333.CO.3	Design various unit processes for effluent treatment	60	62.22	1	Y
		CV333.CO.4	Identify and assess the characteristics of effluent water along with their environmental impacts.	60	46.67	1	Y

CV343	Skill Development Course – 3 (Open Road Designer)	CV343.CO.1	Demonstrate use of basic functions of Open Road Designer	60	75.40	3	Y
		CV343.CO.2	Model terrain using total station data in Open Road Designer Environment	60	75.40	3	Y
		CV343.CO.3	Create horizontal vertical alignment	60	75.40	3	Y
		CV343.CO.4	Create 3D model of 2 / 4 lane rural corridor	60	75.40	3	Y
		CV343.CO.5	Create and annotate cross section sheets and plan and profile sheets	60	75.40	3	Y
CV344	Skill Development Course – 3 (WATERGEMS)	CV344.CO.1	Summarize the basic principles of water distribution modelling	60	62.34	3	Y
		CV344.CO.2	Apply water gems models to solve common water distribution system problems	60	62.34	3	Y
		CV344.CO.3	Develop a deeper understanding of model creation and analysis using water gems.	60	62.34	3	Y
CV360	Project Implementation	CV360.CO.1	Analyse techniques, algorithms and design process relate to the project	60	71.67	2	Y
		CV360.CO.2	Implement/develop/experiment/simulate/test techniques/process and infer conclusions from it.	60	71.67	2	Y
		CV360.CO.3	Cognize the importance of documentation and report writing.	60	71.67	2	Y
HP-305	Employability & Career Development	HP305.CO.1	Relate the importance of professional skills	60	66.15	3	Y
		HP305.CO.2	Build necessary, specific professional skills	60	66.15	3	Y
		HP305.CO.3	Analyse the environment of employ-ability	60	66.15	3	Y
		HP305.CO.4	Develop various techniques of effective team building in their professional life	60	66.15	3	Y

CV405	Estimating and Costing	CV405.CO.1	Describe the importance of estimation and able to use approximate estimate for rough estimation.	55	85.93	3	Y
		CV405.CO.2	Write specification for construction materials and activities.	55	93.56	3	Y
		CV405.CO.3	Prepare detailed estimate for building, road and industrial structure.	55	91.27	3	Y
		CV405.CO.4	Calculate rates for various items of construction.	55	78.27	2	Y
		CV405.CO.5	Prepare valuation report for residential building.	55	81.19	3	Y
		CV405.CO.6	Describe types of contracts and to draft tender notices.	55	71.29	2	Y
CV471	Discipline Elective - 1 Building Services	CV471.CO.1	Analyse plumbing and drainage plan.	50	79.37	2	Y
		CV471.CO.2	Explain the concepts and techniques of water proofing and rain water harvesting	50	74.13	2	Y
		CV471.CO.3	Prepare reflected ceiling plan.	50	65.03	1	Y
		CV471.CO.4	Define principles of air conditioning and thermal insulation	50	90.91	3	Y
		CV471.CO.5	Illustrate firefighting system.	50	89.16	3	Y
		CV471.CO.6	Identify materials of acoustics and sound insulation	50	81.47	3	Y
CV473	Discipline Elective - 1 Railway Engineering	CV473.CO.1	Explain different components of railway track	50	91.81	3	Y
		CV473.CO.2	Calculate different resistances to the traction	50	98.51	3	Y
		CV473.CO.3	Design geometry of railway track	50	82.58	3	Y
		CV473.CO.4	Explain traffic regulatory system for railway	50	94.79	3	Y
		CV473.CO.5	Describe facilities at railway station yards	50	89.83	3	Y
		CV473.CO.6	Explain essentials of track maintenance	50	68.98	1	Y

CV422	Open Elective-03 Financial Management	CV422.CO.1	Understand the basic of economic and financial management	50	91.7	2	Y
		CV422.CO.2	Solve the issues of financial management in business operations	50	91.7	2	Y
		CV422.CO.3	Construct financial statements for construction industry/projects	50	91.7	2	Y
		CV422.CO.4	Estimate working capital of construction projects	50	91.7	2	Y
		CV422.CO.5	Apply the principles of supply chain management to construction projects	50	91.7	2	Y
		CV422.CO.6	Analyse and mitigate risks involved in construction projects	50	91.7	2	Y
CV423	Environmental Impact assessment and Climate Change	CV423.CO.1	Examine the different environmental attributes and identify the environmental parameters.	65	68	3	Y
		CV423.CO.2	Apply the different methodologies to predict and assess the impacts.	60	72	3	Y
		CV423.CO.3	Compile the data and formulate an EIA report	60	68	3	Y
		CV423.CO.4	Understand the climate system and its changes due to human activities	60	60	1	Y
		CV423.CO.5	Identify the effects of climate change and adopt probable techniques to deal with climate change.	60	59	0	N
CV436	Skill Development Course – 4 (QGIS)	CV436.CO.1	Use GIS to identify, explore, understand, and solve spatial problems	55	79.25	3	Y
		CV436.CO.2	Demonstrate GIS modelling skills	55	73.58	2	Y
		CV436.CO.3	Design and implement a GIS project	55	66.04	2	Y
		CV436.CO.4	Formulate applications of GIS technology.	55	60.38	1	Y
CV470	Project Evaluation	CV470.CO.1	Interpret findings, compare them with results in the literature, identify weaknesses and limitations, and propose improvements.	70	83.33	3	Y
		CV470.CO.2	Make use of standard industry practices.	70	85.19	3	Y
		CV470.CO.3	Decide appropriate platform for presenting the work done.	70	62.96	2	Y

CV406	Design of Hydraulic Structures	CV406.CO.1	Perform the stability analysis of gravity dam	60	53.07	3	Y
		CV406.CO.2	Explain the causes of failure of different types of dams & their design criteria	60	26.41	3	Y
		CV406.CO.3	Design components of dam outlet works	60	93.01	3	Y
		CV406.CO.4	Design minor irrigation structures.	60	91.26	3	Y
		CV406.CO.5	Integrate relevant concept and methodologies in the area of hydraulics, water resources and geotechnical engineering.	60	91.26	3	Y
CV480	Capstone Portfolio	CV480.CO.1	Portray individual skill for solving the problem.	70	64	2	Y
		CV480.CO.2	Showcase and exhibit the best techniques and suitable methodology.	70	64	2	Y
		CV480.CO.3	Cognize the significance of report and comprehend its reflections.	70	36	0	N
		CV480.CO.4	Assimilate digital and visual literacies.	70	43	0	N
HP405	Engineering Economics	HP405.CO.1	Relate the basic concepts of engineering economics	50	45.09	1	Y
		HP405.CO.2	Apply the economic viability of firm/organization under different market conditions	50	42.59	1	Y
		HP405.CO.3	Explain the bank structures and its schemes	50	60.89	1	Y
		HP405.CO.4	Execute the effective way of financial budget and skills	50	69.55	1	Y
HP406	Psychology	HP406.CO.1	To introduce the basic concept of Psychology.	60	92.86	3	Y
		HP406.CO.2	To explain how learning and conditioning occurs in everyday life through both nature and nurture factors.	60	71.43	2	Y
		HP406.CO.3	To know the main schools of thought and prime contributors to the theory of workplace motivation.	60	92.86	3	Y
		HP406.CO.4	To develop insight into one's own and others behaviour and underlying mental processes.	60	71.43	2	Y
		HP406.CO.5	To develop Positive Psychology interventions to increase personal well-being.	60	75.00	2	Y

Institute Marks : 22.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Material Engi	2.63	PO2	3	PO4	3	3	PO7	2.45	1.90	2.45	1.90	0.77
Geotechnical	2.75	PO2	3	3	2.49	3	PO7	2.33	2	2.48	2	1
Building Desi	1.14	1.19	1.62	1.28	1.43	2	1.50	0.93	PO9	1.50	1.00	PO12
Mechanics of	1.03	1.26	0.34	1.03	1.71	PO6	PO7	0.50	0.34	0.34	PO11	0.34
Minor Project	2.12	1.68	2.57	2.34	2.34	1.91	1.90	1.66	1.68	2.12	1.23	1.90
Skill Course -	2.50	2.50	2.25	1.00	2.25	1.50	PO7	1.50	1.00	PO10	1.00	1.00
Applied Math	2.02	1.32	1.00	PO4	1.51	PO6	PO7	0.61	PO9	PO10	PO11	1.51
Mechanics of	2.30	1.90	1.00	1.00	0.80	0.80	PO7	PO8	PO9	PO10	PO11	1.30
Surveying & (	1.43	1.63	PO3	PO4	1.21	0.15	PO7	PO8	1.29	0.65	1.75	PO12
Structural Ana	1.60	1.75	0.88	1.60	2.40	PO6	PO7	0.96	0.88	0.88	PO11	0.88
Rapid Prototy	1.34	2.45	2.64	0.77	1.90	0.77	0.77	0.77	2.17	3.00	1.90	1.34
Minor Project	2.09	1.68	2.56	2.34	2.34	1.90	1.90	1.67	1.68	2.12	1.22	1.90
Professional :	PO1	PO2	PO3	PO4	PO5	3.00	2.00	2.00	3.00	3.00	PO11	1.00
Concrete Tec	1.91	1.90	0.96	2.42	1.94	PO6	PO7	0.98	PO9	PO10	PO11	0.96
Drinking Wate	1.97	1.93	0.97	2.49	1.97	PO6	PO7	0.97	PO9	PO10	PO11	0.99
Design of Ste	2.15	1.93	1.00	1.00	1.42	1.89	PO7	2.34	PO9	PO10	1.39	0.95
OE-Construct	2.94	2.94	1.17	0.98	0.98	2.61	2.37	1.00	3.00	1.46	2.12	0.97
OE-Solid Was	2.20	1.60	1.33	1.50	1.50	2.20	1.80	1.00	1.25	1.40	2.00	1.00
Project Mana	1.35	1.48	0.92	1.05	0.74	1.83	0.67	0.61	1.95	1.53	1.90	0.96
Skill Course -	2.03	1.68	1.88	1.48	2.28	1.56	PO7	1.22	PO9	1.48	0.90	1.04
Project Desig	2.25	1.00	1.50	PO4	1.75	2.00	1.33	1.25	2.25	1.25	1.75	1.00
Design of Rei	2.25	1.86	2.05	1.50	1.30	1.50	0.83	1.30	1.66	2.05	0.95	0.95
Transportatio	1.73	1.47	0.84	0.71	0.63	PO6	1.37	1.31	1.03	0.76	PO11	0.79
Water Resou	2.62	2.25	1.66	2.31	3.00	2.49	1.32	1.99	2.00	1.66	1.00	1.32
OE-Operation	2.13	1.77	PO3	0.71	0.71	PO6	0.73	PO8	PO9	1.42	1.65	1.61
OE-Unit Oper	1.82	1.69	0.83	1.18	1.82	1.90	1.00	1.00	PO9	PO10	PO11	0.80
Skill Course -	1.76	1.39	0.96	1.23	1.79	2.35	1.75	1.30	0.90	1.00	2.00	0.93
Skill Course-\	2.00	1.00	1.50	1.00	1.00	PO6	2.00	PO8	PO9	PO10	PO11	1.00
Project Imple	2.33	1.00	1.67	PO4	2.00	2.00	1.33	1.33	2.00	1.00	1.67	1.00

Employability	PO1	2.00	PO3	PO4	PO5	3.00	2.00	2.00	3.00	2.00	PO11	2.00
Estimating ar	1.87	1.76	0.82	0.83	1.67	1.40	0.70	1.40	0.93	2.11	1.40	0.81
DE-Building S	2.00	2.00	1.00	2.00	2.00	PO6	PO7	1.00	PO9	1.00	PO11	1.00
DE-Railway E	1.50	1.00	1.00	2.00	1.25	2.00	PO7	PO8	1.00	1.00	PO11	1.00
OE-Financial	1.83	1.67	1.00	1.33	1.33	2.67	2.20	2.00	2.17	2.17	1.60	PO12
Environmenta	2.40	1.60	1.30	1.30	1.40	2.00	2.00	1.00	1.50	1.30	1.50	1.00
Skill Course-(	1.64	1.27	1.45	1.09	2.18	PO6	PO7	PO8	PO9	0.91	PO11	PO12
Design of Hy(	1.33	1.20	1.00	1.00	1.00	2.00	1.00	1.00	1.20	1.00	1.80	2.25
Capstone Poı	2.17	1.44	1.44	1.92	1.64	1.94	0.97	0.95	1.91	1.42	0.72	1.17
Engineering E	1.08	0.98	1.09	1.09	0.52	PO6	0.59	0.55	1.27	1.14	1.52	1.09
Psychology	PO1	PO2	PO3	PO4	PO5	PO6	PO7	1.23	2.00	PO10	PO11	2.00
Engineering F	3.00	1.01	1.85	1.11	3.00	0.77	3.00	1.81	1.81	1.90	0.77	0.38
SIC	1.09	1.09	PO3	0.37	PO5	PO6	0.37	0.37	PO9	PO10	PO11	0.37
SON	2.46	1.50	0.00	2.70	0.77	1.42	2.07	PO8	PO9	PO10	PO11	0.77
LDC	2.45	2.64	1.62	PO4	PO5	PO6	PO7	0.77	PO9	PO10	PO11	0.77
App-Python	2.64	PO2	3.00	3.00	3.00	3.00	PO7	2.27	1.90	2.45	1.90	0.77
EEE	2.64	1.90	1.34	0.77	3.00	1.06	1.90	PO8	0.77	0.77	PO11	1.15
Calculus & Di	1.24	1.24	0.19	0.19	PO5	PO6	PO7	PO8	0.72	PO10	PO11	PO12
ENE	PO1	PO2	PO3	PO4	PO5	2.64	PO7	PO8	2.64	3.00	PO11	2.27
EGR	3.00	2.78	2.56	PO4	2.45	PO6	PO7	PO8	3.00	3.00	PO11	2.73
Design Think	1.90	1.90	PO3	0.77	0.77	0.77	PO7	PO8	PO9	1.15	PO11	1.34

PO Attainment Indirect

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Alumni Surve	2.20	2.30	2.30	2.30	2.20	2.30	2.20	2.20	2.30	2.40	2.30	2.30
Graduate Exi	2.42	2.28	2.10	2.14	2.18	2.16	2.22	2.22	2.20	2.26	2.18	2.32
Recruiters Fe	2.90	2.90	2.80	2.90	2.80	2.90	2.90	3.00	2.90	2.90	2.90	3.00

PO Attainment Level

> Note: The Institution can fix the weightage of the indirect attainment maximum up to 20%.

Define the Weightage for Indirect Attainment: 20.00

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.01	1.66	1.45	1.42	1.73	1.91	1.48	1.30	1.70	1.62	1.50	1.16
InDirect Attainment	2.51	2.49	2.40	2.45	2.39	2.45	2.44	2.47	2.47	2.52	2.46	2.54
Overall Attainment	2.11	1.83	1.64	1.63	1.86	2.02	1.67	1.53	1.85	1.8	1.69	1.44

PSO Attainment

Course	PSO1	PSO2
ME221	1.90	0.77
CV204	2.00	2.33
CV205	1.00	1.00
CV206	1.03	1.26
CV230	2.12	2.13
CV232	2.00	2.25
AS203	1.00	1.00
CV214	1.78	1.00
CV215	1.67	0.82
CV216	1.60	0.88
ET235	1.34	0.77
CV240	2.12	1.00
HP202	1.50	1.50
CV305	1.60	2.90
CV306	1.00	3.00
CV307	1.00	0.95
CV325	0.98	0.94
CV326	1.40	1.40
CS361	1.03	0.81
CV342	1.49	1.00
CV350	1.50	1.75
CV350	1.50	1.75
CV350	1.50	1.75
CV312	1.50	1.00
CV313	0.83	0.62

CV314	1.33	1.80
CV332	2.19	0.73
CV333	1.00	1.00
CV343	1.00	0.90
CV344	1.00	1.00
CV360	1.33	1.67
HP305	1.00	1.00
CV405	0.70	0.64
CV471	1.00	1.50
CV473	1.00	1.00
CV422	1.17	1.00
CV423	1.80	1.40
CV436	1.00	0.73
CV470	2.09	1.28
CV406	1.00	1.00
CV480	1.94	1.17
HP405	0.77	0.67
HP406	1.00	1.00

PSO Attainment Indirect

Survey	PSO1	PSO2
Alumni Survey	2.30	2.20
Graduate Exit	2.26	2.28
Recruiter Feedback	2.80	3.00

PSO Attainment Level

Course	PSO1	PSO2
Direct Attainment	1.37	1.26
InDirect Attainment	2.45	2.49
Overall Attainment	1.59	1.51

4 STUDENTS' PERFORMANCE (120) Total Marks 80.80

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Table No. 4A: Admission details for the program excluding those admitted through multiple entry and exit points.

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)	2021-22 (CAYm4)	2020-21 (CAYm5)	2019-20 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	60	60	60	60	60	60	60
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	60	55	34	30	36	37	40
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	15	33	41	40	32	32
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	10	8	11	8	5	9	8

Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	70	78	78	79	81	78	80

Table No. 4B: Admission details for the program through multiple entry and exit points.

	Item (No. of students admitted/exited through multiple entry and exit points) in the respective batch	**2025-26 (CAY)**	**2024-25 (CAYm1)**	**2023-24 (CAYm2)**	**2022-23 (CAYm3)**	**2021-22 (LYG)**	**2020-21 (LYGm1)**	**2019-20 (LYGm2)**
N52=No. of students admitted in 2nd year via multiple entry and exit points in same batch	N52=No. of students admitted in 2nd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N53=No. of students admitted in 3rd year via multiple entry and exit points in same batch	N53=No. of students admitted in 3rd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N54=No. of students admitted in 4th year via multiple entry and exit points in same batch	N54=No. of students admitted in 4th year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N5=N52+N53+N54	N5=N52+N53+N54	0	0	0	0	0	0	0
N61=No. of students exits after 1st year via multiple entry and exit points in same batch	N61=No. of students exits after 1st year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N62=No. of students exit after 2nd year via multiple entry and exit points	N62=No. of students exit after 2nd year via multiple entry and exit points	0	0	0	0	0	0	0
N63=No. of students exit after 3rd year via multiple entry and exit points in same batch	N63=No. of students exit after 3rd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N6=N61+N62+N63	N6=N61+N62+N63	0	0	0	0	0	0	0

Table No. 4C: No. of students graduated within the stipulated period of the program.

Year of entry	Total no. of students (N1 + N2 + N3+ N4 + N5 - N6 as defined above)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2025-26 (CAY)	70				
2024-25 (CAYm1)	78	60			
2023-24 (CAYm2)	78	43	75		
2022-23 (CAYm3)	79	36	70	70	
2021-22 (LYG)	81	32	60	59	49
2020-21 (LYGm1)	78	32	61	59	53
2019-20 (LYGm2)	80	43	73	69	62

4.1 Enrolment Ratio (20)

Total Marks 20.00

Institute Marks : 20.00

Get Details from Table 4.1

Table No.4.1.1: Student enrolment ratio in the 1st year.

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2025-26 (CAY)	60	60	10	116.67
2024-25 (CAYm1)	60	55	8	105.00
2023-24 (CAYm2)	60	34	11	75.00

Average [(ER1 + ER2 + ER3) / 3] = 98.89 ≡ 20.00

Assessment : 20.00

4.2 Success Rate of the Students in the Stipulated Period of the Program (15)

Total Marks 8.70

Institute Marks : 8.70

Table No.4.2.1: The success rate in the stipulated period of a program.

Item	(2021-22) LYG	(2020-21) LYGm1	(2019-20) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	100.00	92.00	92.00
B=No. of students who graduated from the program in the stipulated course duration	49.00	53.00	62.00
Success Rate (SR)= (B/A) * 100	49.00	57.61	67.39

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 58.00

SR Points : 8.70

Note *: If the value of A in Table No. 4.2.1 is less than the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2), then the value of A in Table No. 4.2.1 should be the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2).

4.3 Academic Performance of the First-Year Students of the Program (10)

Total Marks 5.64

Institute Marks : 5.64

Table No.4.3.1: Academic Performance of the First-Year Students of the Program.

Academic Performance	CAYm1(2024-25)	CAYm2(2023-24)	CAYm3 (2022-23)
Mean of CGPA or mean percentage of all successful students(X)	6.05	5.58	5.84
Y=Total no. of successful students	60.00	43.00	36.00
Z=Total no. of students appeared in the examination	61.00	44.00	38.00
API [X*(Y/Z)]	5.95	5.45	5.53

Average API[(AP1+AP2+AP3)/3] : 5.64

Assessment = Average API : 5.64

4.4 Academic Performance of the Second Year Students of the Program (10)

Total Marks 5.53

Institute Marks : 5.53

Table No.4.4.1: Academic Performance of the Second Year Students of the Program.

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	5.80	6.24	6.24
Y=Total no. of successful students	75.00	70.00	60.00
Z=Total no. of students appeared in the examination	76.00	77.00	72.00
API [X * (Y/Z)]	5.72	5.67	5.20

Average API [(AP1 + AP2 + AP3)/3] : 5.53

Assessment [AverageAPI] : 5.53

4.5 Academic Performance of the Third Year Students of the Program (10)

Total Marks 6.94

Institute Marks : 6.94

Table No.4.5.1: Academic Performance of the Third Year Students of the Program

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	6.96	7.01	7.22
Y=Total no. of successful students	70.00	59.00	59.00
Z=Total no. of students appeared in the examination	70.00	60.00	61.00
API [X*(Y/Z)]:	6.96	6.89	6.98

Average API [(AP1 + AP2 + AP3)/3] : 6.94

Assessment [1.5 * AverageAPI] : 6.94

4.6 Placement, Higher Studies and Entrepreneurship (30)

Total Marks 9.99

Institute Marks : 9.99

Table No. 4.6.1: Placement, higher studies, and entrepreneurship details.

Item	LYG (2021-22)	LYGm1(2020-21)	LYGm2(2019-20)
FS*=Total no. of final year students	100.00	92.00	92.00
X=No. of students placed	21.00	35.00	26.00
Y=No. of students admitted to higher studies	5.00	5.00	2.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	26.00	43.48	30.43

Average Placement Index = (P_1 + P_2 + P_3)/3: 33.30

Placement Index Points: 9.99

4.7 Professional Activities (25) Total Marks 24.00

4.7.1 Professional Societies/ Bodies, Chapters, Clubs, and Professional Engineering Events Organized (5)

Institute Marks : 5.00

Table No. 4.7.1.1: List of active professional societies/bodies/chapters/clubs.

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs
1	Indian Geotechnical Society (IGS student chapter),
2	Indian Concrete Institute (ICI student chapter)
3	Pune Construction Engineering Research Foundation (PCERF, MoU)
4	Bhoomi (Departmental student green club)
5	Federation of Resonant Civil Engineering Students "F.O.R.C.E.S" (Departmental student council)

Table No. 4.7.1.2: List of events/programs organized.
(CAYm1) 2024-25

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	Pune Construction Engineering Research Foundation	BIM: Transforming Design, Construction & Beyond	International	05/03/2025
2	Pune Construction Engineering Research Foundation	Beyond Borders: Learnings from a rescue mission	International	09/06/2025
3	Pune Construction Engineering Research Foundation	Volunteering at Constro 2025	National	04/01/2025
4	Pune Construction Engineering Research Foundation	Expert Seminar & Knowledge sessions on "Innovations in MEP" at Constro 2025	National	06/01/2025
5	Pune Construction Engineering Research Foundation	Constro Vidhyarthi awards 2025	National	30/01/2025
6	Pune Construction Engineering Research Foundation	Expert Lecture on "Future Skills for Civil Engineers: Preparing for Tomorrow's Challenges"	Regional	20/09/2024
7	Pune Construction Engineering Research Foundation	Visit to Indian Meteorological Department, Pune	Regional	10/10/2024
8	Pune Construction Engineering Research Foundation	Expert Lecture on "Online resources for Academic and research (IEEE resources)"	Regional	23/01/2025
9	Pune Construction Engineering Research Foundation	Workshop on Drone Surveying	Regional	02/02/2025
10	Pune Construction Engineering Research Foundation	Expert lecture on "Changemakers' Meet: Lead the change with Saksham"	Regional	13/02/2025
11	Pune Construction Engineering Research Foundation	Autodesk Revit Global Certification	Regional	17/06/2024
12	Pune Construction Engineering Research Foundation	Expert lecture on "IOT for Smart City Development"	Regional	24/09/2024
13	Pune Construction Engineering Research Foundation	Site Visit to Water Treatment Plant Nigadi Pradikaran, Pune	Regional	09/09/2024
14	Pune Construction Engineering Research Foundation	Awareness session on Placement & Higher Studies Opportunities through GATE & other competitive exam	Regional	19/09/2024
15	Pune Construction Engineering Research Foundation	Site Visit at Under Construction Institutional Building at MITAOE	Regional	15/01/2025
16	Pune Construction Engineering Research Foundation	Expert lecture on "Tendering Process in Construction"	Regional	18/02/2025
17	Pune Construction Engineering Research Foundation	Waste to Energy Project and Construction and Demolition Waste Management Plant, Moshi	Regional	27/02/2025
18	Pune Construction Engineering Research Foundation	Site visit to Survey of India	Regional	28/02/2025
19	Pune Construction Engineering Research Foundation	Drone application in traffic density mapping	Regional	19/03/2025
20	Pune Construction Engineering Research Foundation	Workshop on Building Bye Laws & Planning	Regional	11/09/2024
21	Pune Construction Engineering Research Foundation	Expert Lecture on "Basics of Financial Management"	Regional	20/09/2024
22	Pune Construction Engineering Research Foundation and Bhoomi Green Club	Student Solar Ambassador Workshop	Regional	18/10/2024
23	Indian Geotechnical Society	Site Visit To Indian Railways Institute Of Civil Engineering (Pune)	Regional	17/08/2024
24	Indian Geotechnical Society	Expert lecture on "Geometric Design of Railways	Regional	17/10/2024
25	Indian Concrete Institute	Site Visit to College of Military Engineering, Dapodi,Pune	Regional	10/10/2024

26	Indian Concrete Institute	Awareness session on Industrial Practices of Steel Structures and career opportunities	Regional	19/10/2024
27	Indian Concrete Institute	Expert lecture on "Advanced concrete for today and tomorrow"	Regional	21/11/2024
28	Indian Concrete Institute	Business Blueprint Seminar	Regional	26/01/2025
29	Indian Concrete Institute	Educational excursion to Atal Tunnel Manali	Regional	11/04/2024
30	Federation of Resonant Civil Engineering Students "F.O.R.C.E.S" (Departmental students' council)	Donation camp	Regional	05/12/2024
31	Federation of Resonant Civil Engineering Students "F.O.R.C.E.S" (Departmental students' council)	Awareness session on Placement & Higher Studies Opportunities through GATE & other competitive exam	Regional	27/08/2024
32	Bhoomi (Departmental student green club)	Environment day celebration	Regional	05/06/2024
33	MITAOE Art Circle club	Awareness workshop for Firodiya competition	Regional	12/12/2024

(CAYm2) 2023-24

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	Pune Construction Engineering Research Foundation	Constro 2024	National	04/01/2024
2	Pune Construction Engineering Research Foundation	Vidhyarthi awards	National	30/01/2024
3	Pune Construction Engineering Research Foundation	Visit to Panchshil Developers Pune	Regional	22/08/2023
4	Pune Construction Engineering Research Foundation	Alumni meet	Regional	28/10/2023
5	Pune Construction Engineering Research Foundation	Product Audit for TY students	Regional	04/11/2023
6	Pune Construction Engineering Research Foundation	Expert Session on Solid Waste Management	Regional	18/08/2023
7	Pune Construction Engineering Research Foundation	Bhama Askhed Dam Site Visit	Regional	21/08/2023
8	Pune Construction Engineering Research Foundation	Expert lecture on Pune Metro : Future of Mobility : Experience & Opportunities	Regional	15/09/2023
9	Pune Construction Engineering Research Foundation	Expert lecture on Rethinking of Waste Management	Regional	04/11/2023
10	Pune Construction Engineering Research Foundation	Moshi Dumping Plant Pune Site Visit	Regional	22/11/2023
11	Pune Construction Engineering Research Foundation	Expert lecture on “Empowering Engineers”	Regional	19/01/2024
12	Pune Construction Engineering Research Foundation	Value-Added Certification Course ‘Smart Cities – A Sustainable Development	Regional	29/01/2024
13	Pune Construction Engineering Research Foundation	Site visit to Katraj Dairy	Regional	05/02/2024
14	Pune Construction Engineering Research Foundation	Guest lecture on Use of ChatGPT for MS Office automation	Regional	16/02/2024
15	Pune Construction Engineering Research Foundation	Workshop on Practical Application of Water Gems Software in Civil Engineering	Regional	11/03/2024
16	Pune Construction Engineering Research Foundation and Bhoomi Green Club	Plogging Activity Solid Waste Management	Regional	29/08/2023
17	Pune Construction Engineering Research Foundation and Bhoomi Green Club	Marathi Bhasha Diwas	Regional	31/01/2024
18	Indian Geotechnical Society	Live demonstration and Workshop on Total station	Regional	22/02/2024
19	Indian Geotechnical Society	Visit to Survey of India, Maha.& Goa Geospatial Data Center	Regional	28/02/2024
20	Indian Concrete Institute	Site Visit to College of Military Engineering (CME), Dapodi Pune	Regional	12/12/2023
21	Indian Concrete Institute	Unlocking Entrepreneurial Potential: The Impact of Skill Courses in Civil Engineering	Regional	31/10/2023
22	Indian Concrete Institute	Preparing Civil Engineering Students for Success: Insights from an Alumni Perspective	Regional	04/11/2023
23	Indian Concrete Institute	Online Guest Lecture on Understanding Strength and Stability of Structural Components	Regional	18/12/2023

24	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Chandryan 3 Mission Celebration	Regional	24/08/2023
25	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Makar Sankranti & Kai PO Che	Regional	15/01/2024

(CAYm3) 2022-23

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	Indian Geotechnical Society	Expert session on Stresses In soil	National	27/09/2022
2	Indian Geotechnical Society	Expert session on “Understanding strength and stability of structural components”	Regional	20/01/2023
3	Indian Geotechnical Society	Expert session on Design of Traffic Signals and Geometric Design of Highway	Regional	11/02/2023
4	Indian Geotechnical Society	Projectile Motion Model Making Competition	Regional	08/03/2023
5	Indian Geotechnical Society	Truss Motion Model Making Competition	Regional	08/03/2023
6	Indian Concrete Institute	Expert lecture on Concrete Mix Design	Regional	06/09/2022
7	Indian Concrete Institute	Technical poster presentation	Regional	12/09/2022
8	Indian Concrete Institute	Visit to RMC plant	Regional	14/10/2022
9	Indian Concrete Institute	Visit to Hot mix Plant Yerwada	Regional	17/04/2023
10	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Hands-on workshop on Project report preparation using Latex	Regional	30/09/2022
11	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Awareness session on Career Opportunities after Btech Civil	Regional	09/12/2022
12	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Expert session on Legal Aspects and stationing of plan in civil engineering	Regional	15/12/2022
13	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Visit to Constro 2023- International Expo	Regional	12/01/2023
14	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Motivational session	Regional	12/09/2022
15	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Lecture on occasion of Engineers day	Regional	15/09/2022
16	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Donation camp	Regional	05/12/2022
17	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	S.Y. Fresher’s & B. TECH Farewell Party	Regional	25/03/2023
18	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Abhyudaya: The Revolution	Regional	01/04/2023
19	Federation of Resonant Civil Engineering Students F.O.R.C.E.S" (Departmental students' council)	Event Xemplar	Regional	01/04/2023
20	Bhoomi (Departmental students' green club)	One day workshop on Rainwater harvesting	Regional	17/09/2022
21	Bhoomi (Departmental students' green club)	Solid Waste Management at Yuthika society Baner	Regional	12/10/2022
22	Bhoomi (Departmental students' green club)	Moshi Solid Waste Management treatment plant Visit	Regional	12/10/2022
23	Bhoomi (Departmental students' green club)	Water Treatment Plant Visit	Regional	11/11/2022

24	Bhoomi (Departmental students' green club)	Expert session on Unit Operation and Effluent Treatment Process	Regional	18/04/2023
25	Bhoomi (Departmental students' green club)	Remote Sensing - Applications and Computer Models in Water Resources Engineering	Regional	20/04/2023

4.7.2 Student’s Participations in Professional Events (10)

Institute Marks : 10.00

Table No. 4.7.2.1: List of students participated in professional events.
(CAYm1) 2024-25

S.No	Name of the Student	Name of the Event	State /State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Aishwarya Sarode	Pratikruti 2025 Project competition	National	25/02/2025	1st Place
2	Nayna Mahajan	Pratikruti 2025 Project competition	National	25/02/2025	1st Place
3	Anant Lakhe	Pratikruti 2025 Project competition	National	25/02/2025	1st Place
4	Sainath Karewad	Pratikruti 2025 Project competition	National	25/02/2025	1st Place
5	Sahil panchal	Firodia Karandak Cultural competition	District	07/02/2025	1st runner up in group performance and 2nd in Music Band (Folk)
6	Yasmeen Fatima	Firodia Karandak Cultural competition	District	07/02/2025	1st runner up in group performance
7	Sahil panchal	Dajikaka Gadhge Karandak	District	09/06/2025	Consolation prize
8	Masooma Sultan	International Conference on Joint Innovations in Sustainable Engineering, Project Managaement and New transformation in Computing and Communication	International	27/06/2024	Participation
9	Rohit Jitendra Wankhede	International Conference on Joint Innovations in Sustainable Engineering, Project Managaement and New transformation in Computing and Communication	International	27/06/2024	Participation
10	Mousim Sultan	International Conference on Joint Innovations in Sustainable Engineering, Project Managaement and New transformation in Computing and Communication	International	27/06/2024	Participation
11	Varsha Puri	International Conference on Joint Innovations in Sustainable Engineering, Project Managaement and New transformation in Computing and Communication	International	27/06/2024	Participation
12	Parimeeta Kamble	International Conference on Joint Innovations in Sustainable Engineering, Project Managaement and New transformation in Computing and Communication	International	27/06/2024	Participation
13	Aditya Vijay Gawai	International Conference on Joint Innovations in Sustainable Engineering, Project Managaement and New transformation in Computing and Communication	International	27/06/2024	Participation
14	Nivesh Sanap	International Conference on Water and Sustainable Development (ICWSD:2024)	International	11/08/2024	Participation
15	Mansi Kawade	International Conference on Water and Sustainable Development (ICWSD:2024)	International	11/08/2024	Participation
16	Abhijeet Athawale	International Conference on Water and Sustainable Development (ICWSD:2024)	International	11/08/2024	Participation
17	Vedant Sontakke	7th International Conference on Modelling & Simulation in Civil Engineering	International	12/05/2024	Participation
18	Sanskar Ashok Chavhan	7th International Conference on Modelling & Simulation in Civil Engineering	International	12/05/2024	Participation

19	Vaidehi Baban Chaudhari	7th International Conference on Modelling & Simulation in Civil Engineering	International	12/05/2024	Participation
20	Madhura Shirode	7th International Conference on Modelling & Simulation in Civil Engineering	International	12/05/2024	Participation
21	Sandeep Gangadhar Sakunde	7th International Conference on Modelling & Simulation in Civil Engineering	International	12/05/2024	Participation
22	Tushar Mundhada	Technical Competition	National	20/09/2024	Participation
23	Arti Dharpale	Technical Competition	National	20/09/2024	Participation
24	Shubham Tiwari	Sci-Tech Villgethon	National	26/09/2024	Participation
25	Sandeep Gangadhar Sakunde	Sci-Tech Villgethon	National	26/09/2024	Participation
26	Sanskar Ashok Chavhan	Sci-Tech Villgethon	National	26/09/2024	Participation
27	Vaidehi Baban Chaudhari	Sci-Tech Villgethon	National	26/09/2024	Participation
28	Abhijeet Athawale	Sci-Tech Villgethon	National	26/09/2024	Participation
29	Sarthak Chavan	Sci-Tech Villgethon	National	26/09/2024	Participation
30	Yash Sangale	Sci-Tech Villgethon	National	26/09/2024	Participation
31	Amogh Bedmutha	Sci-Tech Villgethon	National	26/09/2024	Participation
32	Vedant Sontakke	Sci-Tech Villgethon	National	26/09/2024	Participation
33	Manas Tambe	Seminar / Webinar	National	24/01/2025	Participation
34	Omkar Medankar	Seminar / Webinar	National	24/01/2025	Participation
35	Yuvraj Shendkar	Seminar / Webinar	National	24/01/2025	Participation
36	Shubham Tiwari	Constro 2025	National	30/01/2025	Participation
37	Abhijeet Athawale	Constro 2025	National	30/01/2025	Participation
38	Sarthak Chavan	Constro 2025	National	30/01/2025	Participation
39	Yash Sangale	Constro 2025	National	30/01/2025	Participation
40	Amogh Bedmutha	Constro 2025	National	30/01/2025	Participation
41	Jay Satao	Constro 2025	National	30/01/2025	Participation
42	Sahil Ilapate	Constro 2025	National	30/01/2025	Participation
43	Shoyeb Sutar	Constro 2025	National	30/01/2025	Participation

44	Kaustubh Koyende	Constro 2025	National	30/01/2025	Participation
45	Sumit Shetty	Constro 2025	National	30/01/2025	Participation
46	Krutarth Londe	Constro 2025	National	30/01/2025	Participation
47	Krutarth Londhe	NPTEL COURSE	National	01/07/2025	Participation
48	Shubham Tiwari	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
49	Abhijeet Athawale	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
50	Sarthak Chavan	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
51	Yash Sangale	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
52	Amogh Bedmutha	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
53	Vedant Sontakke	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
54	Sanskar Ashok Chavhan	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
55	Vaidehi Baban Chaudhari	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
56	Madhura Shirode	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
57	Sandeep Gangadhar Sakunde	Aavishkar-2024 Level Project Competition	Zonal	24/09/2025	Participation
58	Sanchita Patil	Sports	Zonal	27/09/2024	Participation
59	Ashutosh Verma	Training (Software/Site Training)	Regional	16/07/2024	Participation
60	Nayna Mahajan	Golden Jubilee Debate Competition	Regional	18/01/2025	Participation
61	Nayna Mahajan	Quiz Competition	Regional	31/01/2025	Participation
62	Tushar Mundhada	Project Competition	National	13/09/2024	Participation
63	Arti Dharpale	Project Competition	National	13/09/2024	Participation
64	Tushar Mundhada	Intercollegiate National Competition	National	17/08/2024	Participation
65	Arti Dharpale	Intercollegiate National Competition	National	17/08/2024	Participation
66	Shantanu Pogulwar	Technical Competition	National	25/11/2024	Participation
67	Tushar Mundhada	Intercollegiate Technical Competition	National	20/09/2024	Participation
68	Arti Dharpale	Intercollegiate Technical Competition	National	20/09/2024	Participation

69	Rutvik Eknath Kankirad	Intercollegiate Technical Competition	National	28/02/2025	Participation
70	Tekale Om Vinod	Technical Competition	National	28/02/2025	Participation
71	Prajwal Vitthalrao Deshmukh	Technical Competition	National	22/03/2025	Participation
72	Jay Satao	Technical Competition	National	02/05/2025	Participation
73	Rutvik Eknath Kankirad	Technical Competition	National	02/05/2025	Participation

(CAYm2) 2023-24

S.No	Name of the Student	Name of the Event	State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Mr. Sandeep Sakunde	Paper presentation on "Analyzing Water Quality in Rural Areas: A Case Study of Dhanore and Nirgudi Villages"	National	23/04/2024	First Prize/Best Paper
2	Mr. Vedant Sontakke	Paper presentation on "Analyzing Water Quality in Rural Areas: A Case Study of Dhanore and Nirgudi Villages"	National	23/04/2024	First Prize/Best Paper
3	Mr. Yash Sangale	Paper presentation on "Analyzing Water Quality in Rural Areas: A Case Study of Dhanore and Nirgudi Villages"	National	23/04/2024	First Prize/Best Paper
4	Mr. Ajay Borade	Wastewater Treatment & Recycling, NPTEL Swayam Course	National	10/10/2023	8Elite Participation Ranking
5	Mr. Tanmay Khade	Discuss throw, Shot put	University	10/04/2023	Bronze Medal
6	Mr. Bira Narbat	GATE EXAM 2024	National	02/02/2024	Qualified
7	Mr. Aditya Gawai	GATE EXAM 2024	National	02/02/2024	Qualified
8	Mr. Vijay Aghav	Paper presentation on "Utilizing Lignin from the Pulp Industry to construct Sustainable Road"	International	18/08/2023	Participation
9	Mr. Shubham Aghav	Paper presentation on "Utilizing Lignin from the Pulp Industry to construct Sustainable Road"	International	18/08/2023	Participation
10	Mr. Kaustubh Vete	Paper presentation on "Utilizing Lignin from the Pulp Industry to construct Sustainable Road"	International	18/08/2023	Participation
11	Mr. Ajay Borade	Paper presentation on "Utilizing Lignin from the Pulp Industry to construct Sustainable Road"	International	18/08/2023	Participation
12	Mr. Aditya Kapse	Paper presentation on "Performance Evaluation of Modified Bitumen with Waste Plastic in WBM Road Construction"	International	19/08/2023	Participation
13	Mr. Uday Patharkar	Paper presentation on "Performance Evaluation of Modified Bitumen with Waste Plastic in WBM Road Construction"	International	19/08/2023	Participation
14	Mr. Prajwal Bambal	Paper presentation on "Performance Evaluation of Modified Bitumen with Waste Plastic in WBM Road Construction"	International	19/08/2023	Participation
15	Mr. Uday Andhale	Paper presentation on "Performance Evaluation of Modified Bitumen with Waste Plastic in WBM Road Construction"	International	19/08/2023	Participation
16	Ms. Samruddhi R. Ankalkhope	Paper presentation on "Examine the Geotextile Behaviour in Flexible Pavement using IIT Pare"	International	19/08/2023	Participation
17	Ms. Mohini Gulve	Paper presentation on "Examine the Geotextile Behaviour in Flexible Pavement using IIT Pare"	International	19/08/2023	Participation
18	Mr. Pranav Kusalkar	Paper presentation on "Examine the Geotextile Behaviour in Flexible Pavement using IIT Pare"	International	19/08/2023	Participation
19	Mr. Mohit Soni	Paper presentation on "Enhancing Sustainability in Building Design: Optimizing Energy Efficiency and Reducing Carbon Footprint Using BIM Tools"	International	28/11/2023	Participation

20	Mr. Athrav Surana	Paper presentation on "Enhancing Sustainability in Building Design: Optimizing Energy Efficiency and Reducing Carbon Footprint Using BIM Tools"	International	28/11/2023	Participation
21	Mr. Bira Narbat	Paper presentation on "Enhancing Sustainability in Building Design: Optimizing Energy Efficiency and Reducing Carbon Footprint Using BIM Tools"	International	28/11/2023	Participation
22	Ms. Aryan Awatare	Paper presentation on "Enhancing Sustainability in Building Design: Optimizing Energy Efficiency and Reducing Carbon Footprint Using BIM Tools"	International	28/11/2023	Participation
23	Ms. Mamta Dawale	Paper prsesntation on "A Comparative Study of Time and Cost Optimization in Project Management: Primavera P6 & Linear Programming with Lingo Solver"	International	01/01/2024	Participation
24	Ms. Pooja Patil	Paper prsesntation on "A Comparative Study of Time and Cost Optimization in Project Management: Primavera P6 & Linear Programming with Lingo Solver"	International	01/01/2024	Participation
25	Vaidehi Chavan	Represented MITAOE at Kalarashik Karandak	State	15/04/2023	Participation
26	Sanskar Chavan	Represented MITAOE at Kalarashik Karandak	State	15/04/2023	Participation
27	Yasmeen Fatima	Represented MITAOE at Kalarashik Karandak	State	15/04/2023	Participation
28	TY Civil Engineering Students	Street play to promote Marathi Language for the “Marathi Bhasha Pandharwada”	Regional	31/01/2024	Participation
29	Bhoomi – Green Club of SCVE	Released short film titled “Tahan” to promote the importance of water usage	Regional	22/03/2024	Participation

S.No	Name of the Student	Name of the Event	State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Mr. Shailesh Budharam	Technical Quiz Kalpak 2022	National	31/07/2022	First Place
2	Ms. Kirti Kumbhar	Competition on BOB-The Builder	National	16/04/2023	2nd Prize
3	Mr. Omkar Chavan	Competition on BOB-The Builder	National	16/04/2023	3rd Prize
4	Mr. Arjun Dhodade	Competition on BOB-The Builder	National	16/04/2023	4th Prize
5	Mr. Nishant Kadam	Air Pollution & Control, NPTEL Swayam Course	National	25/10/2022	80%, Elite Participation Ranking
6	Mr. Hemant Bhorem	Air Pollution & Control, NPTEL Swayam Course	National	25/04/2023	83%, Elite Participation Ranking
7	Mr. Aakash Rathod	Wastewater Treatment & Recycling, NPTEL Swayam Course	National	25/10/2022	84%, Elite Participation Ranking
8	Mr. Gajanan Bimrot	Patent Application on Shelf Dust Remover	Regional	23/12/2022	Applied for INVENTORSHIP
9	Mr. Aryan Awatare	International Youth Math Challenge 2022	International	01/04/2022	Bronze Honor
10	Mr. Tushar Mundhada	ILTES Test Reform Test	International	01/02/2022	Qualified
11	Mr. Abhijeet Athawale	Online Course on Cyber Security	International	25/07/2022	Participation
12	Mr. Prajwal Bambal	Online Course on JAVA-11	International	30/07/2022	Participation
13	Ms. Kirti Kumbhar	Masterclass on Android Fundamentals with Capstone Project	International	30/07/2022	Participation
14	Ms. Smriti Singh	Paper presentation on "CFD Analysis of Pump Intake - A review of the state of Art	International	26/08/2022	Participation
15	Ms. Pranjal Gawali	Research Paper on CFD Analysis of Pump Intake - A review of the state of Art	International	26/08/2022	Participation
16	Mr. Yogam Dekate	Research Paper on CFD Analysis of Pump Intake - A review of the state of Art	International	26/08/2022	Participation
17	Ms. Vaibhavi Chopade	Research Paper on CFD Analysis of Pump Intake - A review of the state of Art	International	26/08/2022	Participation
18	Mr. Jatin Burde	Research Paper on Energy Saving Opportunity in Pump & Pumping System	International	26/08/2022	Participation
19	Mr. Ganesh Boyane	Research Paper on Energy Saving Opportunity in Pump & Pumping System	International	26/08/2022	Participation

20	Mr. Umesh Khillare	Research Paper on Energy Saving Opportunity in Pump & Pumping System	International	26/08/2022	Participation
21	Ms. Neha Kolekar	Research Paper on Energy Saving Opportunity in Pump & Pumping System	International	26/08/2022	Participation
22	Mr. Aakash Rathod	Research Paper on Study of Open Flow Modelling Software for Understanding & Mitigating Flood Risks	International	10/11/2022	Participation
23	Mr. Dipak Tayade	Research Paper on Study of Open Flow Modelling Software for Understanding & Mitigating Flood Risks	International	10/11/2022	Participation
24	Mr. Touphik Shaikh	Research Paper on Study of Open Flow Modelling Software for Understanding & Mitigating Flood Risks	International	10/11/2022	Participation
25	Mr. Sandip Bhutepwad	Research Paper on Study of Open Flow Modelling Software for Understanding & Mitigating Flood Risks	International	10/11/2022	Participation
26	Mr. Varad Khandekar	Research Paper on Study of Natural Reduction of Nirmalya Waste & Organic Waste as Composting Process	International	10/11/2022	Participation
27	Mr. Keshraj Tonge	Research Paper on Study of Natural Reduction of Nirmalya Waste & Organic Waste as Composting Process	International	10/11/2022	Participation
28	Mr. Hemant Bhore	Research Paper on Study of Natural Reduction of Nirmalya Waste & Organic Waste as Composting Process	International	10/11/2022	Participation
29	Mr. Ajinkya Kad	Research Paper on Study of Natural Reduction of Nirmalya Waste & Organic Waste as Composting Process	International	10/11/2022	Participation
30	Mr. Om Kavitake	Online Course on Geographic Information System (GIS)	International	31/01/2023	Participation
31	Mr. Ganesh Bhoyane	Badminton Mens Singles at Vedant 2022	Regional	21/04/2023	Participation

4.7.3 Publication of Journals, Magazines, Newsletters, etc. in the Department (5)

Institute Marks : 5.00

Table No. 4.7.3.1: List of students involved in publication of journals, magazines, and newsletters, etc. in the Department.

(CAYm1) 2024-25

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1	"Blueprint" newsletter	Mrs. Swapnali Mohol	Nivesh Sanap	3	2	Both
2	"Blueprint" newsletter	Mrs. Swapnali Mohol	Prajwal Deshmukh	3	2	Both
3	"Blueprint" newsletter	Mrs. Swapnali Mohol	Nivesh Sanap	4	2	Both
4	"Blueprint" newsletter	Mrs. Swapnali Mohol	Prajwal Deshmukh	4	2	Both

(CAYm2) 2023-24

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1	Ajaanvriksha 2024	Ms. Nutan Bansode	Raj Gaikwad	8	1	Both
2	Ajaanvriksha 2024	Ms. Nutan Bansode	Jenish Panchal	8	1	Both
3	Ajaanvriksha 2024	Ms. Nutan Bansode	Prasad Busamwar	4	1	Both
4	Ajaanvriksha 2024	Ms. Nutan Bansode	Kapil Kumbhar	4	1	Both
5	Ajaanvriksha 2024	Ms. Nutan Bansode	Raghuveer Kombade	4	1	Both
6	Ajaanvriksha 2024	Ms. Nutan Bansode	Mousim Sultan	6	1	Both
7	Ajaanvriksha 2024	Ms. Nutan Bansode	Sandeep Sakunde	6	1	Both
8	Ajaanvriksha 2024	Ms. Nutan Bansode	Aditya Gawai	6	1	Both
9	Ajaanvriksha 2024	Ms. Nutan Bansode	Jenish Panchal	8	1	Both
10	Ajaanvriksha 2024	Ms. Nutan Bansode	Kunal Bhandari	8	1	Both
11	Ajaanvriksha 2024	Ms. Nutan Bansode	Aditya Kapse	8	1	Both
12	"Data Analysis" newsletter	Dr. Vijay Muthekar	Swapnil Gole	8	11	Both
13	"Data Analysis" newsletter	Dr. Vijay Muthekar	Shraddha Gadge	6	11	Both

(CAYm3) 2022-23

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1	Ajaanvriksha 2023	Ms. Nutan Bansode	Prathamesh Chavan	8	1	Both
2	Ajaanvriksha 2023	Ms. Nutan Bansode	Srushti Jadhav	6	1	Both
3	Ajaanvriksha 2023	Ms. Nutan Bansode	Nishant Kadam	8	1	Both
4	Ajaanvriksha 2023	Ms. Nutan Bansode	Aryan Awatare	6	1	Both
5	Ajaanvriksha 2023	Ms. Nutan Bansode	Kirti Kumbhar	6	1	Both
6	Ajaanvriksha 2023	Ms. Nutan Bansode	Mamta Dawale	6	1	Both
7	Ajaanvriksha 2023	Ms. Nutan Bansode	Shubham Tiwari	6	1	Both
8	Ajaanvriksha 2023	Ms. Nutan Bansode	Chirag Khatri	4	1	Both
9	Ajaanvriksha 2023	Ms. Nutan Bansode	Kajal Gite	6	1	Both
10	Ajaanvriksha 2023	Ms. Nutan Bansode	Mousim Sultan	4	1	Both
11	Ajaanvriksha 2023	Ms. Nutan Bansode	Sakunde Sandeep Gangadhar	4	1	Both
12	Ajaanvriksha 2023	Ms. Nutan Bansode	Furquanziya Shakeel Shaikh	4	1	Both
13	Ajaanvriksha 2023	Ms. Nutan Bansode	Jenish Panchal	6	1	Both
14	Ajaanvriksha 2023	Ms. Nutan Bansode	Kunal Bhandari	6	1	Both
15	Ajaanvriksha 2023	Ms. Nutan Bansode	Aditya Kapse	6	1	Both
16	Ajaanvriksha 2023	Ms. Nutan Bansode	Sandip Butepwad	8	1	Both
17	Ajaanvriksha 2023	Ms. Nutan Bansode	Dipak N. Tayade	8	1	Both
18	Ajaanvriksha 2023	Ms. Nutan Bansode	Aakash P. Rathod	8	1	Both

4.7.4 Student Publications (5)

Institute Marks : 4.00

Table No. 4.7.4.1: List of student publications.

(CAYm1) 2024-25

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1	Mohit Soni	8	STM Journals	Journal of Polymer & Composites	193	193	N.A.
2	Bira Narbat	8	STM Journals	Journal of Polymer & Composites	193	193	N.A.
3	Aryan Awatare	8	STM Journals	Journal of Polymer & Composites	193	193	N.A.
4	Atharva Surana	8	STM Journals	Journal of Polymer & Composites	193	193	N.A.
5	Mousim Sultan	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
6	Arti Dharpale	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
7	V. Ambhore	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
8	Masooma Sultan	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
9	Rohit Wankhede	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
10	Aditya Gawai	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
11	Sanket Dhamshedwar	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
12	Varsha Puri	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
13	Parimeeta Kamble	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.
14	Raj Gundle	7	AIP conference proceedings	IC-JSPMNTC 2024 on Joint Innovations in Sustainable Engg, Project management and New Transformations in computing and communication	1	1	N.A.

(CAYm2) 2023-24

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1	Vedant Sontakke	5	N.A.	"National Conference on Water and Climate" School of Civil Engineering, Vellore Institute of Technology, Chennai	1	1	N.A.
2	Yash Sangale	5	N.A.	"National Conference on Water and Climate" School of Civil Engineering, Vellore Institute of Technology, Chennai	1	1	N.A.
3	Sandeep Sakunde	5	N.A.	"National Conference on Water and Climate" School of Civil Engineering, Vellore Institute of Technology, Chennai	1	1	N.A.

(CAYm3) 2022-23

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1	N.A.	3	N.A.	N.A.	1	1	N.A.

5 FACULTY INFORMATION (100) Total Marks 96.00

:

Sr.No	Name of the Faculty	PAN No.	APAAR faculty ID*(if any)	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Nature of Association (Regular/ Contract/ Ad hoc)	Currently Associated (Y/N)	In case of NO, Date of Leaving	IS HOD?
1	Dr. Shyam Shukla	APJPS1866G	436967333514	Ph.D	MANIT Bhopal	Fluid Machinery	31/03/2021	4.9	Professor	Professor	31/03/2021	Regular	Yes		No
2	Dr. Nilesh Mate	AJVPM9073F	398319818951	Ph.D	VNIT Nagpur	Structural Engineering	25/08/2025	0.4	Professor	Professor	25/08/2025	Regular	Yes		Yes
3	Dr. Janhavi Inamdar	AAGPI3280G	NA	Ph.D	DTU Delhi	Environmental Engineering	01/02/2023	2.10	Professor	Professor	01/02/2023	Regular	Yes		No
4	Dr. Sushilkumar Magade	BEBPM6245R	240463467934	Ph.D	VNIT Nagpur	Structural Engineering	30/09/2019	6.3	Associate Professor	Associate Professor	30/09/2019	Regular	Yes		No
5	Dr. Vijay Muthekar	AKKPM5432C	933738549354	Ph.D	SPPU, Pune	Geotechnical Engineering	30/03/2021	4.9	Assistant Professor	Assistant Professor		Regular	Yes		No
6	Dr. Muniappan N	BZGPM1537G	811164212892	Ph.D	IIT Bombay	Remote Sensing and GIS	04/07/2022	3.5	Assistant Professor	Assistant Professor		Regular	Yes		No
7	Dr. Swapnil Patare	AUYPP0579M	306491937113	Ph.D	IIT Bombay	Structural Engineering	31/07/2023	2.4	Assistant Professor	Assistant Professor		Regular	Yes		No
8	Mr. Vijay Pingale	ANNPP9502G	628141117576	M.E.	Shivaji University, Kolhapur	Structural Engineering	14/08/2008	17.4	Lecturer	Assistant Professor		Regular	Yes		No
9	Mr. Atif Shaikh	EPAPS5171D	959096939586	M.Tech	SVNIT, Surat	Transportation Engineering	25/08/2014	11.4	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Mr. Shailesh Pawar	ACBPP1842Q	NA	M.E.	COE, Pune	Construction Management	29/05/2015	10.7	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Mr. Nilesh Baglekar	BLZPB1897F	255974834461	M.E.	Sant Gadagebaba Amravati University, Amravati	Structural Engineering	25/07/2016	9.5	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Mr. Bhaskar Wabhitkar	ABXPW4776F	320193755497	M.Tech	SVNIT, Surat	Soil Mechanics and Foundation Engineering	14/09/2016	9.3	Assistant Professor	Assistant Professor		Regular	Yes		No

13	Mr. Nikhil Bhalerao	AUXPB7039H	249834813234	M.Tech	SPPU, Pune	Environmental and Water Resources Engineering	18/12/2017	8	Assistant Professor	Assistant Professor		Regular	Yes		No
14	Mr. Sitaram Suryawanshi	CQWPS0191J	819078138193	M.Tech	Shivaji University, Kolhapur	Structural Engineering	01/08/2018	7.4	Assistant Professor	Assistant Professor		Regular	Yes		No
15	Mr. Khushal Kanade	BRBPK5877N	162863954827	M.E.	SPPU, Pune	Water Resources and Environmental Engineering	05/08/2019	6.4	Assistant Professor	Assistant Professor		Regular	Yes		No
16	Ms. Swapnali Mohol	CNOPM0789D	830977131329	M.E.	SPPU, Pune	Environmental Engineering	23/07/2022	3.5	Assistant Professor	Assistant Professor		Regular	Yes		No
17	Ms. Anagha Galagali	DFTPK9687C	423698153610	M.E.	SPPU, Pune	Construction Management	21/08/2023	2.4	Assistant Professor	Assistant Professor		Regular	Yes		No
18	Ms. Snehal Wagh	ADJPW3135E	221288919331	M.E.	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	Water Resources Engineering	04/08/2023	2.4	Assistant Professor	Assistant Professor		Regular	Yes		No
19	Dr. Shalaka Hire	AHDPH5352E	537907510906	Ph.D	Symbiosis International (Deemed) University, Pune	Construction Management	22/07/2024	1.5	Assistant Professor	Assistant Professor		Regular	Yes		No
20	Dr. Mrudula Patil	DEFPP7252P	157434957040	Ph.D	MIT WPU, Pune	Structural Engineering	18/08/2025	0.4	Assistant Professor	Assistant Professor		Regular	Yes		No
21	Mr. Sumit Patil	AUIPD6017A	918184196406	M.E.	SPPU, Pune	Construction Management	06/01/2015	9.6	Assistant Professor	Assistant Professor		Regular	No	12/07/2024	No

5.1 Student-Faculty Ratio (SFR) (30) Total Marks 26.00

Institute Marks : 26

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
B= No. of Students in UG 2nd year (ST)
C= No. of Students in UG 3rd year (ST)
D= No. of Students in UG 4th year (ST)
No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):
PG1=1st PG program.
PGm=mth PG program
A= No. of Students in PG 1st year
B= No. of Students in PG 2nd year
Student Faculty Ratio **(SFR)** = S/F
S= No. of students of all programs in the Department including all students of allied departments/clusters.
No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)
Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.
F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

UG

No. of UG(Engineering) programs in Department including allied departments/clusters(UGn): 1

Civil Engineering						
Year of Study	**CAY**		**CAYm1**		**CAYm2**	
	(2025-26)		**(2024-25)**		**(2023-24)**	
	Sanction Intake	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**
2nd Year	60	6	60	6	60	6
3rd Year	60	6	60	6	60	6
4th Year	60	6	60	6	60	6
Sub-Total	**180**	**18**	**180**	**18**	**180**	**18**
Total	**198**		**198**		**198**	

Grand Total	198	198	198

PG

No. of PG Programs in the Department 0

Grand Total			

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 0

Civil Engineering

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1.B	66	66	66
UG1.C	66	66	66
UG1.D	66	66	66
UG1: Civil Engineering	**198**	**198**	**198**
DS=Total no. of students in all UG and PG programs in the Department	198	198	198
AS=Total no. of students of all UG and PG programs in allied departments	0	0	0
S=Total no. of students in the Department (DS) and allied departments (AS)	**S1=** 198	**S2=** 198	**S3=** 198
DF=Total no. of faculty members in the Department	20	18	18
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 20	**F2=** 18	**F3=** 18
FF=The faculty members in F who have a 100% teaching load in the first-year courses	8	6	5
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 16.50**	**SFR2= 16.50**	**SFR3= 15.23**
Average SFR for 3 years	**SFR= 16.08**		

Average SFR for three assessment years : 16.08

Assessment SFR : 26

5.2 Faculty Qualification (25) Total Marks 25.00

Institute Marks : 25.00

Year	X	Y	RF	FQ = 2.5 x [(10X + 4Y) / RF)]
2025-26(CAY)	9	11	9.00	37.22
2024-25(CAYm1)	6	12	9.00	30.00
2023-24(CAYm2)	6	12	9.00	30.00

Average Assessment : 32.41

5.3 Faculty Cadre Proportion (25) Total Marks 25.00

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2025-26)	1.00	3.00	2.00	1.00	6.00	16.00
CAYm1(2024-25)	1.00	2.00	2.00	1.00	6.00	15.00
CAYm2(2023-24)	1.00	2.00	2.00	1.00	6.00	15.00
Average Numbers	1.00	2.33	2.00	1.00	6.00	15.33

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

5.4 Visiting/Adjunct/Emeritus Faculty etc. (10)

Total Marks 10.00

Institute Marks : 10.00

Table No. 5.4.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.
(CAYm1) 2024-25

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. Sivakumar V	Scientist - E/Joint Director	Center for Development of Advanced Computing (CDAC), Pune	CV436 - QGIS	52.00
2	Shri. Sanjay Dhote	Officer Surveyor	Survey of India, Geospatial division. Pune.	2303366 - Drone Surveying	52.00
3	Dr. Suhasini Madekar	Retired Professor	College of Engineering, Pune	2303101T- Applied Mechanics	168.00

(CAYm2) 2023-24

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. Sivakumar V	Scientist - E/Joint Director	Center for Development of Advanced Computing (CDAC), Pune	CV436 - QGIS	52.00

(CAYm3) 2022-23

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. Sivakumar V	Scientist - E/Joint Director	Center for Development of Advanced Computing (CDAC), Pune	CV436 - QGIS	52.00

5.5 Faculty Retention (10)

Total Marks 10.00

Institute Marks : 10.00

Description	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section 5.1 of SAR; (RF=S/20).	9	9	9
AF=The no. of available faculty members in the Department including allied Departments	18	18	15
A= The no. of faculty members at the current institute with less than 1 year of experience (A in AF)	0	0	1
B= The no. of faculty members at the current institute with more than 1 year and less than 2 years of experience (B in AF)	1	0	2
C= The no. of faculty members at the current institute with more than 2 years and less than 3 years of experience (C in AF)	4	4	2
D= The no. of faculty members at the current institute with more than 3 years and less than 4 years of experience (D in AF)	2	2	2
E= The no. of faculty members at the current institute with more than 4 years of experience (E in AF)	11	12	8
FR=(((A*0) +(B*1)+(C*2)+(D*3)+(E*4))/RF) *2.50 (points limited to 10)	10	10	10

Average : 10.00

Assessment Marks : 10.00

6 FACULTY CONTRIBUTIONS (120)

Total Marks 79.00

6.1 Professional Development Activities (60)

Total Marks 60.00

6.1.1 Memberships in Profession Societies at National/International Levels (5)

Institute Marks : 5.00

Table No. 6.1.1.1: List of faculty members and their memberships.

S.No	Name of the Faculty	Name of the Professional Society /Body at National and International Level	Name of the Grade/ Level/Position
1	Dr. Shyam N. Shukla	National Society of Hydraulic (F766)	Lifetime Member
2	Dr. Shyam N. Shukla	Member of Institute of Engineers (139966-I)	Lifetime Member
3	Dr. Shyam N. Shukla	National Society of fluid mechanics and fluid power (LM-715)	Lifetime Member
4	Dr. Nilesh U. Mate	The Indian Society of Technical Education (ISTE)(LM-35479)	Lifetime Member
5	Dr. Nilesh U. Mate	The Institute of Engineers (India) (M-1545175)	Lifetime Member
6	Dr. Nilesh U. Mate	Association of Consulting Civil Engineering (India) (LMN-5399L)	Lifetime Member
7	Dr. Sushilkumar B. Magade	Indian Geotechnical Society (IGS/f.-006/369)	Lifetime Member
8	Dr. Vijay V. Muthekar	The Institution of Engineers (M-149470-2)	Lifetime Member
9	Dr. Vijay V. Muthekar	Indian Society for Technical Education (LM103725)	Lifetime Member
10	Dr. Vijay V. Muthekar	Approved Valuer of the Indian Institution of Valuers (CATI/FIIV-6755)	Lifetime Member
11	Dr. Muniappan N.	Indian Society of Remote Sensing - Life Member (L-3805)	Lifetime Member
12	Dr. Muniappan N.	Indian Society of Geomatics – Life Member (L-1320)	Lifetime Member
13	Dr. Muniappan N.	Indian National Cartography Association – Life Member (L- 2575)	Lifetime Member
14	Dr. Muniappan N.	Institution of Engineers (India) Associate Member (AM1621737)	Lifetime Member
15	Dr Swapnil A Patare	The Institution of Engineers (M-1732662)	Lifetime Member
16	Mr. Vijay K. Pingale	Indian Society for Technical Education (LM46865)	Lifetime Member
17	Mr. Nilesh Baglekar	International Society for Technology in Education (ISTE) (LM 113235)	Lifetime Member
18	Mr. Nikhil Bhalerao	International Society for Technology in Education (ISTE) (LM10867)	Lifetime Member
19	Mr. Nikhil Bhalerao	The Institution of Engineers (AM-163055-8)	Lifetime Member
20	Mr. Nikhil Bhalerao	Indian Water Works Association (LM - 8383)	Lifetime Member
21	Mr. Sitaram Suryawanshi	International Society for Technology in Education (ISTE) (LM1161168)	Lifetime Member
22	Mr. Khushal Kanade	Indian Society for Technical Education (LM 122420)	Lifetime Member
23	Mr. Khushal Kanade	Indian Society of Hydraulics (LM-1362)	Lifetime Member
24	Dr. Shalaka K. Hire	American Society of Civil Engineers (ASCE) (000011987203)	Lifetime Member

6.1.2 Faculty as Resource Persons or Participants in STTPs/FDPs (10)

Institute Marks : 5.00

6.1.2.1 Faculty as Resource Persons in STTPs/FDPs (5)

Table No. 6.1.2.1: List of faculty members as resource person in STTP/FDP events.

(CAYm1) 2024-25

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	Dr. Sushilkumar B. Magade	Baby Conference on "Innovative Sustainable Solutions in Civil Engineering"	22/03/2025	PCCOE, Pune	Civil Engineering Department, PCCOE, Pune
2	Dr. Vijay V. Muthekar	IGS-SPPU One-Day workshop on “Geotechnical Engineering for Sustainable Environment"	18/01/2025	SPPU, Pune	Department of Geology, SPPU, Pune
3	Dr. Janhavi Inamdar	Internationalization of Education	18/07/2024	Nashik	Dr. B V Hiray College of Management and Research Centre Malegoan

(CAYm2) 2023-24

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	Dr. Vijay V. Muthekar	SPPU sponsored National Workshop on "Application of Geospatial & Machine learning Techniques in Land	24/07/2023	SPPU, Pune	Department of Geology, SPPU, Pune
2	Dr. Janhavi Inamdar	Internationalization of Education	20/07/2023	Malegoan, Nashik	KBHSS Trust's Institute of Pharmacy

(CAYm3) 2022-23

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	Dr. Janhavi Inamdar	Understanding Internationalization as per National Education policy	14/09/2022	Bandra , Mumbai	Dr. Baliram Hiray College of Architecture

6.1.2.2 Faculty Members’ Participation in STTPs/FDPs (5)

Institute Marks : 5.00

Name of the faculty	Max 5 Per Faculty		
	2024-25(CAYm1)	2023-24(CAYm2)	2022-23(CAYm3)
Dr. Shyam Shukla	5.00	5.00	5.00
Dr. Sushilkumar Magade	5.00	5.00	5.00
Dr. Vijay Muthekar	5.00	5.00	5.00
Dr. Muniappan N.	5.00	5.00	5.00
Mr. Vijay Pingale	5.00	5.00	5.00
Mr. Nilesh Baglekar	5.00	5.00	5.00
Mr. Bhaskar Wabhitkar	5.00	5.00	5.00
Mr. Nikhil Bhalerao	5.00	5.00	5.00
Mr. Sitaram Suryawanshi	5.00	5.00	5.00
Mr. Khushal Kanade	5.00	5.00	5.00
Ms. Swapnali S. Mohol	5.00	5.00	5.00
Dr Swapnil A Patare	5.00	5.00	0.00
Anagha A Galagali	5.00	5.00	0.00
Snehal B Wagh	5.00	5.00	0.00
Dr. Shalaka K. Hire	5.00	0.00	0.00
Mr. Atif Shaikh	5.00	5.00	0.00
Mr. Sumit Patil	0.00	5.00	1.00
Mr. Dhananjay Bhosale	0.00	0.00	5.00
Sum	80.00	80.00	61.00
RDF = Number of faculty required to comply with the 20:1 student - faculty ratio in the Department alone, as per section 5.1 of SAR(RDF= DS / 20).	9.90	9.90	9.90

Assessment Points (AP)= (Sum/(0.5* RDF)) (Points limited to 5 for each assessment year)	5.00	5.00	5.00

Average assessment over 3 years: 5.00

6.1.3 Faculty Contribution in Development of SWAYAM MOOCs and other E-Content (5) Institute Marks : 5.00

Table No. 6.1.3.1: List of faculty members developed MOOC course for the past 3 years.

S.No	Name of the Faculty	Name of the Course Developed and available online on Swayam platform by your Department faculty
1	Mr. Sitaram G. Suryawanshi	Introduction to Machine Learning (https://drive.google.com/file/d/1JQQzyKajAGw4S9iWeoIddIf-nRbSNq_P/view)
2	Mr. Sitaram G. Suryawanshi	Disaster Recovery and Build Back Better https://drive.google.com/file/d/1H37iNtI3BVmzw_H7QCZw75j-JmW4KaRU/view
3	Mr. Bhaskar D. Wabhitkar	Modern Construction Materials (105106053) https://drive.google.com/file/d/1UepMscucztDA2_Ir_m8rYmQ0seKAe8Se/view
4	Mr. Bhaskar D. Wabhitkar	Materials as a Cornerstone to Sustainability https://drive.google.com/file/d/1ZEJYoIXIeniuUDijwJcTtx1GnKTLJAqP/view
5	Mr. Bhaskar D. Wabhitkar	Strength of Materials https://drive.google.com/file/d/1T3BAiXEs1dSwuDqQbMLNersqqVdcMsix
6	Dr. Vijay V. Muthekar	Geology and Soil Mechanics (105104147) in Marathi, (Submitted, awaiting for publication)
7	Dr. Swapnil A. Patare	Estimation and Costing https://mitaoe.ac.in/video-course-series/Estimation-and-Costing.php (https://www.youtube.com/@SwapnilPatare-q8y)
8	Dr. Shyam N. Shukla	Environmental Impact Assessment https://mitaoe.ac.in/video-course-series/Environmental-Impact-Assessment-and-Climate-Change.php (https://www.youtube.
9	Mr. Khushal S. Kanade	Design of Hydraulic Structures https://mitaoe.ac.in/video-course-series/Railway-Engineering.php (https://www.youtube.com/@khushalkanade)
10	Dr. Shalaka K. Hire	Financial Management https://mitaoe.ac.in/video-course-series/Financial-Management.php (https://www.youtube.com/@shalakahire3821)
11	Mr. Vijay K. Pingale	Building Services https://mitaoe.ac.in/video-course-series/Building-Services.php (https://www.youtube.com/@Prof.VijayPingale)

6.1.4 Faculty Certification of MOOCs through SWAYAM, etc. (10) Institute Marks : 10.00

Table No. 6.1.4.1: List of faculty members obtained certification of MOOCs for the past 3 years.

S.No	Name of the Faculty	Name of Course Passed	Course Offered by (agency)	Grade obtained if any
1	Snehal Wagh	Teaching and learning in general programs: TALG	NPTEL& IISC Bangalore	50%
2	Snehal Wagh	Accreditation and Outcome Based Learning	NPTEL& IIT Karagpur	65%
3	Dr. Shalaka Hire	Teaching and learning in general programs: TALG	NPTEL AICTE, New Delhi	73%
4	Anagha Galagali	NBA Accreditation and Teaching Learning in Engineering	NPTEL & IISC Banglore	77%
5	Dr. Swapnil Patare	Accreditation and Outcome Based Learning	NPTEL& IIT Karagpur	80%
6	Anagha Galagali	Effective Engineering Teaching in Practise	NPTEL AICTE, New Delhi	88%
7	Dr. Muniappan N	Module 1 Orientation Towards Technical Education & Curriculum Aspects	AICTE NITTT	85%
8	Dr. Muniappan N	Module 2 Professional Ethics & Sustainable Development	AICTE NITTT	69.1%
9	Dr. Muniappan N	Module 3 Communication Skills, Modes and Knowledge Dissemination	AICTE NITTT	67.9%
10	Dr. Muniappan N	Module 4 Instructional Planning and Delivery	AICTE NITTT	73.5%
11	Dr. Muniappan N	Module 5 Technology Enabled Learning and Life-Long Self Learning	AICTE NITTT	74.8%
12	Dr. Muniappan N	Module 6 Student Assessment and Evaluation	AICTE NITTT	71.3%
13	Dr. Muniappan N	Module 7 Creative Problem Solving, Innovation and Meaningful R & D	AICTE NITTT	62.2%
14	Dr. Swapnil Patare	Module 1 Orientation Towards Technical Education & Curriculum Aspects	AICTE NITTT	69.7%
15	Dr. Vijay V. Muthekar	Module 1 Orientation Towards Technical Education & Curriculum Aspects	AICTE NITTT	94%
16	Dr. Vijay V. Muthekar	Module 2 Professional Ethics & Sustainable Development	AICTE NITTT	73%
17	Dr. Vijay V. Muthekar	Module 3 Communication Skills, Modes and Knowledge Dissemination	AICTE NITTT	84%
18	Dr. Muniappan N	NBA Accreditation and Teaching-Learning in Engineering	NPTEL AICTE, New Delhi	66%
19	Dr. Swapnil Patare	Teaching and learning in general programs	NPTEL AICTE, New Delhi	55%
20	Mr. Kushal Kanade	Air Pollution & Control	NPTEL & IIT Roorkee	73%
21	Dr. Swapnil Patare	Outcome Based Pedagogic Principles for Effective Teaching	NPTEL AICTE, New Delhi	58%
22	Dr. Muniappan N	Remote Sensing and GIS	NPTEL AICTE, New Delhi	63%
23	Sitaram Suryawanshi	Effective Engineering teaching in Practice	NPTEL, IIT Madras	61%
24	Dr. Muniappan N	Remote Pilot Certificate Certificate No. PC01250000A0H	Garuda Aerospace Private Limited	NA
25	Dr. Muniappan N	Building life-cycle assessment onboarding	One Click LCA	NA
26	Dr. Muniappan N	Remote Sensing and GIS	NPTEL AICTE, New Delhi	63%

6.1.5 FDP/STTP Organized by the Department (10)

Institute Marks : 10.00

Table No. 6.1.5.1: List of FDPs/STPs organized by Department for the past 3 years.

(CAYm1) 2024-25

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1	AICTE ATAL – EduSkills Faculty Development Program on ANSYS Structural Analysis	02/12/2024	6	Mr. Prabhupada Samal, Assistant Manager at Learning & Development	25
2	Effective Technique for Online/ Blended Teaching Learning & E-content Development	22/06/2024	11	Assist Prof. Arnab Mandal, SChE, Prof. Sham Shukla SCVE, MIT AOE	33

(CAYm2) 2023-24

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1	MATLAB Applications in Civil Engineering	31/03/2024	5	Mr. Aditya Kumar Singh, PhD Research Scholar from IIT Bombay	104
2	Outcome based Education and Project Based Learning	14/12/2023	5	Dr. Shaila Subbeaman, Professor, Walchand College of Engg. Dr, Vikas shinde, Vishwaniketan iMEET	21

(CAYm3) 2022-23

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1	Advanced in Earthquake Analysis of Structures	5/12/2022	5	Onkar Kumbhar, (Design Engineer) Walter P Moore, Anadee Kulkarni (Design Engineer) Walter P Moore	38

6.1.6 Faculty Support in Student Innovative Projects (10)

Institute Marks : 10.00

Table No. 6.1.6.1: List of faculty members involved in student innovative projects.

(CAYm1) 2024-25

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Mr. Kushal Kanade	Won 1st prize and a cash of Rs. 25000/- at Pratikurti 2025, a National level project competition,	25/02/2025	Yashwantrao Chavan College of Engineering, Nagpur	NA
2	Mr. Khushal Kanade	Research Paper Publication in Journal of Polymer & Composites titled “Enhancing Sustainability in Bu	06/12/2024	Online	https://journals.stmjournals.com/jopc/article=2024/view=188035/
3	Mr. Bhaskar Wabhitkar	Research Paper Presented and Published in AIP Conference Proceedings titled “Study the Durability of	27/06/2024	Online	https://doi.org/10.1063/5.0269211
4	Mr. Sitaram Suryawanshi	Research Paper Presented and Published in AIP Conference Proceedings titled “Analysis of Progressive	27/06/2024	Online	https://doi.org/10.1063/5.0269206
5	Mr. Kushal Kanade	Presented a research paper entitled 'Fostering Sustainability: Pioneering Greywater solution for rur	08/11/2024	VNIT Nagpur	NA
6	Mr. Bhaskar Wabhitkar	Presented a research paper entitled Study the durability of chemically processed recycled aggregates	27/06/2024	Online	https://doi.org/10.1063/5.0269211

(CAYm2) 2023-24

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Dr. Swapnil Patare	Research Paper Publication in International Journal of Scientific Research in Engineering and Manage	02/01/2024	International Journal of Scientific Research in Engineering and Management	NA
2	Mr. Kushal Kanade	Presented research paper entitled 'Enhancing Sustainability in Building Design: Optimizing Energy Ef	28/11/2023	GLA University Mathura	NA
3	Mr. Kushal Kanade	Won First Prize/Best Paper in "Land & Climate Change on Disasters Section", in Two-Day National Conf	23/04/2024	VIT Chennai	NA
4	Mr. Bhaskar Wabhitkar	Presented research paper entitled Utilizing Lignin from the Pulp Industry to construct Sustainable R	18/08/2023	PCCOE Pune	NA
5	Mr. Bhaskar Wabhitkar	Presented a research paper entitled Performance Evaluation of Modified Bitumen with Waste Plastic in	18/08/2023	PCCOE Pune	NA
6	Mr. Bhaskar Wabhitkar	Presented a research paper entitled 'Examine the Geotextile Behaviour in Flexible Pavement using IIT	18/08/2023	PCCOE Pune	NA

(CAYm3) 2022-23

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Dr. Sham Shukla	Presented a research paper entitled 'CFD Analysis of Pump Intake -A review of the state of Art', in	26/08/2022	PCCOE Pune	NA
2	Dr. Sham Shukla	Presented a research paper entitled 'Energy Saving Opportunity in Pump & Pumping System', in Two-Day	26/08/2022	PCCOE Pune	NA
3	Mr. Khushal Kanade	Presented a research paper entitled 'Study of Open Flow Modelling Software for Understanding & Mitig	09/11/2022	EWIT, Bengaluru	NA
4	Mr. Khushal Kanade	Presented a research paper entitled 'Study of Open Flow Modelling Software for Understanding & Mitig	09/11/2022	EWIT, Bengaluru	NA

6.1.7 Faculty Internship/Training/Collaboration with Industry (10)

Institute Marks : 10.00

Table No. 6.1.7.1: Faculty internship/training/collaboration details.

S.No	Name of the Faculty	Name of the Internship/ Training/ Collaboration	Name of the Company & Place	Duration	Outcomes of Internship/ Training/ Collaboration
1	Dr. Muniappan N	Software Training Revit for Architecture	Autodesk	01 Month	Training inputs integrated into the curriculum to strengthen BIM and Revit skills.
2	Mr. Vijay Pingale	MoU Collaboration	Samarth Comprehensive Civil Consultancy Pvt. Ltd.	01 Year	Guest lecture conducted
3	Mr. Khushal Kanade	MoU Collaboration	Samarth Infra	01 Year	Guest lecture conducted
4	Ms. Swapnali Mohol	MoU Collaboration	Pro earth Ecosystem Pvt Ltd	01 Year	Guest lecture conducted
5	Dr. Shalaka K. Hire	MoU Collaboration	Durocrete Engineering Services Private Limited	01 Year	Internship support is provided to students additionally, placement offered to students
6	Mr. Sitaram Suryawanshi	AICTE-QIP-PG Certificate Programme in Internet of Things	AICTE-QIP	06 Month	Applied knowledge in teaching and IoT project mentoring
7	Mr Bhaskar Wabhitkar	AICTE-QIP-PG Certificate Programme in Machine Learning	AICTE-QIP	06 Month	Applied knowledge in teaching and IoT project mentoring
8	Mrs. Anagha Gagali	Software Training Revit for Architecture	Autodesk	01 Month	Knowledge Utilized in Construction Engineering and Management and BIM-II courses
9	Mr. Khushal Kanade	MoU Collaboration	Samarth Infra	01 Year	Guest lecture conducted
10	Dr. Shyam Shukla	MoU Collaboration	Siddhi Consulting Engineers Pvt Ltd Pune	01 Year	Consultancy work initiated.
11	Ms. Swapnali S. Mohol	MoU Collaboration	Pro earth Ecosystem Pvt Ltd	01 Year	Site visit is arranged for student
12	Mr. Sitaram Suryawanshi	MoU Collaboration	SoftTech Engineers Ltd Pune	01 Year	Entrepreneurship cell visited for incubation opportunities
13	Dr. Vijay Muthekar	MoU Collaboration	Pune Construction Engineering Research Foundation	01 Year	Visit to international Exhibition, students participated as volunteers
14	Mr. Sitaram Suryawanshi	MoU Collaboration	Water Field Technologies Pvt Ltd	01 Year	Internship opportunities provided to students through industry startup collaboration
15	Mr. Sumit Patil	MoU Collaboration	Durocrete Engineering Services Private Limited	01 Year	Inauguration of Centre of Excellence, Internship to Students, Performance based placement
16	Ms. Swapnali S. Mohol	MoU Collaboration	Pro earth Ecosystem Pvt Ltd	01 Year	Guest Lecture, Internship to Students
17	Dr. Shyam Shukla	MoU Collaboration	Conchem Labs Ltd	01 Year	Faculty Interaction
18	Mr. Sitaram Suryawanshi	Software Training Revit For Architecture	Autodesk	01 Month	Implemented in BIM I Course

6.2 Research and Development Activities (60) Total Marks 19.00

6.2.1 Academic Research (10)

Institute Marks : 9.00

Table No. 6.2.1.1: Faculty publication details.

S.No.	Item	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
1	No. of peer reviewed journal papers published	3	1	3
2	No. of peer reviewed conference papers published	6	1	1
3	No. of books/book chapters published	1	2	1

6.2.2 Ph.D. Student Details (5)

Institute Marks : 0.00

Table No. 6.2.2.1: Ph.D. details.

S.No.	Item	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
1	No. of students enrolled for Ph.D. in the Department	0	0	0
2	No. of Ph.D. students graduated in the Department	0	0	0

6.2.3 Development Activities (10)

Institute Marks : 6.00

The Civil Engineering Department at MITAOE has actively contributed to research and innovation through patents and Prototypes Developed.

The Civil Engineering Department at MIT Academy of Engineering (MITAOE) actively promotes research and innovation through patent development. Faculty members and students are encouraged to convert innovative ideas into practical engineering solutions relevant to construction and infrastructure sectors. During the assessment period, the department achieved notable progress in intellectual property creation across areas such as construction equipment design, composite structural systems, IoT-based applications, safety systems, and sustainable materials.

In the academic year 2025–26, two patents were published related to a hybrid concrete cube compactor machine and a bamboo–cold formed steel composite section. In 2024–25, two additional patents were published focusing on IoT-based experimental equipment and sensor-based safety systems.

Table No. 6.2.3 : List of Patent

S. N.	Title / Description	Inventor(s)/ Author(s)	Type	Date (DD/MM/YYYY)	Status	Application / Grant Number
(CAY) 2025-26						
1	Design and development of Hybrid concrete cube compactor machine	Kombade Raghuveer Vaijnath, Gawade Radheshyam Dhananjay, Hirale Aniket Raju, Bahekar Shruti Shamrao, Raut Piyush Sanjay, Muthekar Vijay Vitthal	Patent	04/07/2025	Published	202521040367 A
2	Bamboo-Cold Formed Steel Composite Section	Sitaram Govindrao Suryawanshi, Mr. Pavan Dattatray Tikate	Patent	04/07/2025	Published	202521040362
(CAYm1) 2024-25						
1	IOT Based Projectile Motion Equipment	Raut Piyush Sanjay, Muthekar Vijay Vitthal	Patent	28-03-2025	Published	202421033190 A
2	A Safety Jacket Embedded With Compatible Sensors For Fall Detection And Gas Leak Detection	Vibhute Pratik Mahesh, Jadhav, Smita Hanmant, Painter, Prerana Ramchandra, Nagarajan Muniappan	Patent	07-03-2025	Published	202421033157 A

Two prototypes were developed.

1. IoT-Based Projectile Motion Equipment:
An IoT-based projectile motion equipment prototype was developed to measure projectile velocity and horizontal range using integrated sensors. It provides accurate real-time data and improves the effectiveness of projectile motion experiments. This prototype enhances experimental accuracy and supports laboratory learning.

2. Hybrid Concrete Cube Compactor Machine:
A hybrid concrete cube compactor machine prototype was developed to ensure uniform compaction of concrete specimens. It supports both automatic and manual operation for efficient compaction. This prototype improves specimen quality and supports laboratory testing in concrete technology.

6.2.4 Sponsored Research Project (15)

Institute Marks : 1.00

2024-25 (CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Mr. Bhaskar Wabhitkar	Dr. Shraddha Shende (Chemical Engineering Department MIT AOE))	Civil Engineering Department, MITAOE	Removal of organic pollutants from wastewater (Food Industry) through novel techniques.	ASPIRE Research Mentorship Scheme, SPPU	2 Years (1 December 2024 to 30 November 2026)	2.52
						Amount received (Rs.):2.52

2023-24 (CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Nil	Nil	Nil	Nil	Nil	Nil	0.00
						Amount received (Rs.):0.00

2022-23 (CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Nil	Nil	Nil	Nil	Nil	Nil	0.00
						Amount received (Rs.):0.00

Total Amount (Lacs) Received for the Past 3 Years: 2.52

Note*:

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

6.2.5 Consultancy Work (15)

Institute Marks : 1

2024-25 (CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. S. N. Shukla	Nil	Department of Civil Engineering, MITAOE	CFD Analysis	M/s Siddhi Consulting Engineers	01 year	3.50
						Amount received (Rs.):3.50

2023-24 (CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Nil	Nil	Nil	Nil	Nil	Nil	0.00
						Amount received (Rs.):0.00

2022-23 (CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Nil	Nil	Nil	Nil	Nil	Nil	0.00
						Amount received (Rs.):0.00

Total amount (Lacs) received for the past 3 years: 3.50

Note*:

- Only consultancy projects will be considered. Infrastructure-based projects will not be considered here.

6.2.6 Institution Seed Money or Internal Research Grant to its Faculty for Research Work(5)

Institute Marks : 0.00

6.2.6 A Amount received (3)

2024-25 (CAYm1)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr. Swapnil Pathare	Innovative structures with bamboo	01 Year	0.29	0.29	Promoted sustainable and eco-friendly construction practices through student projects and hands-on laboratory learning.
Dr. Shyam N. Shukla	ANSYS Software	01 year	1.14	1.14	Enhanced skills in finite element modelling and simulation
			Amount received (Rs.): 1.43		

2023-24 (CAYm2)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr. Swapnil Pathare	Innovative structures with bamboo (Consumable for proto lab)	01 Year	0.12	0.12	Promoted sustainable and eco-friendly construction practices through student projects and hands-on laboratory learning.
			Amount received (Rs.): 0.12		

2022-23 (CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Nil	Nil	Nil	0.00	0.00	Nil
			Amount received (Rs.): 0.00		

Total amount (Lacs) received for the past 3 years : 1.55

6.2.6 B Amount utilized (2)

Institute Marks : 2.00

A total amount of **₹1.549 lakhs** received during the last three academic years (2022–25) was effectively utilised to strengthen faculty research activities and research infrastructure.

Funds for **Innovative Structures with Bamboo** were utilised for procurement of consumables and development of prototypes to carry out experimental research on sustainable and eco-friendly construction materials. The project supported laboratory-based investigations and enhanced research capabilities in alternative construction techniques.

The grant for **ANSYS Annual Charges** was utilised for procurement and maintenance of licensed structural analysis software to support faculty research in advanced analysis, finite element modelling, and simulation-based studies. The software improved research competency in computational analysis and structural behaviour prediction.

7 FACILITIES AND TECHNICAL SUPPORT (100)

Total Marks 87.00

7.1 Adequate and well equipped laboratories, and technical manpower (40)

Total Marks 35.00

Institute Marks : 35.00

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	HBM02 – Geot	4	Proctor Compa	• Geotechnical	Mr. Venkatesh	Lab Assistant	B.E. Civil Engir
2	HBM03 – Testi	4	• Compression	• Mechanics of	Mr. Venkatesh	Lab Assistant	B.E. Civil Engir
3	HBM05 – Fluid	4	• Wind Tunnel	• Fluid Mechan	Mr. Suresh Nag	Lab Assistant	MBA
4	HBM06 – Trans	4	• Los Angeles A	• Transportatio	Mr. Venkatesh	Lab Assistant	B.E. Civil Engir
5	HBM07 – Envir	4	• BOD Incubato	• Environmenta	Mr. Suresh Nag	Lab Assistant	MBA
6	HBM12 – Proje	1	• Desktop Com	• Final Year Pro	Mr. Yogesh Abh	Lab Assistant	Diploma in Civi
7	HBM13 – Com	1	• Desktop Com	• Programming	Mr. Yogesh Abh	Lab Assistant	Diploma in Civi
8	H001A – Surve	4	• Total Station	• Surveying Lal	Mr. Suresh Nag	Lab Assistant	MBA
9	H001B – Civil F	5	• Drill Machine	• Prototyping /	Mr. Prashant B	Lab Assistant	B.E. Civil Engir
10	H106 – Appliec	4	• Universal For	• Applied Mech	Mr. Prashant B	Lab Assistant	B.E. Civil Engir

7.2 Additional Facilities Created for Improving the Quality of Learning Experience in Laboratories (20)

Total Marks 16.00

Institute Marks : 16.00

Sr. No	Name of the Facility	Details	Purpose for creating facility	Utilization	Relevance to POs/PSOs
1	Industry-Supported Advanced Facility for Self-Compacting Concrete (SCC) Testing	Industry-supported facility comprising U-Box, L-Box, and V-Funnel apparatus donated by RKH Consultancy Services LLP and installed in the Concrete Technology Laboratory	To introduce advanced and industry-relevant testing methods for evaluating workability, passing ability, and segregation resistance of SCC beyond conventional slump tests	Used in Concrete Technology Laboratory, mini-projects, final-year projects, and experimental studies on M30, M40, and M65 SCC mixes; supported hands-on testing, mix design as per IS 10262:2019, and preparation/testing of cubes, cylinders, and beams	PO1, PO2, PO3, PO4, PO5, PO7, PO10, PO12; PSO1, PSO2
2	Hybrid Concrete Compaction Apparatus And A Method Of Compacting Concrete (Patented Facility)	Institute-developed and patented apparatus titled “Hybrid Concrete Compaction Apparatus and a Method of Compacting Concrete” (Indian Patent Application No. 202521040367 A, published on 04/07/2025). Facility enables manual and motorized concrete compaction with controlled energy input as per IS 1199 (Part 4):2018	To provide an innovative, research-driven and standardized concrete compaction facility that ensures uniform compaction, avoids segregation/bleeding, and exposes students to modern compaction technology and IPR-based engineering solutions	Used in Concrete Technology Laboratory, material testing experiments, student projects, prototype development, and research activities for studying effect of compaction energy on strength and durability of concrete specimens	PO1, PO2, PO3, PO4, PO5, PO7, PO10, PO12; PSO1, PSO2
3	P-Box (Performance Box) – Portable Vehicle Data Acquisition System	In-house developed portable data acquisition system built using ESP-32 microcontroller, integrated with GPS module for position, speed, and time stamping, SD-card module for local data storage, and buzzer-based speed threshold alert for real-time driver warning	To create an indigenous, low-cost, and portable facility for real-world vehicle trajectory data collection and driver behavior analysis beyond conventional laboratory experiments	Used in Transportation Engineering laboratory activities, mini-projects, and B.Tech. final-year projects for naturalistic driving data collection, analysis of speeding behavior, acceleration–deceleration patterns, and traffic safety assessment	PO1, PO2, PO3, PO4, PO5, PO7, PO10, PO12; PSO1, PSO2
4	Advanced Oxidation Process (AOP) Facility for Wastewater Treatment	Facility comprising 3 LPM Ozone Generator and Photochemical Quartz Glass Reactor, procured under a funded research project for photo-ozonation and photocatalytic treatment of industrial wastewater	To create an advanced experimental and research facility for treatment of industrial wastewater and to enhance learning in modern environmental engineering techniques	Used for laboratory experiments, B.Tech projects, research work on food industry wastewater treatment, student training, and research publications	PO1, PO2, PO3, PO4, PO5, PO7, PO10, PO12; PSO1, PSO2

7.3 Maintenance of laboratories and overall ambiance (10)

Total Marks 10.00

Institute Marks : 10.00

The Department of Civil Engineering ensures systematic maintenance of laboratories and a learning-conducive overall ambiance through planned procedures, defined responsibilities, safety practices, and continuous monitoring. The focus is on functionality, safety, cleanliness, and sustainability, thereby supporting effective teaching–learning and research activities.

Maintenance of Laboratories

Planned Preventive and Corrective Maintenance

All laboratories are maintained through a planned maintenance mechanism that includes:

- Periodic inspection of major equipment
- Preventive maintenance schedules
- Corrective maintenance through in-house technical staff or authorized service agencies

Critical equipment such as CTM, Total Station, Marshall Apparatus, Wind Tunnel, and Tilting Flume are periodically serviced and calibrated to ensure accuracy and reliability.

Maintenance Records and Documentation

Each laboratory maintains:

- Equipment logbooks
- Maintenance and servicing records
- Calibration certificates (where applicable)
- Fault reporting and rectification registers

These records are reviewed by the Laboratory In-charge and Head of the Department at regular intervals.

Role of Technical Manpower

Dedicated and qualified laboratory assistants are assigned to each laboratory. Their responsibilities include:

- Daily upkeep and cleanliness
- Safe operation of equipment
- Identification and reporting of faults
- Assistance during laboratory sessions and project work

This ensures minimal downtime and smooth conduct of laboratory activities.

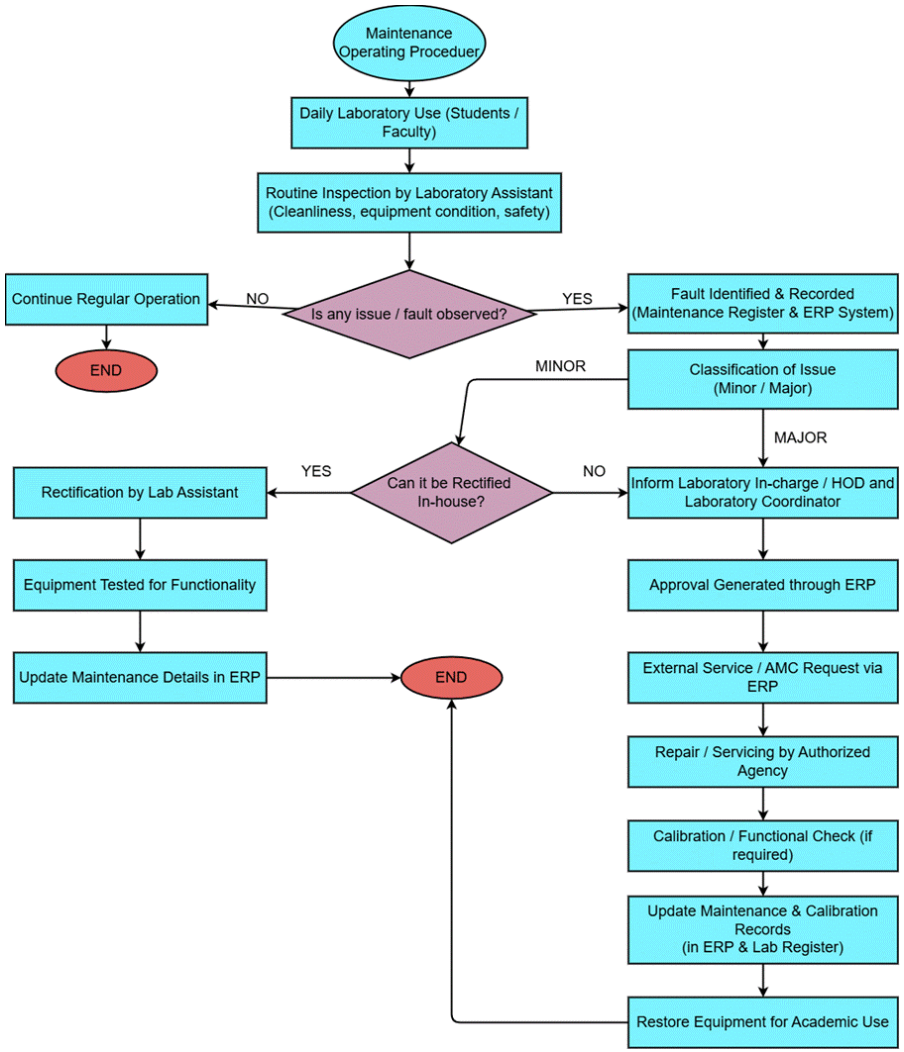


Figure 7.3.1: SOP Flowchart for Maintenance of Laboratories

Safety, Housekeeping, and Compliance

Laboratories follow standard safety and housekeeping practices, including:

- Display of Standard Operating Procedures (SOPs)
- Availability of fire extinguishers and first-aid kits
- Safety signage and emergency instructions
- Proper storage of tools, specimens, and consumables

Regular cleaning, organized layout of equipment, and uncluttered workspaces contribute to a safe and disciplined laboratory environment.

Overall Ambiance and Learning Environment

The department maintains a clean, well-lit, and well-ventilated ambiance across laboratories, classrooms, corridors, and common areas. Key features include:

- Adequate lighting and ventilation

- Noise-free academic environment
- Proper seating and workspace arrangement
- Discipline and accessibility during working hours

Software/Computer lab

- Software lab in the department is well equipped with 20 PCs with Hi-Speed internet connectivity.
- This lab is provided with uninterrupted power supply (UPS).
- Each student can use a single PC for their lab work assigned /Project purpose.
- Labs are equipped with licensed software to run programs over and above specific curriculum.

Other Laboratories

- All equipment is maintained in good working order.
- The details of the maintenance are entered in the equipment register that is kept in the laboratory.
- The machines are arranged so that the students can be accommodated comfortably.
- The lists of experiments that are being carried out are shown in all laboratories.
- Whiteboards are provided in all laboratories to demonstrate the experimental methodologies to the students.

Continuous Improvement

Feedback from students, faculty, and technical staff is periodically collected regarding laboratory facilities and ambiance. Based on feedback:

- Maintenance schedules are refined
- Safety measures are strengthened
- Equipment upgrades and repairs are prioritized

This ensures continuous improvement in laboratory maintenance and learning environment.

Outcome

The systematic maintenance of laboratories and the overall ambiance has ensured:

- High equipment availability and reliability
- Safe and disciplined laboratory practices
- Enhanced student satisfaction and learning effectiveness

7.4 Safety measures in laboratories (10) Total Marks 10.00

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	Transportation Engineering Laboratory	• Fire extinguisher (ABC type) near bitumen heating and aggregate testing area • MCB-protected electrical supply for Marshall and extraction equipment • Heat-resistant gloves and safety goggles for bitumen tests • Safety instructions and Do’s & Don’ts displayed
2	Geotechnical Engineering Laboratory	• Fire extinguisher provided in laboratory • MCB-protected power supply for shear and compression testing units • Safe handling instructions for heavy soil testing equipment • Do’s & Don’ts and equipment operating instructions displayed
3	Surveying Laboratory	• Fire extinguisher available in laboratory • MCB-protected electrical points for electronic surveying instruments • Safe storage racks for Total Station and theodolite • Do’s & Don’ts for precision instrument handling displayed
4	Testing of Materials / Concrete Technology Laboratory	• Fire extinguisher installed near CTM and vibration equipment • MCB-protected power supply for testing machines • Safety gloves and shoes for handling concrete specimens • Equipment operation and safety instructions displayed
5	Environmental Engineering Laboratory	• Fire extinguisher provided in laboratory • MCB-protected electrical connections for ovens and digesters • Safety goggles and gloves for chemical handling • Chemical safety instructions and Do’s & Don’ts displayed
6	Fluid Mechanics Laboratory	• Fire extinguisher provided in laboratory • MCB-protected electrical supply for pumps and flow rigs • Guards and safe operating instructions for rotating components • Do’s & Don’ts displayed near experimental setups
7	Applied Mechanics Laboratory	• Fire extinguisher available in laboratory • MCB-protected electrical connections for mechanical rigs • Safety instructions for rotating and moving components • Do’s & Don’ts displayed for safe experimentation
8	Civil Prototyping Laboratory	• Fire extinguisher installed near cutting and grinding machines • MCB-protected electrical supply for machines • Safety goggles, gloves, and guards for machining operations • Mandatory PPE usage and Do’s & Don’ts displayed
9	Computer Laboratory	• Fire extinguisher provided in laboratory • MCB-protected electrical supply for computer systems • Proper cable management and covered switchboards • Electrical safety instructions and Do’s & Don’ts displayed
10	Project Laboratory	• Fire extinguisher available in laboratory • MCB-protected electrical connections for computers and project equipment • Safe workspace layout to avoid congestion • Safety and electrical Do’s & Don’ts displayed

7.5 Project laboratory/research laboratory /centre of excellence (20) Total Marks 16.00

Institute Marks : 16.00

The Department of Civil Engineering provides dedicated and well-supported facilities for B.Tech. project work and research activities, ensuring that students have adequate space, equipment, financial support, and technical guidance to undertake meaningful and application-oriented projects. The emphasis is on hands-on learning, innovation, interdisciplinary exposure, and industry relevance.

Dedicated Project and Research Facilities

The department has a dedicated Project Laboratory supported by domain-specific laboratories such as Geotechnical Engineering, Transportation Engineering, Environmental Engineering, Concrete Technology, Surveying, and Prototyping Laboratories. Students are allotted laboratory space based on their project domain and area of interest, enabling focused and effective execution of project work.

In addition to the project laboratory, sufficient workspace is available within respective laboratories for fabrication, testing, and development of experimental or research setups. This flexible arrangement ensures that students can carry out experimental, analytical, and field-oriented projects without infrastructural constraints.

Availability of Equipment and Tools for Project Work

All laboratories are adequately equipped to support B.Tech. project requirements, including:

- Experimental equipment for material testing and structural investigations
- Facilities for pavement material characterization and mix design
- Environmental testing setups for water and wastewater analysis
- Surveying and field investigation instruments
- Prototyping and fabrication tools

Both experimental and analytical tools, including relevant software and data analysis resources, are accessible to students. This enables students to undertake design-based, experimental, simulation-based, and field-oriented projects.

Support for Field Studies and Applied Research

Students carrying out projects involving field investigations, such as pavement evaluation, traffic studies, geotechnical investigations, and environmental monitoring, are supported with:

- Required field equipment and instruments
- Safety accessories such as reflective jackets and protective gear
- Faculty and technical staff guidance during field activities

This ensures that project work is conducted in a **safe, systematic, and professional manner**, aligned with real-world engineering practices.

Financial Support and Seed Funding

The institute provides financial support for student project work through a dedicated project funding mechanism. Financial assistance is made available for:

- Fabrication of project-specific setups and prototypes
- Purchase of materials, components, and consumables
- Procurement of specialized equipment required for projects

Funding requests are processed through the project supervisor and department, ensuring transparency and academic relevance. In addition, the institute offers seed funding for selected innovative and research-oriented projects, encouraging students to develop models, prototypes, and experimental systems.

Centralized and Interdisciplinary Facility Utilization

In addition to departmental laboratories, students have access to centralized institutional facilities for advanced testing, fabrication, prototyping, and analysis. The institute has a central workshop facility equipped with modern fabrication tools, including a laser cutting machine, which is utilized by students for fabrication of project components, experimental setups, and structural models.

Further, additive manufacturing facilities such as 3D printers are available at the institute level and are extensively used by students for development of prototypes, scaled models, and custom-designed components as part of their project work.

The institute actively promotes interdisciplinary utilization of facilities, allowing Civil Engineering students to use laboratories, workshop facilities, and prototyping infrastructure available across departments whenever required. There are no restrictions on laboratory or facility access based on department boundaries, ensuring optimal utilization of resources, hands-on fabrication experience, and interdisciplinary learning.

Outcome

The availability of dedicated project laboratories, domain-specific experimental facilities, financial support, and interdepartmental access has resulted in:

- Effective execution of B.Tech. project work
- Enhanced practical skills and problem-solving ability
- Increased student engagement in research and innovation
- Development of industry-relevant and socially meaningful engineering solutions

Table No. 7.5.1: List of project laboratory/research laboratory /Centre of Excellence.

S.N.	Academic Year	Project laboratory

1.	2023-24	IOT Applications in Construction Industry
2.		Optimization of IOT based Bio-digester for Environmental Sustainability
3.		Progressive Collapse of Building
4.		Comparative Study of Various Base Isolation Techniques
5.		Remote Sensing and GIS application to air and water monitoring
6.		Sustainability analysis of a commercial building using BIM tools- CED & LCA
7.		Project Duration forecasting using modern tools
8.		Developing susceptibility index using Python for disaster management
9.		Developing susceptibility index using Python for building resilience
10.		Study of Mathematical model for prediction of Rainfall induced
11.		Optimizing the retaining wall section and construction using Grav loft technique
12.		Application of Remote Sensing & GIS in A.I. based Hydrological Model
13.		Study and design of 24x7 water supply distribution system by WATERGEMS for Alandi region
14.		Fragility Analysis for RC frames
15.		Fragility Analysis for RC frames with rocking shear wall
16.		Artificial intelligence application to construction industry: state of art, future scope and challenges
17.		Study of Green Building
18.		3-D printing and construction industry - state of art, future scope and challenges
19.		Application and challenges of Building Information Modelling (BIM) in context of construction
20.		Approximation of GIS in modelling evapotranspiration
21.		Structural systems for tall buildings - a comparative study
22.		Modelling industrial PEB structure (working) to test axial loading capacity of column
23.		Working model of industrial shed using IoT
		CAPSTONE PORTFOLIO
24.		Granite Waste Reclamation: A study in Concrete Mixtures
25.		Study how land use affects flooding in an urban area
26.		Analyzing the role of remote sensing and GIS in promoting environmental preservation in rural area.
27.		YouTube Channel – Build Civil
28.		Use of Renewable sources of energy in construction sector

1.	2024-25	Stress concentration around a circular opening optimization of opening size and location using FEM
2.		Investigation the effect of headed bar over shear and flexural strength
3.		Application of BIM for sight safety management
4.		Analysis of beam cross section using fiber reinforced bars
5.		AI embed hazard detection for construction site/real time safety management
6.		Design and develop lab setup of rainfall simulator
7.		LCA Analyzing of commercial building
8.		Designing and Modelling of Green Building
		CAPSTONE PORTFOLIO
9.		Literature review of current and advanced procedure in RMC plants.
10.		Review on BIM adoption for Sustainability
11.		literature review on time management issues in RMC
12.		Literature Review and Impact analysis On Concreting Without Cement
13.		Practical Construction Guide with YouTube Channel - AK Infra
14.		BIM Driven sustainability: A Case study Using Autodesk Revit
15.		Real-Time-Deblur App
1	2025-26	Effect of Temperature Gradient on the Development of Thermal Stresses in Concrete Pavements
2		Tuned mass dampers embedded in floors
3		Machine learning approach for stress in structural analysis
4		BIM enabled optimization of time and cost in construction projects
5		BIM Application for sustainability
6		Effectiveness of foot insoles in diabetic patients and gait analysis
7		Life cycle assessment for residential building
8		Quality control of RMC plant using 6 sigma methodology
9		Factors influencing adoption of technology for construction safety in India.
10		Crack analysis in concrete structures
11		Impact of temperature variation on concrete
12		Fabrication of 1-D Shake Table
13		Surface Blast Load Calculations for Medium Rise Structure
14		Calculation of Subsurface blast loading parameters for building.

S.N.	**Academic Year**	**Environmental Engineering laboratory**

1.	2023-24	Logistic Solid Waste Management
2.		Urban Sprawl
3.		Developing Sustainable and Economical Stratergies for Rural Water Source
4.		A Comprehensive Study & Sustainable Solution for Wastewater Treatment as a Resource: Investigating Opportunities for Recycle & Reuse.
5.		Implementation of Biogas Plant in MIT Academy of Engineering Alandi
6.		Study of Future Challenges & current approaches for monitoring antibiotic resistance genes in waste water treatment
7.		An investigation on the difficulties of ammonia removal and challenges in utilizing a bio-film based reactor
8.		Study of effects of growing urbanized areas on waste management practices and viability
9.		Development of treatment process for water treatment using UCCW to produce potable water
		CAPSTONE PORTFOLIO
10.		Optimizing Water resources: A sustainable Approach for MITAOE
1.	2024-25	Environmental impact assessment study of different category of structures
2.		Design and implementation of sustainable water supply system for rural community
3.		Design and implementation of sustainable water supply system for college campus or rural communities
4.		Optimizing resource recovery in urban waste Strems through circular economic principles
5.		Assessing cost effectiveness of implementing advanced technologies in existing STP.
6.		Designing and integrated waste management system for rural area
7.		Evapotranspiration Modelling using Machine Learning
		CAPSTONE PORTFOLIO
8.		Global trends and evolution of Antibiotic Resistance Genes in Wastewater Systems..
9.		Efficiency of Wastewater Treatment in ARG Removal : Challenges and innovations
10.		Create a cost-effective system system for E waste collection, treatment, disposal.
11.		Advanced Detection Technologies for ARGs in Wastewater
12.		Bio reactor-based approaches for mitigating Antibiotic Resistance Genes in Wastewater
13.		Waste Segregation, Sorting, and Collection
1.	2025-26	Station temporal detection and impact assessment of flash draught in Maharashtra
2.		Reuse of spent lithium-ion batteries into application in waste water management
3.		Evapotranspiration using GIS Modelling
4.		Impact of climate variability on sugarcane using CROPWAT
5.		Crop Water required for Marathwada and Vidarbha Regions using CROPWAT 8.0
6.		Trend analysis of rainfall and temperature for climate change assessment
7.		Efficacy recovery and reuse of construction and demolition waste for affordable design

S.N.	Academic Year	Testing of Materials Laboratory
1.	**2023-24**	Structural Health Monitoring System
2.		Study on deterioration of Chemically treated aggregate
3.		Partial Replacement of Course Aggregates with Granite Powder & E-Waste
4.		Experimental Investigation on Response and Failure modes of Ferrocement LGS composite wall to in Plane Lateral Monotonic and Cyclic Loading
5.		Study of Structural Behavior of ferrocement - LGS composite section
6.		Effective management of construction and demolition waste
7.		Utilization of waste as construction management
8.		Optimization of use of recycled aggregate in structural concrete
9.		Study of stress concentration around opening of beam
10.		Self-healing and fire-resistant concrete
		CAPSTONE PORTFOLIO
11.		Transforming Waste into resources: Incorporating E-waste as partial Replacement for Coarse Aggregates
12.		Low-cost Red Brick and Magnificent Efficiency using Agricultural waste (Bagasse ash)
1.	2024-25	Analysis of repair method of RCC in rigid pavement
2.		Development of green concrete
		CAPSTONE PORTFOLIO
3.		Comparative study of different base isolation technique
1.	2025-26	Investigations on response and failure modes of Ferrocement - LGS composite wall elements to in-plane loading
2.		Offloading for diabetic foot wounds using customize insoles
3.		LCA Material construction concrete
4.		Energy analysis of building using BIM tools for Sustainable design

S.N.	Academic Year	Transportation Engineering Laboratory
1.	2023-24	Naturalistic driving study for road safety
1.	2025-26	Traffic Simulation study
2.		Traffic simulation and road intersection development

S.N.	Academic Year	Geotechnical Engineering Laboratory

1.	2023-24	Stabilization of Soil Using Natural Fibers.
2.		To investigate the extreme value of meteorological parameters in order to foercast the landslide
3.		Analysis of slopes using spatial technique
4.		Development of Laboratory based Plate Load Test setup
		CAPSTONE PORTFOLIO
5.		Comparative study of Sin map & shall stab method to analyze landslide at selected region.
6.		To investigate the extreme value of meteorological parameters inorder to forecast landslides
7.		Artificial Neural Network in Geotechnical Engineering : Design of Retaining walls Manual
1.	2025-26	Rainfall induced landslide physical model
2.		Development of small-scale laboratory apparatus PLT
3.		Performance evaluation of natural fiber-reinformed soil, soil stabilization under rainfall condition
4		Experimental investigation of rubber band fatigure

S.N.	Academic Year	Fluid Mechanics Laboratory
1.	2023-24	Optimization of Water Distribution System using Jaltantra Software
2.		Designing Water Distribution system for Kati village using Darwin Designer in Water Gems
3.		Analyzing leaks detections, pump detection, pressure for the designed water distribution system
1.	2024-25	Design and develop low-cost rain-gauge with data logger

8 CONTINUOUS IMPROVEMENT (80) Total Marks 66.00

8.1 Actions taken based on the results of evaluation of each of the COs, POs & PSOs (40) Total Marks 36.00

8.1.1 Actions Taken Based on the Results of Evaluation of the COs Attainment (20)

Institute Marks : 18.00

Actions Taken Based on the Results of Evaluation of the COs Attainment:

The Department of Civil Engineering at MITAOE follows a OBE-based CO attainment evaluation process wherein target vs. achieved CO attainment is analyzed for the assessment year (CAYm1: AY 2024–25) to identify specific learning gaps (e.g., insufficient numerical/problem-solving practice, need for concept revision, improved diagram/worksheet practice, and strengthened application-oriented learning), and the resulting corrective actions, including added tutorials, quizzes, guided problem sheets, case-based discussions, ICT/visual demonstrations, and enhanced academic support along with their implementation/effectiveness plan for AY 2025–26, are systematically documented in Table 8.1a.

Course Code	Course Name	CO No	CO Statement	Target %	Achieved %	Measures Identified /Action Taken (AY 2024-25)	Implementation/ effectiveness in AY 2025-26
2303211 T	Mechanics of Solids	2303211T.CO.3:	Draw shear force diagrams and bending moment diagrams for statically determinate beams and twisting moment diagram for statically determinate shafts.	50	48.97	Low attainment in SFD and BMD calculations indicates a need for more practice, so additional numerical tutorials will be implemented in the next cycle.	Marginal Improvement is observed in the attainment. Assessment needs the reformation.
2303211 T	Mechanics of Solids	2303211T.CO.4:	Produce bending stress distribution diagrams (BSD) for beams and shear stress distribution diagrams (SSD) for beams and shafts.	50	48.97	Low attainment in shear stress and Bending stress calculations indicates a need for more practice, so additional numerical tutorials will be implemented in the next cycle.	Attainment improved significantly due to additional practice sessions.
2303212 T	Geotechnical Engineering	2303212.CO.1	Classify the soil based on index properties and relevant IS codes	50	34.52	Additional concept-revision sessions on index properties and soil classification as per IS codes; solved examples emphasized.	Conducted short quizzes and practice session focusing on IS code-based classification problems; improvement in mid-semester assessments.
2303212 T	Geotechnical Engineering	2303212.CO.3	Select suitable materials and methods for improving soil density	50	48.63	Introduced case-based discussions and site-related examples for soil improvement methods.	Classroom discussions and assignment problems redesigned to include practical selection-based questions; effectiveness to be reviewed through internal assessments.
2303212 T	Geotechnical Engineering	2303212.CO.4	Calculate induced stresses in soil at various depth.	50	40.24	Strengthened teaching through step-by-step numerical derivations and additional tutorial problems.	Extra problem-solving sessions conducted; tutorial sheets introduced to improve conceptual clarity and numerical accuracy.
2303214 T	Mechanics of Fluids	2303214 T .CO2	Apply equations of motion for various flow conditions and compute the discharge of the flows	50	46.43	Solved numerical problems based on continuity, Bernoulli's equation, and momentum equation with tutorial support.	Additional numerical practice sessions and short quizzes will be conducted to improve confidence and accuracy in discharge computation.
2303214 T	Mechanics of Fluids	2303214 T .CO3	Analyze laminar and turbulent flows through pipes considering the losses	50	14.52	Regular theory delivery with limited numerical and problem-based reinforcement.	In AY 2025–26 attainment level achieved is low, hence actions will be revised by introducing step-by-step numerical derivations, loss-calculation worksheets, and problem-solving tutorials.
2303215 L	Surveying and Geospatial Engineering	2303215L.CO.1	Demonstrate the knowledge of foundation marking.	50	42.00	Planned to give worksheet for ready reference of coordinates.	Second cycle is in progress.
2303215 L	Surveying and Geospatial Engineering	2303215L.CO.2	Construct simple circular curve using total station in field.	50	47.33	Stake out survey using curve setting was conducted	Second cycle is in progress.

Course Code	Course Name	CO No	CO Statement	Target %	Achieved %	Measures Identified /Action Taken (AY 2024-25)	Implementation/ effectiveness in AY 2025-26
2303216 T	Structural Analysis	2303216T.CO.2	Calculate the deflections of beams and trusses using classical methods [L3].	50	23.20	Students are not able to digest multiple methods which are based on mathematical concepts. Geometry and calculus concepts are to be revised before the start of unit.	Second cycle is in progress.
2303216 T	Structural Analysis	2303216T.CO.3	Analyse statically indeterminate structures by force methods [L4].	50	37.00	Lengthy procedures and more calculations are many time going wrong and not able to reach to final answer. Need to start with smaller problems to build the confidence	Second cycle is in progress.
2303216 T	Structural Analysis	2303216T.CO.4	Analyse kinematic ally indeterminate structures by displacements methods [L4].	50	34.17	Lengthy procedures and more calculations are many time going wrong and not able to reach to final answer. Need to start with smaller problems to build the confidence	Second cycle is in progress.
2301254 T	Applied Mathematics	2301254 T .CO1	Solve problems on eigenvalues & eigenvectors and system of linear equations [L3]	50	48.45	It's close to first level attainment, students do not practice and remember the mathematical methods done in the classroom, an extra tutorial class is needed for improvement	Second cycle is in progress.
2301254 T	Applied Mathematics	2301254 T .CO2	Evaluate the Laplace and inverse Laplace transform of functions [L4].	50	46.37	Its close to first level attainment, students do not practice and remember the mathematical methods done in the classroom, an extra tutorial class is needed for improvement	Second cycle is in progress.
2301254 T	Applied Mathematics	2301254 T .CO5	Evaluate work done, surface area and volumes of objects using multiple integrals [L4].	50	44.81	Its close to first level attainment, students do not practice and remember the mathematical methods done in the classroom, an extra tutorial class is needed for improvement	Second cycle is in progress.
2301277 L	Entrepreneurship Skills	2301277L.CO.4	Demonstrate the balance sheet estimation for venture	50	48.53	Do not ask students to create a balance sheet from scratch. Provide a pre-formulated Excel Template.	Second cycle is in progress.
2303311 T	Concrete Technology	2303311T.CO.2	Illustrate properties of concrete using various IS tests	60	55.14	During teaching the theory of a test, demonstrating procedure through videos. Discussion shall be held for IS Code Interpretation.	In AY 2025-2026, Attainment level achieved = 0.6, hence the actions to be taken shall be revised.
2303312 T	Water Supply and Sanitary Engineering	2303312 T .CO5	Interpret and illustrate the system of wastewater treatment. [L2]	60	47.39	Regular teaching method followed with limited diagram practice.	As the attainment level achieved is low, hence the actions to be taken shall be revised by including videos/flow-diagram practice and short activities.
2303315 T	Transportation Engineering	2303315.CO.1	Apply basic transportation planning process.	60	56.52	Strengthened conceptual understanding through additional problem-solving sessions and numerical examples on transportation planning steps.	Sessions conducted focusing on trip generation and distribution problems; moderate improvement observed in internal assessments.

Course Code	Course Name	CO No	CO Statement	Target %	Achieved %	Measures Identified /Action Taken (AY 2024-25)	Implementation/ effectiveness in AY 2025-26
2303315 T	Transportation Engineering	2303315.CO.2	Design systems for traffic operations.	60	19.71	Introduced step-by-step explanation of traffic flow concepts and additional solved numericals on traffic operations.	Classroom problem-solving conducted; effectiveness to be reviewed in subsequent internal evaluations
2303315 T	Transportation Engineering	2303315.CO.3	Design highway geometry	60	32.61	Enhanced emphasis on IRC-based design problems with worked examples and drawing-based explanations.	Design numericals and IRC tables discussed in class; improved student engagement observed during problem-solving sessions.
2303315 T	Transportation Engineering	2303315.CO.5	Apply the fundamental principles of bridge engineering.	60	21.38	Simplified teaching approach using schematic diagrams and real-life bridge examples to strengthen conceptual clarity.	Visual aids and case illustrations introduced; gradual improvement observed in student participation.
2303315 T	Transportation Engineering	2303315.CO.6	Demonstrate use of BIS, IRC MORTH codes.	60	45.83	Introduced guided classroom exercises on interpretation and application of BIS, IRC, and MoRTH provisions.	Code-based problems discussed in class; effectiveness to be assessed through future examinations and assignments.
2303321 T	Construction Engineering and Management	2303321 T .CO1	Elaborate management plans for construction projects with proficiency in application and synthesis of project management concepts [L3]	60	55.00	IA conducted to do SWOT analysis in groups, by analyzing their assigned group scenario and present their findings.	Reinforce fundamentals through short concept quizzes. Increased Target to 55%
2303321 T	Construction Engineering and Management	2303321 T .CO4	Identify the potential of the advanced techniques, Lean Construction, EVM, Artificial Intelligence, BIM. [L3]	60	54.33	Assignment conducted o explore advanced techniques in construction management through latest research papers.	Additional IA conducted to emphasis real life problem solving. Increased Target to 55%
2303323 T	Hydrology and Irrigation Engineering	2303323T.CO. 4	Analyze hydrological data effectively within hydrological modeling using advance soft tools	60	53.46	Provided guided worksheets for data input, model execution, and result interpretation.	Improved analytical and computational skills
2303392L	Major Project - II	2303392L .CO3	Incorporate ethical considerations and sustainable practices into their implementation processes, evaluating the societal and environmental impacts of their solutions	70	62.75	CO3: NOT fully attained. To meet this CO, we will add workshops on ethical frameworks and a simple sustainability checklist to be completed for every major design decision.	This will build the necessary awareness and routine to consistently include ethical and green thinking in their projects.
CV406	Design of Hydraulic Structures	CV406.CO.1	Perform the stability analysis of gravity dam	60	53.07	Conducted step-by-step numerical demonstrations and tutorial problem-solving on stability checks.	Regular stability-analysis numerical practice sessions will be implemented to improve calculation accuracy and confidence in design checks.
CV406	Design of Hydraulic Structures	CV406.CO.2	Explain the causes of failure of different types of dams & their design criteria	60	26.41	Introduced failure-case discussions with dam incident examples and linked them to design criteria.	Case-based learning and short assessments will be implemented to strengthen understanding of dam failures and safe design provisions.
CV423	Environmental Impact assessment and Climate Change	CV423.CO.5	Identify the effects of climate change and adopt probable techniques to deal with climate change.	60	59	Included case studies on climate change impacts and introduced mitigation/adaptation strategy discussions.	Case-based learning and solution-oriented assignments will be implemented to improve awareness of climate impacts and application of mitigation/adaptation techniques.

Course Code	Course Name	CO No	CO Statement	Target %	Achieved %	Measures Identified /Action Taken (AY 2024-25)	Implementation/ effectiveness in AY 2025-26
CV480	Capstone Portfolio	CV480.CO.1	Portray individual skill for solving the problem.	70	64.29	Strengthened problem identification and complexity through focused guide–student interactions	Evaluation rubrics were refined by integrating relevant SDG goals, and students were sensitized to these aspects from the project topic selection stage
CV480	Capstone Portfolio	CV480.CO.3	Cognize the significance of report and comprehend its reflections.	70	35.71	Planned to Improve outcome quality by emphasizing sustainability, feasibility, and result validation.	An expert session on AI tools is planned, requiring students to prepare a technical report and deliver a presentation based on the learning outcomes.

8.1.2 Actions Taken Based on the Results of Evaluation of the POs/PSOs Attainment (20)

Institute Marks : 18.00

Actions Taken Based on the Results of Evaluation of the POs/PSOs Attainment :

The Department of Civil Engineering at MIT Academy of Engineering, Alandi follows an Outcome-Based Education (OBE) process to evaluate the attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs) for each graduating batch. Based on the comparison of target levels and actual attainment levels for the batches 2020–24 and 2021–25, areas requiring strengthening are identified at the program level. Accordingly, the department has planned and implemented focused improvement measures over the last two academic years, including curriculum refinements, pedagogical enhancements, assessment and rubric alignment, student support initiatives, and increased exposure to modern tools, projects, internships, and field-based learning. The batch-wise observations and actions taken are summarized in Table 8.1b.

(BATCH 6 2021-25)

Table 8.1b. Actions Taken Based on the Results of Evaluation of the POs Attainment

PO	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.35	2.18	Students demonstrate foundational knowledge, but the application of core fundamentals to complex, multi-constraint civil engineering problems is less consistently evidenced across courses and assessments.
Actions Taken: 1. NEP curriculum strengthens early conceptual grounding through structured theory–lab combinations and dedicated tutorials (e.g., Mathematics and Applied Mechanics with lab), enabling repeated practice and evidence of fundamentals in application. 2. Faculty implement blended teaching–learning with interactive tutorials, doubt-clearing and continuous assessment mapped to course outcomes to reinforce engineering fundamentals. 3. Supports foundational learning through a cloud-based Moodle LMS, MS Teams-enabled live teaching, recorded sessions via webinar platforms, and smart classrooms with ICT facilities.			
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	2.07	1.89	Students can solve routine problems, but problem formulation, assumption setting, and validation/interpretation steps are not uniformly demonstrated in their work.
Actions Taken: 1. NEP curriculum integrates problem-solving through tutorial credits (Calculus/Statistics tutorials) and analytics-oriented courses (Essentials of Data Science), which systematically build problem formulation and validation habits using continuous assessment. 2. Open-ended and case-based assignments, evaluated using rubrics, are implemented to require students to clearly document assumptions, methodologies, and validation procedures. 3. Students receive structured practice and feedback through Moodle-based quizzes/assignments, AMCAT-supported test platforms for evaluations, and access to recorded learning resources for revision.			
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO3	1.90	1.74	Design outputs are produced, but explicit consideration and documentation of constraints such as safety, public welfare, sustainability, and feasibility are sometimes weak in design justification.
Actions Taken: 1. The NEP curriculum introduces Design Thinking with a lab component and strengthens engineering drawing through Computer-Aided Engineering Drawing, enabling early design process training, prototyping, and better design documentation aligned to specified needs. 2. Project-based pedagogy with iterative reviews, peer feedback and design justification rubrics are adopted to strengthen structured design reasoning. 3. The program supports student awareness of current societal needs through well-equipped laboratories, state-of-the-art computer labs, regular site visits, and expert sessions.			
PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	1.86	1.72	Students conduct projects, but investigation steps (data collection plan, experiment design, analysis protocol, and uncertainty and conclusion validity) are not consistently documented or assessed.

PO	Target Level	Attainment Level	Observations
Actions Taken: 1. Inquiry-based learning is reinforced through a range of laboratory courses and data analytics exposure, enabling students to develop structured experimental and analytical competencies. 2. Activity-based learning with progressive evaluation and structured report writing is implemented to strengthen evidence of investigation and valid conclusions. 3. Support includes ICT-enabled tools for data handling, Moodle/Teams for submissions and feedback, and lab systems strengthened through periodic quality practices and documentation.			
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO5	2.06	1.88	While students receive exposure to tools, opportunities to demonstrate sustained usage, deeper proficiency, and clear justification of tool choice and limitations need to be enhanced.
Actions Taken: 1. The curriculum fosters early tool competence through Foundations of Computing, Essentials of Data Science, Surveying/Geomatics labs, and Creative Technologies, enabling a structured progression in modern tool practice. 2. Hands-on tool-based labs, demonstrations and presentations are integrated into assessment so students must select appropriate tools, state limitations and interpret results. 3. A cloud based Moodle LMS, MS Teams for live sessions, ICT-enabled smart classrooms, campus wide secure Wi-Fi, high-bandwidth internet, and robust computing resources support technology intensive learning.			
PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO6	2.22	2.08	Students show awareness of societal and safety contexts, but consistent linking of engineering decisions to legal, safety and community responsibilities varies across courses.
Actions Taken: 1. The curriculum strengthens societal contextualization through IKS (Ancient Indian Architecture and Town Planning) with field visits and report writing, supporting context-based engineering thinking. 2. Faculty integrate community-context mini-projects, field visit reports and discussions on safety/legal responsibilities in relevant courses and evaluations. 3. Support is provided through structured internships and stakeholder interactions facilitated by institutional systems, enabling students to connect classroom learning with societal needs.			
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	1.78	1.71	Technical solutions are achieved, but sustainability considerations (environmental impact, resource efficiency and measurable indicators) are to be quantified or embedded in assessments.
Actions Taken: 1. Students are encouraged to select their projects like integrated waste management, recycled concrete aggregates, etc. to reduce environmental impact by conserving energy, for a sustainable environment. 2. Sustainability case studies and projects are embedded in teaching and assessed through structured rubrics. 3. Support also includes exposure through site/field visits and access to environmental learning resources.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	1.67	1.59	Ethical intent exists, but authentic assessment of academic integrity, professional ethics and ethical decision-making is not uniformly embedded in student artifacts.
Actions Taken: 1. The NEP curriculum incorporates Universal Human Values induction and structured communication/reflective learning components to strengthen ethical awareness. 2. Ethical reasoning and professional integrity are reinforced through ethical discussions, responsible conduct guidelines, and originality requirements embedded in assessments. 3. Institute quality processes (IQAC-led documentation and monitoring) and digital platforms support integrity and evidence keeping through structured submissions and evaluation workflows.			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	2.08	1.93	Teamwork occurs in projects, but role clarity and evidence of collaboration/leadership are not consistently captured through structured rubrics.

PO	Target Level	Attainment Level	Observations
Actions Taken: 1. The NEP curriculum includes team based labs activities and minor & major projects that promotes collaboration and team work. 2. Team-role matrices, peer assessment and presentation-based evaluation are adopted to capture contribution, leadership and multidisciplinary teamwork evidence. 3. Student bodies/clubs and departmental chapters that provide collaborative platforms and leadership opportunities.			
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO10	2.01	1.84	Reports and presentations are submitted by students, but variations are observed in the quality of technical writing, structured documentation, and presentation delivery.
Actions Taken: 1. Curriculum formalizes Communication Skills (English) Lab and assessed presentation/report components, improving consistency of communication outcomes. 2. Students periodically give presentations for project reviews, Internships, etc. which helps to improve their communication skills. 3. Support is strengthened through Training & Placement-led personality development and aptitude/communication preparation, practice resources on Btech Guru (mock tests/videos), and student-accessible notes/study materials platform.			
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO11	1.90	1.71	Students work on projects, but systematic planning (scope, scheduling, risk, resources and basic project finance awareness) is not properly documented.
Actions Taken: 1. Program elective track on construction management focusses on the management and finance aspects of civil engineering projects. 2. Students complete their internships in the industries where they learn about project management and finance.			
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO12	1.63	1.50	Independent learning evidence (self-study logs, MOOCs, certifications and reflective learning artifacts) is uneven and not consistently captured across courses.
Actions Taken: 1. The NEP curriculum includes credit-bearing Liberal Learning tracks and a mandatory internship requirement that institutionalize self-learning pathways and documented artifacts. 2. Lifelong learning processes are excelled through study MOOC badges via SWAYAM. 3. Summer Internship courses added after every year support and enhance lifelong learning. 4. Case studies, self-study component is introduced in all courses in curriculum revision.			

PSO	Target Level	Attainment Level	Observations
PSO1: Analyze, Design, Construct, Maintain and Operate infrastructure projects.			
PSO1	1.79	1.64	Students demonstrate domain competence, but integrated multi-domain evidence across civil sub-disciplines is not always strong across the batch.
Actions Taken: 1. The NEP curriculum introduces Basics of Civil Engineering and early Surveying/Geomatics labs to build integrated civil foundations and field documentation. 2. Field-based exercises, mini-projects and case studies are adopted to integrate structural, geotechnical, transportation and water considerations with systematic evaluation. 3. Support is provided in terms of well-equipped laboratories, high tech computer labs, regular site visits and active student/professional chapters that strengthen domain practice and exposure.			
PSO2: Assess the environmental impact of various projects and take required measures to curb environmental deterioration.			

PSO	Target Level	Attainment Level	Observations
PSO2	1.66	1.56	Environmental awareness exists, but structured environmental appraisal (checklists, compliance tables, field evidence and mitigation planning) is not consistently practiced.

Actions Taken:

1. Case-based teaching, field-visit reports and rubric-driven documentation are adopted so students explicitly demonstrate environmental impact assessment.
2. Organized field visits to STPs, landfills, Composting plants.
3. Conducted expert lectures on sustainable materials, green construction, and pollution control measures.

PSO3: Able to use the latest software pertaining to various streams of Civil Engineering.

PSO3	1.24	0.87	Significant gap in advanced proficiency and applied tool usage.

Actions Taken:

1. Introduced courses in BIM, Hydraulic Modeling, Data analysis, ADBS.
2. Tool-based labs, hands-on workshops and demonstration-based assessments are implemented to ensure sufficient time-on-tool and competency demonstration.
3. Support is strengthened through high-tech computer labs and departmental software ecosystem (ETABS, BIM/Revit, Open-Road, Water GEMS, QGIS, ANSYS).

(BATCH 5 2020-24)

PO	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.26	2.06	Students possess strong fundamental knowledge of engineering mathematics, basic sciences, and core engineering principles, with scope to further enhance the breadth and depth of application in solving diverse and complex engineering problems.

Actions Taken:

1) Innovative assignments, tutorials, interactive teaching learning pedagogies are adopted and practiced, to address the conceptual understanding of the courses like Mathematics, Mechanics, etc.

2) Students are encouraged to participate in technical events where they apply basic knowledge with the defined level of standards.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO2	2.12	1.90	The problem solving and analyzing skills gained through first and second year courses helps the students to apply in real time applications during their third and final year courses.

Actions Taken:
1) For improving the analytical skills, different case studies based on analytical skills are included in the curriculum.
2) Open Ended assignments are given to students to identify, formulate and analyze Engineering problems.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO3	1.93	1.77	The projects developed by the student provide solutions to some of the societal problems. However, they are not exclusively considering the social and environmental issues.

Actions Taken:
1) Major and minor Projects are based on finding solutions for the issues related to societal, environmental, public health and safety.
2) Expert sessions are organized through different professional bodies for students to make them aware about the current needs of the society.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO	Target Level	Attainment Level	Observations
PO4	2.02	1.78	It is observed that most of the project abstract and literature surveys are addressing the research-based approach. Data collection, carrying out investigations and experiments ended up with valid conclusions.
Actions Taken: **1)** Final year Projects/Internships are given which includes design of experiments, analysis and interpretation of data. **2)** Students are motivated to attend conferences/workshops/seminars which helps for doing research**.**			
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO5	2.18	1.96	It is observed that Up-gradations of some tools and resources are necessary to meet the present industry standards and research.
Actions Taken: **1)** Computer Lab is equipped with modern tools/software in all the domains of civil engineering. 2) More computer systems with the latest configuration are added to the lab. 3) B Tech guru platform with enhanced modules is made available for competitive exam and placement preparation.			
PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO6	2.23	2.03	The courses of Civil Engineering like sociology, environmental science, and engineering economics are addressing the needs of, health, safety and social concerns regarding engineering practices in real life.
Actions Taken: **1)** Employability and career development courses are introduced in the 2019 revision to understand the safety concerns and social aspects. **2)** Courses such as Engineering Economics, financial Management are included in B. Tech. civil engineering curriculum revision 2019. 3) Real life Societal problems are addressed in final year projects like development of water purification systems for nearby villages, solid waste management, etc.			
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	1.70	1.57	Solutions obtained by the students are technically sound but the issues of global and environmental awareness and the need for sustainable development should be inculcated among the students.
Actions Taken: **1)** Students are encouraged to select their projects like bio enzymes, recycled concrete, etc. to reduce environmental impact by conserving energy, for a sustainable Environment. **2)** Topics on sustainability are added in EVS and EIACC courses in curriculum revision 2019.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	1.82	1.79	The students are doing better in improving their overall expertise in the field of engineering. Ethical and moral values are also to be imbibed among the students which are essential in their future career.
Actions Taken: **1)** Career guidance programs, motivational talks are organized for students to make them aware about ethical practices. **2)** Plagiarism checking is made mandatory for B. Tech project reports, Papers, Patents through authenticated plagiarism software.			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	1.94	1.76	The students are able to work as individuals as well as in teams during minor, mini and major projects at SY, TY and B Tech.

PO	Target Level	Attainment Level	Observations
Actions Taken: 1) Laboratory experiments class activities are conducted in groups of students to enhance cooperative and collaborative learning with teamwork. 2) Students are engaged in various project based learning (PBL) activities, where they learn to function effectively both as individuals and as team members in a group. 3) Alumni are involved in assessments like practical viva examinations, project examinations.			
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO10	2.06	1.95	The communication, presentation and report writing skills are to be further improved among the students.
Actions Taken: 1) Students periodically give presentations for project reviews, Internships, etc. which helps to improve their communication skills. 2) Training and placement cell organizes various training programs such as curriculum vitae writing, group discussion, personal interviews, aptitude training, behavioral and life skills on a regular basis.			
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO11	1.93	1.79	Project management and Financial Management principles are very much essential in student life as well as in further career while working on different engineering projects.
Actions Taken: 1) A complete open elective track on construction and project management is included in the revised curriculum. 2) Students complete their internships in the industries where they learn about project management and finance.			
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO12	1.70	1.58	The pre-final year and final year courses of the civil engineering program provide the basis for contemporary issues and lifelong learning.
Actions Taken: **1)** Lifelong learning processes are excelled through study of skill development courses, collaborative courses for all graduate levels. 2) Summer Internship courses added after every year support and enhance lifelong learning. 3) Case studies, self-study component is introduced in majority of courses in curriculum revision 2019.			

PSO	Target Level	Attainment Level	Observations
PSO1: Analyze, Design, Construct, Maintain and Operate infrastructure projects.			
PSO1	1.94	1.75	Different tools and techniques are used to analyze, design, test, construct and maintain the civil engineering projects.
Actions Taken: 1) Site visits are regularly arranged for projects like buildings, WTP, STP, Railways, Metros, etc. 2) Students are doing Semester long Internships with reputed construction companies, consultants, On-site training etc.			
PSO2: Assess the environmental impact of various projects and take required measures to curb environmental deterioration.			
PSO2	1.71	1.54	Students are urged to check the environmental impacts of their minor, mini and major projects and the solutions proposed therein.
Actions Taken: 1) An open elective basket on environmental engineering is introduced in the revised curriculum. 2) Social activities like, cloth collections, e waste collection, are conducted for environmental awareness among students.			

PSO	Target Level	Attainment Level	Observations
PSO3: Able to use the latest software pertaining to various streams of Civil Engineering.			
PSO3	1.87	1.40	All the skill courses in the curriculum are imparting the hands-on practice of the latest civil engineering software's in the market.
Actions Taken: 1) Bentley software suite with modules like STAAD Connect, OPENROAD, Water GEMS, etc. is made available to students under skill courses and for project work. 2) Latest commercial software packages like ANSIS, ETABS, etc. are purchased for skill courses.			

8.2 Academic Audit and actions taken thereof during the period of Assessment (15) Total Marks 12.00

Institute Marks : 12.00

Academic Audit and Actions Taken thereof during the Period of Assessment

The department follows a structured academic audit process aligned with NBA and Outcome-Based Education (OBE) principles to ensure continuous improvement in curriculum, teaching–learning, assessment, and outcome attainment. The academic audit is conducted once every semester during student availability, enabling direct interaction with students and real-time verification of classroom teaching, laboratory conduct, assessment practices, curriculum delivery, and learning effectiveness. Vision and Mission statements of the Institute and Department are formulated, approved, and periodically reviewed, while Program Educational Objectives (PEOs) are defined by the Program Assessment and Quality Improvement Committee (PAQIC) to ensure alignment with institutional goals and long-term graduate attributes.

Vision, Mission, and PEOs are published and disseminated through the Institute and Department websites, classrooms, laboratories, academic documents, and orientation programs, and stakeholder awareness is verified during audits. Consistency between PEOs and the Department Mission is ensured through a PEO–Mission correlation matrix, while Course Outcomes (COs) are defined for all courses and mapped with Program Outcomes (POs) and Program Specific Outcomes (PSOs). Attainment of COs, POs, and PSOs is evaluated using direct and indirect assessment tools with predefined benchmarks, and the results are reviewed for continuous improvement. The semester-wise academic audit ensures systematic monitoring, documentation, and timely corrective actions in compliance with NBA requirements.

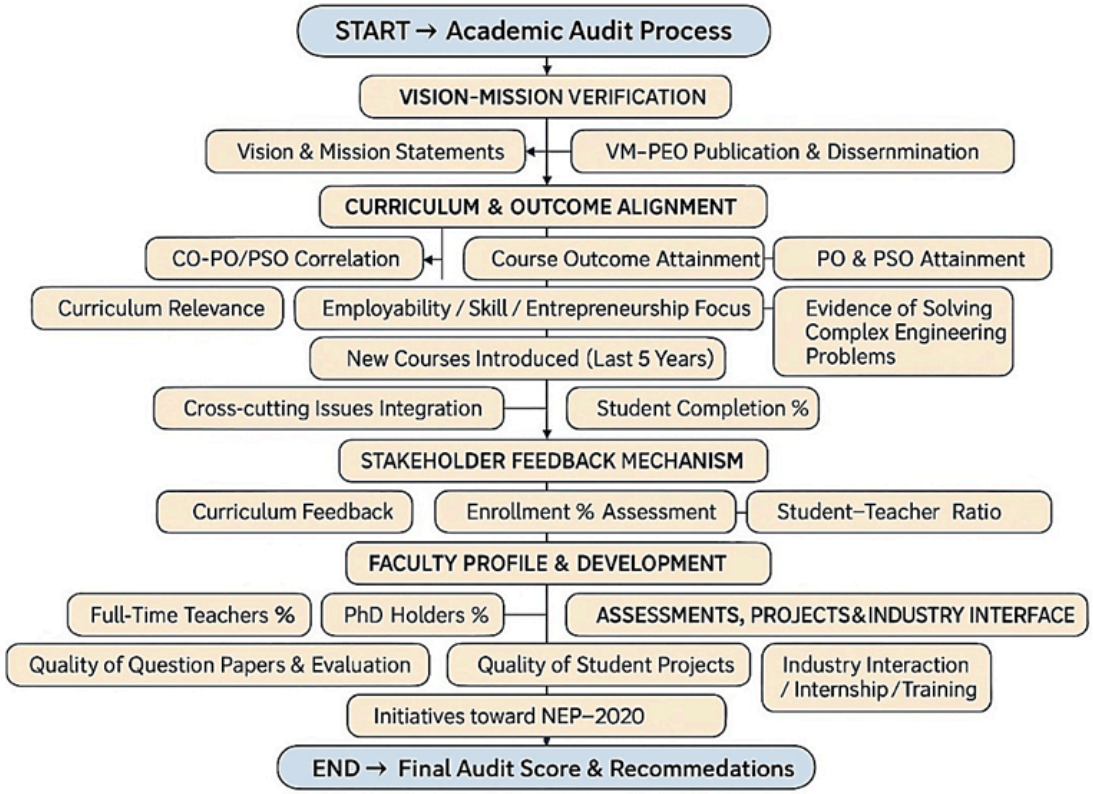


Fig 8.2a: Academic Audit Process

MIT | Academy of Engineering

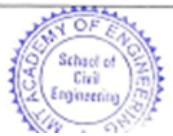
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

SCHOOL OF CIVIL ENGINEERING

Action Taken & Effectiveness/Impact Analysis of Academic Audit 2024-25 Term-II

Date of audit Conducted - 06/08/2025
Expert - Dr Aruna Thube, Associate Professor Civil Engineering Dept. COEP, Pune
Venue - CRPC Board Room

Sr No	Presentation By	Comment By the Expert	Action Taken	Effectiveness/Impact Analysis
1	Dr. Shyam Shukla, Dean, School of Civil Engineering, welcomes the expert Dr. Aruna Thube, Former Associate Professor, Civil Engineering Dept., COEP, Pune.			
	Vision, Mission, and PEO of Institute and School Dissemination.	Disseminated and discussed the vision, mission, and PEO statements of the School of Civil Engineering.		
2	Discussion on Result Analysis for AY 2024-25 **(SY, TY, and BTech by ClassCoordinators)**	The result analysis of SY, TY, and B.Tech was presented to the expert. The expert advised conducting a root cause analysis to identify courses with low performance. For those courses, students should be provided with additional support through extra classes or dedicated office hours. This initiative will help improve the results of such courses in the future.	Concerned faculties were informed to take corrective measures accordingly	SY - The actions taken have strengthened academic delivery, increased student engagement, and aligned courses with higher-order learning outcomes. Improved industry interaction and evaluation practices have also contributed to a more effective, outcome-driven learning environment. TY - The adopted measures have contributed to more effective teaching–learning



				practices by reinforcing student engagement, improving conceptual clarity, and strengthening academic support mechanisms. The integration of blended learning, project-based activities, and refined assessment approaches has fostered a more interactive, practice-oriented, and outcome-driven learning environment. **BTech** Enhanced academic performance as a result of regular attendance tracking, remedial support, and continuous assessment follow-up. Strengthened problem-solving and design skills by facilitating project-based learning, industry-oriented assignments, and technical seminars.
3	1. Success Rate With and Without Backlog 2. SLIP and placement status of 2024-25.	The expert discussed and suggested the department's initiatives in adopting pedagogical reforms, blended learning, and expert sessions to enhance student learning and performance.	The department revised teaching and assessment methods, implemented a blended learning model with recorded resources, and conducted expert-led sessions to strengthen academic	These actions have improved student engagement, accessibility to learning materials, and academic outcomes, contributing to higher success and readiness for course progression.

		SLIP and placement appreciated.	delivery.	
4	Mr. Bhaskar Wabhitkar	Appreciated for the conduction of the Transportation Engineering course: The course primarily focuses on experiential learning.	The same pedagogy should be continued so that students can further enhance their research skills and achieve the intended outcomes of the laboratory courses in upcoming semesters. Care must be taken to ensure that students are not overburdened by these activities. All assigned work should be completed within the scheduled practical sessions, thereby maintaining balance and preventing additional workload outside class hours.	Students presented the 5 conference papers under this course. ➢ International Conference on Innovations in Smart and Sustainable Infrastructure (ISSI 2.0)- **03Papers** ➢ 4th International Conference on Innovations in Mechanical & Civil Engineering 2025- **02Papers**
5	Mr Vijay Pingle	➢ Appreciated course delivery practices. ➢ Raised concerned about more no. of detentions and less result.	➢ Detention policy to be reviewed and make-up sessions will be arranged. ➢ Extra support (Practice sessions) will be provided for Weak/slow learners in the next batch.	The course will be starting in Jan 2025.
6	Dr. Vijay Muthekar	Presented the following courses: ➢ Data Analysis (Even Sem) Said courses adopt the	➢ Continuing the implementation of same teaching-learning pedagogy in the coming semester	**The course will be starting in Jan 2026.**

MIT | Academy of Engineering

(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

8/9/2025

Mr. Bhaskar Wabhitkar
Department Coordinator

ACADEMY OF ENGINEERING School of Civil Engineering

Dr. S. N. Shukla
Dean, School of Civil Engg.

DEAN
School of Civil Engineering
MIT Academy of Engineering
Alandi (D.), Pune-412 105.

Fig 8.2b: Action taken effectiveness.

8.3 Improvement in Faculty Qualification/Contribution (15) Total Marks 10.00

Institute Marks : 10.00

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
No. of faculty members with Ph.D. degree	6.00	6.00	4.00
No. of publications in peer reviewed journals	3.00	1.00	3.00
No. of publications in conferences	6.00	1.00	1.00

8.4 Improvement in Academic Performance (10)

Total Marks 8.00

Institute Marks : 8.00

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
Academic Performance Index (API) of the First-Year Students in the Program (Refer to section 4.3)	5.95	5.45	5.53
Academic Performance Index of the Second-Year Students in the Program (Refer to section 4.4)	5.72	5.67	5.20
Academic Performance Index of the Third Year Students in the Program (Refer to section 4.5)	6.96	6.89	6.98

9 STUDENT SUPPORT AND GOVERNANCE (120)

Total Marks 117.00

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

Total Marks 2.00

Institute Marks : 2.00

Please provide First year faculty information considering load

Name of the faculty member	PAN No.	Qualification	From Engineering Courses	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Date Of leaving(In case Currently Associated is 'No')
Dr. Ashish Itolik	ABSPI7321K	Ph.D	No	22/03/2017	Physics	Assistant Professor	29/08/2023	Yes	Regular	
Dr. Muniappan	BZGPM1537G	Ph.D	Yes	09/08/2014	Remote sensing and GIS Applications to Construction Management	Assistant Professor	04/07/2022	Yes	Regular	
Dr. Janhavi Ina	AAGPI3280G	Ph.D	Yes	20/06/2008	Environmental Engineering	Professor	01/01/2023	Yes	Regular	
Dr. Dipti Sakha	BPGPS4957A	Ph.D	Yes	06/06/2018	Singal and systems	Associate Professor	23/03/2005	Yes	Regular	
Dr. Usha Verma	ABFPL2857E	Ph.D	Yes	01/11/2011	Image processing Biomedical	Associate Professor	26/06/2012	Yes	Regular	
Dr. Puja Verma	AFTPV6405L	Ph.D	No	01/01/2005	EM Field Theory	Associate Professor	20/07/2009	Yes	Regular	
Dr. Sneha Pokl	AXVPP7153M	Ph.D	Yes	06/04/2023	Renewable energy	Assistant Professor	12/09/2023	Yes	Regular	
Dr. Kunjan Jun	BBIPJ4569D	Ph.D	Yes	21/08/2023	Water treatment adsorption defluridation	Assistant Professor	12/12/2023	Yes	Regular	
Dr. V.C.Wangik	AANPW2940G	Ph.D	Yes	11/10/2020	Data Science	Associate Professor	22/07/2008	Yes	Regular	
Dr. M. M. Char	AJEPC7832R	Ph.D	Yes	05/02/2021	Mechanical	Associate Professor	07/04/2007	Yes	Regular	
Dr. S. Patare	AUYPP0579M	Ph.D	Yes	07/08/2021	Structural Engineering	Assistant Professor	31/07/2023	Yes	Regular	
Dr. Ashish Mula	AZPPM2800E	Ph.D	Yes	21/12/2022	VLSI DESIGN	Assistant Professor	05/09/2023	Yes	Regular	
Dr.P C Jikar	ATXPJ6415E	Ph.D	Yes	06/04/2022	Mechanical en	Assistant Professor	29/06/2022	Yes	Regular	
Mr. Mahendra S	DFWPS4530H	M.Phil	No	01/01/2017	English	Assistant Professor	08/06/2019	Yes	Regular	
Ms. Archana M	BEPPM8981Q	M.Tech	Yes	30/08/2010	Technology And Development	Assistant Professor	09/11/2010	Yes	Regular	

Dr. Renu Shas	DZZPS4745F	Ph.D	Yes	28/07/2023	Manufacturing Engineering	Assistant Professor	01/08/2018	Yes	Regular	
Mr. Nikhil Bhal	AUXPB7039H	M.Tech	Yes	01/06/2014	Environment and Water Resources Engineering	Assistant Professor	18/12/2017	Yes	Regular	
Mrs. Shubhanç	AYHPK9297N	M.E.	Yes	06/01/2014	Data Mining Machine Learning	Assistant Professor	06/02/2014	Yes	Regular	
Mr. Rahul Patil	ARYPP4223B	M.E.	Yes	01/09/2014	MACHINE DESIGN	Assistant Professor	28/07/2017	Yes	Regular	
Ms. S. B. Khar	CRWPK4503M	M.E.	Yes	24/01/2014	Information Technology	Assistant Professor	23/06/2014	Yes	Regular	
Mr. Sandeep S	BHUPS5002G	M.E.	Yes	01/07/2012	Computer Security	Assistant Professor	19/11/2012	Yes	Regular	
Dr. Nitasha B.(	BBUPC9929G	Ph.D	Yes	13/12/2016	Mechanical Design Engg	Assistant Professor	08/01/2018	Yes	Regular	
Ms.Bhagyashr	ANRPA8565G	M.E.	Yes	01/12/2014	Distributed Systems Internet of Things	Assistant Professor	18/11/2010	Yes	Regular	
Dr. Kalpana Pa	ALUPR0581N	Ph.D	Yes	12/12/2023	Electrical and Electronics Engineering Sciences	Assistant Professor	12/09/2022	Yes	Regular	
Mr. Vijay. A. Ta	AETPT2318B	M.Sc	No	01/01/2018	Physical Chemistry	Assistant Professor	25/08/2008	Yes	Regular	
Mr. Amol. M. K	ASJPK6675N	M.Sc	No	01/07/2006	Inorganic Chemistry	Assistant Professor	20/08/2006	Yes	Regular	
Ms. Priti Shind	CISPS7728B	M.Sc	No	30/06/2009	Mathematics	Assistant Professor	07/05/2017	Yes	Regular	
Mr. Azhar Shail	DBYPS8894A	M.Sc	No	07/12/2010	Mathematics	Assistant Professor	07/06/2011	Yes	Regular	
Mr. Manish Kha	BBCPK4618L	M.Sc	No	30/06/2005	Electronics	Assistant Professor	03/10/2010	Yes	Regular	
Mrs. Sini Rons	ALCPV4354K	M.Phil	No	21/06/2010	Differential Equations	Assistant Professor	30/07/2014	Yes	Regular	
Mr.Nikhil Sarda	GFUPS0478K	M.Tech	Yes	01/06/2017	Electrical Power system	Assistant Professor	08/01/2018	Yes	Regular	
Mrs.Prajakta D	BKXPD8027J	M.Tech	Yes	29/09/2020	Data Mining	Assistant Professor	07/11/2022	Yes	Regular	
Ms.Pushpmala	DHHPS4802R	M.E.	Yes	01/12/2014	Machine Learning Data science	Assistant Professor	09/05/2022	Yes	Regular	

Mrs.Snehal Wa	ADJPW3135E	M.E.	Yes	20/02/2015	WATER RESOURSE Engg	Assistant Professor	09/04/2023	Yes	Regular	
Ms.Shilpa K. R	AKHPD4476G	M.E.	Yes	09/02/2013	VLSI and EMBEDDED SYSTEM	Assistant Professor	28/07/2008	Yes	Regular	
Mr. Aniket Kem	BSGPK5094K	M.E.	Yes	19/09/2013	Digital System	Assistant Professor	05/06/2014	Yes	Regular	
Madhavi Nimka	AKBPD6899F	M.E.	Yes	12/01/2013	Machine learning	Assistant Professor	23/11/2022	Yes	Regular	
Ms.Priyankya M	ALVPJ9416B	M.E.	Yes	06/02/2016	AIML Image Processing	Assistant Professor	09/10/2023	Yes	Regular	
Ms. Anagha Ga	DFTPK9687C	M.E.	Yes	01/05/2016	Construction Management	Assistant Professor	21/08/2023	Yes	Regular	
Ms. Swapnali M	CNOPM0789D	M.E.	Yes	11/04/2018	Environmental Engineering	Assistant Professor	23/05/2022	Yes	Regular	
Dr Madhuri	BYZPM4622E	Ph.D	No	22/07/2023	Physics	Assistant Professor	21/08/2024	Yes	Regular	
Dr. Swapnil Do	AVDPD4163D	Ph.D	No	21/09/2021	Physics	Assistant Professor	28/07/2025	Yes	Regular	
Dr. Abhay Dasl	AQGPD7249C	Ph.D	No	01/09/2025	Physics	Assistant Professor	18/08/2025	Yes	Regular	
Dr.Satish Gajbl	ALOPG8689A	Ph.D	No	30/10/2010	Mathematics	Assistant Professor	27/09/2011	Yes	Regular	
Mrs.Manisha P	BSDPP6671E	M.Sc	No	12/06/2009	Mathematics	Assistant Professor	07/05/2017	Yes	Regular	
MR.ANKUSH F	CXVPP1746G	M.Sc	No	25/06/2018	Mathematics	Assistant Professor	20/08/2024	Yes	Regular	
MS. PUNAM G	CSPPG5476D	M.Sc	No	20/06/2018	Mathematics	Assistant Professor	27/08/2024	Yes	Regular	
Mr .AKSHAY T	AYTPT3127C	M.Sc	No	03/12/2020	Mathematics	Assistant Professor	18/09/2024	Yes	Regular	
DR.Sneha C	CEKPC0669F	Ph.D	No	09/07/2025	Mathematics	Assistant Professor	14/07/2025	Yes	Regular	
Dr. S.S.Kulkarr	BKPPK0799C	Ph.D	No	18/03/2014	English Pragmatics	Assistant Professor	11/07/2016	Yes	Regular	
DR.KRISHNA S	ESBPS9138C	Ph.D	No	01/08/2022	English Communication Skills	Assistant Professor	29/07/2024	Yes	Regular	
Ms. Aastha Ans	BYRPA5909C	MA	No	01/04/2021	English Literature	Assistant Professor	10/02/2025	Yes	Regular	

Ms. Parnavi Sa	KFSPS4395D	MA	No	01/12/2019	Communication Studies	Assistant Professor	25/08/2025	Yes	Regular	
Dr. Dnyaneshw	ALVPJ2443A	Ph.D	No	13/09/2024	Communication Studies	Assistant Professor	25/08/2025	Yes	Regular	
Dr. Snigdha Mc	EWUPM2610C	Ph.D	No	30/12/2024	Communication Studies	Assistant Professor	25/08/2025	Yes	Regular	
Mr. Pravin. G. S	CVZPS8369A	M.Tech	Yes	01/07/2015	Chemical Engineering Energy and Sustainability	Assistant Professor	12/08/2024	Yes	Regular	
Dr.Piyali.R.Chc	ARIPR2201H	Ph.D	Yes	13/08/2018	Chemical Engineering	Assistant Professor	06/08/2025	Yes	Regular	
Ms. Sonali Sax	BVFPS1798Q	M.E.	Yes	12/01/2014	Chemical Engineering Waste water treatment waste to energy	Assistant Professor	01/05/2026	Yes	Regular	
Dr. Mahesh D.(	ABWPG9848F	Ph.D	Yes	26/02/2013	Electronics	Professor	06/11/2005	Yes	Regular	
Dr. Sandip Thit	AJDPT5538Q	Ph.D	Yes	16/05/2022	Information Technology	Associate Professor	26/11/2025	Yes	Regular	
Dr. Poonam La	ABMPL1150F	Ph.D	Yes	18/08/2018	Computer Engineering	Assistant Professor	12/01/2025	Yes	Regular	
Ms.Prajakta Ja	ESTPM5885C	M.E.	Yes	10/10/2020	Computer Engineering	Assistant Professor	12/10/2025	Yes	Regular	
Ms. Nutan Wag	EDNPD8995M	M.E.	Yes	28/03/2016	Computer Science and Information Technology	Assistant Professor	12/03/2025	Yes	Regular	
Dr. Janavhi Ina	AAGPI3280G	Ph.D	Yes	20/06/2008	Environmental Engineering	Professor	01/01/2023	Yes	Regular	
Dr. Sushil Mag	BEBPM6245R	Ph.D	Yes	01/07/2019	Structural engineering	Associate Professor	30/09/2019	Yes	Regular	
Mr. Vijay Pinga	ANNPP9502G	M.E.	Yes	01/06/2004	Structures	Assistant Professor	14/08/2008	Yes	Regular	
Dr. Nilesh Mate	AJVPM9073F	Ph.D	Yes	10/03/2015	Structural Engineering	Professor	25/08/2025	Yes	Regular	
Dr. S Madheka	ABEPM6694B	Ph.D	Yes	01/07/2010	Structural engineering	Professor	21/01/2025	No	Contractual	31/12/2025
Dr. P .R .Hatte	AACPH3459A	Ph.D	Yes	07/01/2021	Mechanical Engg	Professor	16/06/2015	Yes	Regular	
Dr. N. B. Totla	AGCPT9695G	Ph.D	Yes	03/12/2022	Mechanical HEAT POWER	Associate Professor	04/01/2010	Yes	Regular	

Mr. B.R.Patil	BNKPP2033A	M.Tech	Yes	15/07/2014	Machine Design	Assistant Professor	12/02/2014	Yes	Regular	
Dr.Kundan Mis	AVXPM3243R	Ph.D	Yes	25/09/2023	Mechanical Design	Assistant Professor	19/08/2024	Yes	Regular	
Mr.Satish S. Ka	ARMPK4581B	M.E.	Yes	01/07/2003	Electrical	Assistant Professor	28/06/2013	Yes	Regular	
Mr.Vinayak B. I	ADQPK7160G	M.E.	Yes	07/05/2007	AI IMAGE PROCESSING ROBOTICS	Assistant Professor	01/09/2012	Yes	Regular	
Mr.Dhananjay I	BNCPD6878F	M.Tech	Yes	01/09/2011	Electronic Design Technology	Assistant Professor	11/12/2014	Yes	Regular	
Mr.Isaq A. Shik	AXLPS4931L	Ph.D	Yes	18/07/2022	Embedded system Signal Processing	Assistant Professor	18/07/2023	Yes	Regular	
Dr. Namrata Bi	BQGPB9892N	Ph.D	Yes	23/01/2025	Wireless Communication Network Security	Assistant Professor	30/09/2024	Yes	Regular	
Nikhil B. Sarda	GFUPS0478K	M.Tech	Yes	21/05/2017	Assistant Professor	Assistant Professor	01/08/2018	Yes	Regular	
Mrs.Uttara P. D	GMEPD6036F	M.Tech	Yes	02/07/2019	Natural Language Processing Deep Learning	Assistant Professor	13/10/2025	Yes	Regular	
Dr. Vrushali R.	ABAPW6924G	Ph.D	Yes	21/09/2022	Photovoltaic Systems	Assistant Professor	15/11/2022	Yes	Regular	
Dr.Aswathy M.	BOIPA4490M	Ph.D	Yes	07/07/2025	AI in Healthcare	Assistant Professor	04/04/2022	Yes	Regular	
Ms. Poonam P.	ASQPR3562E	M.E.	Yes	17/07/2017	Computer Engineering	Assistant Professor	12/10/2024	Yes	Regular	
Mrs.Rohini Bar	BTSPM2947Q	M.E.	Yes	01/10/2017	ML IOT	Assistant Professor	16/12/2025	Yes	Regular	
Dr. Navnath Ka	AFFPN8637Q	Ph.D	Yes	22/11/2022	Computer Science and Engineering	Assistant Professor	08/02/2023	Yes	Regular	
Ms.Shubhangi	AYHPK9297N	M.E.	Yes	06/01/2014	Data Mining Machine Learning	Assistant Professor	06/02/2014	Yes	Regular	
Mrs.Vaishali ku	AMJPV6215D	M.Tech	Yes	01/07/2013	Cyber SecurityMachine learning	Assistant Professor	14/07/2025	Yes	Regular	
Ms. Poonam M	BXAPM2856E	M.E.	Yes	30/06/2014	AI	Assistant Professor	05/08/2024	Yes	Regular	
Mr.Vaibhav Re	BRXPR3700D	M.E.	Yes	16/08/2017	CSIT	Assistant Professor	26/08/2024	Yes	Regular	

Ms. Tejas B.Tai	AQUPT3503H	M.Tech	Yes	01/02/2019	AIML	Assistant Professor	14/07/2025	Yes	Regular	
Ms.Suvidha P.	CYKPS8890J	M.Tech	Yes	08/06/2014	Computer Engineering	Assistant Professor	23/09/2025	Yes	Regular	
Dr. Khushal Kh	CCMPK4990F	Ph.D	Yes	07/07/2022	Computer Engineering	Assistant Professor	04/06/2025	Yes	Regular	
Ms.Anjali Patil	BUYPP0485P	M.E.	Yes	31/12/2015	AIML	Assistant Professor	12/04/2024	Yes	Regular	
Ms. Komal Bor	BOXPB9352Q	M.E.	Yes	10/10/2017	Computer Engineering	Assistant Professor	14/07/2025	Yes	Regular	
Mrs. Parvati P.	AIHPN5613R	M.E.	Yes	01/09/2015	Computer Security	Assistant Professor	14/07/2025	Yes	Regular	
Mrs. Pragati A.	BCAPD3612E	M.Tech	Yes	17/03/2015	AIML	Assistant Professor	14/07/2025	Yes	Regular	
Mrs.Ambika Ka	BAEPA2931F	M.E.	Yes	01/05/2021	Computer Engineering	Assistant Professor	12/02/2024	Yes	Regular	
Mr.Pankaj Devi	ARLPD2772Q	M.E.	Yes	01/05/2015	IoT AI	Assistant Professor	25/11/2024	Yes	Regular	
Ms.Suyoga Bai	BCKPB2630Q	M.E.	Yes	25/04/2016	Cyber Security IOT	Assistant Professor	12/04/2024	Yes	Regular	
Mr.Prateek Mes	DBZPM4787F	M.Tech	Yes	14/07/2017	Clustering ML	Assistant Professor	14/07/2025	Yes	Regular	
Ms.Asmeeta M	AUGPM4606G	M.E.	Yes	01/05/2014	Computer Engineering	Assistant Professor	14/07/2025	Yes	Regular	
Ms.Priyanka Ka	BPJPP9193N	M.E.	Yes	27/11/2020	Computer Networking	Assistant Professor	12/08/2025	Yes	Regular	
Ms.Monali Ban	BJHPB8937L	M.E.	Yes	01/08/2016	Computer Engineering	Assistant Professor	14/07/2025	Yes	Regular	
Mrs. Deepa Re	AUEPM0316P	M.E.	Yes	07/11/2017	CSE	Assistant Professor	12/03/2025	Yes	Regular	
Mr. Shivaji Pati	AQSPP3401G	M.E.	Yes	10/10/2012	CSE	Assistant Professor	12/03/2025	Yes	Regular	
Suhas Kothavle	BPCPK7623F	M.Tech	Yes	20/05/2016	CSE	Assistant Professor	17/12/2026	Yes	Regular	
Dr. Suyog Kum	AHPPT8419C	Ph.D	Yes	30/07/2011	Chemical Engineering Separation Process	Professor	30/08/2022	Yes	Regular	
KRUNAL PAWA	AXFPP4412M	M.Tech	Yes	31/12/2013	CSE	Assistant Professor	07/03/2022	Yes	Regular	

DR. SHALAKA	AHDPH5352E	Ph.D	Yes	11/03/2025	Construction Management	Assistant Professor	22/07/2024	Yes	Regular	
Mrs.Anita Shin	AYNPD0353L	M.Tech	Yes	30/12/2015	Computer Engineering	Assistant Professor	11/03/2024	Yes	Regular	
Dr. Dipti Y. Sak	BPGPS4957A	Ph.D	Yes	06/06/2018	Singal and systems	Associate Professor	23/03/2005	Yes	Regular	
Pranav Shriran	ALXPC1797L	M.Tech	Yes	16/02/2014	Computer Science Engineering	Assistant Professor	10/11/2014	Yes	Regular	
Dr. Sandip Kah	BZTPK8038D	Ph.D	Yes	26/02/2024	ML DL BLOCKCHAIN	Assistant Professor	13/09/2023	Yes	Regular	
APARNA KULK	BEMPP8482A	M.E.	Yes	01/06/2018	COPUTER SCIENCE AND ENGG	Assistant Professor	03/02/2025	Yes	Regular	
Mr. Atif Shaikh	EPAPS5171D	M.Tech	Yes	27/09/2013	Transportation Engineering	Assistant Professor	25/08/2014	Yes	Regular	
Dr. Kanchan Dl	BIJPP9100N	Ph.D	Yes	26/12/2023	Computer Science and Engineering	Assistant Professor	12/07/2023	Yes	Regular	
Ms. Padma Nir	AHOPN4809K	M.E.	Yes	27/12/2010	Computer Science and Engineering	Assistant Professor	20/06/2012	Yes	Regular	
Ms. Disha Sen	BVGPS1465M	M.Tech	Yes	30/08/2014	Computer Science and Engineering	Assistant Professor	03/12/2025	Yes	Regular	
Mrs. Shweta R	GIRPK6879L	M.E.	Yes	26/07/2025	CSE	Assistant Professor	03/12/2025	Yes	Regular	
Mr.Anil Pawar	CISPP0286P	M.Tech	Yes	24/02/2023	Networking Blockchain AIML	Assistant Professor	23/07/2025	Yes	Regular	
Mr.Jalaj Limay	AVKPL5738M	M.Tech	Yes	01/03/2023	Data Analytics and decision sciences	Assistant Professor	19/08/2025	Yes	Regular	
Mr.Sopan Kshi	DPMPK8423P	M.E.	Yes	10/11/2020	web Technology Cyber Security	Assistant Professor	02/12/2024	Yes	Regular	
Abhilasha Josh	BLBPA2970E	Ph.D	Yes	23/12/2023	Deep learning Image Processing	Assistant Professor	06/01/2025	Yes	Regular	
Surendra Bare	BAAPB8277P	Ph.D	Yes	21/09/2021	Thermal Engineering	Assistant Professor	01/04/2021	Yes	Regular	
SAVITA PAWAI	AOAPB5831L	M.E.	Yes	30/06/2011	Embedded System	Assistant Professor	11/08/2008	Yes	Regular	
Dr.Abhijeet Ma	AMCPM3063D	Ph.D	Yes	10/03/2017	Design Engineering	Professor	31/12/2011	Yes	Regular	
Mrs.Laxmi Kale	APCPA6708A	M.E.	Yes	22/08/2022	Data Mining Data Science ML	Assistant Professor	20/02/2024	Yes	Regular	

Mrs.Nita Gore	BQGPM2867N	M.E.	Yes	07/06/2016	ML DATA SCIENCE	Assistant Professor	13/08/2024	Yes	Regular	
Mrs.Sapna Kol	ATAPB4543L	M.E.	Yes	14/11/2024	NLP	Assistant Professor	29/08/2024	No	Regular	31/05/2025
DR.P.Kalos	AILPK0267E	Ph.D	Yes	11/07/2011	Production Engineering	Associate Professor	15/07/2019	Yes	Regular	
Savita Mane	AGGPH7537P	M.E.	Yes	28/11/2014	Sentiment Analysis AI	Assistant Professor	04/12/2024	Yes	Regular	
Padma Nimbor	AHOPN4809K	M.E.	Yes	27/12/2010	Computer Science and Engineering	Assistant Professor	20/06/2012	Yes	Regular	
Vaibhav Gijare	AJEPG8837E	M.E.	Yes	10/07/2013	Computer Network Cyber security	Assistant Professor	22/08/2022	Yes	Regular	
Dr.V.D.Pakhale	BFAPP0937F	Ph.D	Yes	20/09/2024	Water treatement Adsorption Biofuels	Assistant Professor	06/09/2012	Yes	Regular	
Vikrant Verma	AMHPV0978R	M.Tech	Yes	19/02/2026	Electronics and Communication Engineering	Assistant Professor	18/04/2022	Yes	Regular	
Dr.Alka Jakhar	BMBPJ1524N	Ph.D	Yes	05/11/2022	Microelectronics and Nanoelectronics	Assistant Professor	04/07/2022	Yes	Regular	
Mr.Aniket Naga	ARDPN5030F	Ph.D	Yes	02/06/2022	Mech	Assistant Professor	19/12/2022	No	Regular	23/02/2025
Sagar Mahajar	AZUPM2373F	M.E.	Yes	30/05/2016	Discrete mathematic software modelling and design software	Assistant Professor	02/12/2024	Yes	Regular	
Deepti Bhirud	ALXPC1797L	M.E.	Yes	31/08/2015	NPL Networking	Assistant Professor	09/12/2024	Yes	Regular	
Dr.S.K.Dhoke	AQDPD4115A	Ph.D	No	08/08/2009	Corrosion science and Engineering	Assistant Professor	28/07/2025	Yes	Regular	
Dr.Arnab Mand	BMWPN7304L	Ph.D	Yes	14/10/2020	Chemical Engineering	Assistant Professor	12/07/2022	Yes	Regular	
Dr.Mrudula Pat	DEFPP7252P	Ph.D	Yes	08/07/2025	Structural Engineering	Assistant Professor	18/08/2025	Yes	Regular	
Mr. Sitaram Su	CQWPS0191J	M.Tech	Yes	05/08/2015	Structural engineering	Assistant Professor	01/08/2018	Yes	Regular	
Dr.Supriya Sab	ALUPB6158P	Ph.D	Yes	09/01/2024	Deep Learning	Assistant Professor	03/09/2025	Yes	Regular	

Ms.Swati Patil	BZXPP2208L	M.E.	Yes	31/12/2015	CSE	Assistant Professor	28/07/2025	Yes	Regular	
Dr.Mahesh Naç	ADWPN6473H	Ph.D	Yes	09/12/2019	MECHANICAL ENGINEERING	Associate Professor	02/09/2025	Yes	Regular	
Mr. Santosh Ar	AVXPA6604L	M.E.	Yes	12/12/2017	IT E BUSINESS APPS COMPUTER NETWORK	Assistant Professor	02/12/2024	Yes	Regular	
AMRIT KUMAF	DJUPS7624Q	M.E.	Yes	27/02/2016	CSE	Assistant Professor	13/10/2025	Yes	Regular	
Dr. Rahul Adha	AVFPA2037F	Ph.D	Yes	22/08/2022	Computer Engineering	Assistant Professor	15/01/2024	Yes	Regular	
CHAITANYA P/	BGMPP9119C	M.Tech	Yes	12/03/2012	Mechanical Engineering	Assistant Professor	04/04/2023	Yes	Regular	
SONAM SINGI	DLEPS2455D	M.Tech	Yes	21/10/2013	Computer Science and Engineering	Assistant Professor	12/03/2025	Yes	Regular	
Mr. Hussain Sh	CQSPS2324H	MA	No	23/07/2007	Language and communication	Assistant Professor	08/02/2010	Yes	Regular	
Himanshi Ram	CSDPR8217D	MA	No	05/01/2023	English	Assistant Professor	28/08/2023	No	Regular	22/07/2024
Ms.Ankita Gup	CQUPG4290C	MA	No	01/05/2023	English	Assistant Professor	13/09/2023	No	Regular	22/07/2024
Mrs. Asha Abhi	AZAPA9848D	M.Phil	No	01/09/2008	Operations Research	Assistant Professor	07/06/2011	Yes	Regular	
Dr. Shivaji She	BKZPS6968K	Ph.D	No	10/03/2015	English Literature	Assistant Professor	08/09/2025	Yes	Contractual	
Dr. A. Kotha	AEEPK7724H	Ph.D	No	01/11/1997	Chemistry	Professor	30/09/2024	Yes	Contractual	

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage=((NS1*0.8) + (NS2*0.2))/RF
2023-24(CAYm2)	780	39	15	63	63
2024-25(CAYm1)	1020	51	18	80	60
2025-26(CAY)	1440	72	28	110	62
				Average Percentage	61.45

9.2 Mentoring system (5) Total Marks 5.00

Institute Marks : 5.00

9.2 Mentoring System

9.2.1 Policy / Framework at Institute Level

The MIT Academy of Engineering,Alandi,Pune has a structured Mentoring System to provide continuous academic, personal, and professional support to students. The mentoring framework aims to enhance academic performance, address student concerns at an early stage, and promote holistic development. The system is implemented uniformly across all programs as per institute guidelines.

Faculty maintain detailed mentee information including personal and academic details, parents contact information, and performance tra cking. This evidence (mentor–mentee counselling form and record) shows the mentoring interactions are systematic and documented.

9.2.2 Flow Chart of Mentoring System

Fig. 9.2.2 a: Flow Chart of Mentoring System

9.2.3 Roles and responsibilities of Mentor

1. Understand the problem and difficulties of students. Facilitate problem solving and ensures student satisfaction.

2. Communication to higher authorities in case of major query.

3. Interact with parents regarding attendance and progress, invite for parent teacher meeting.

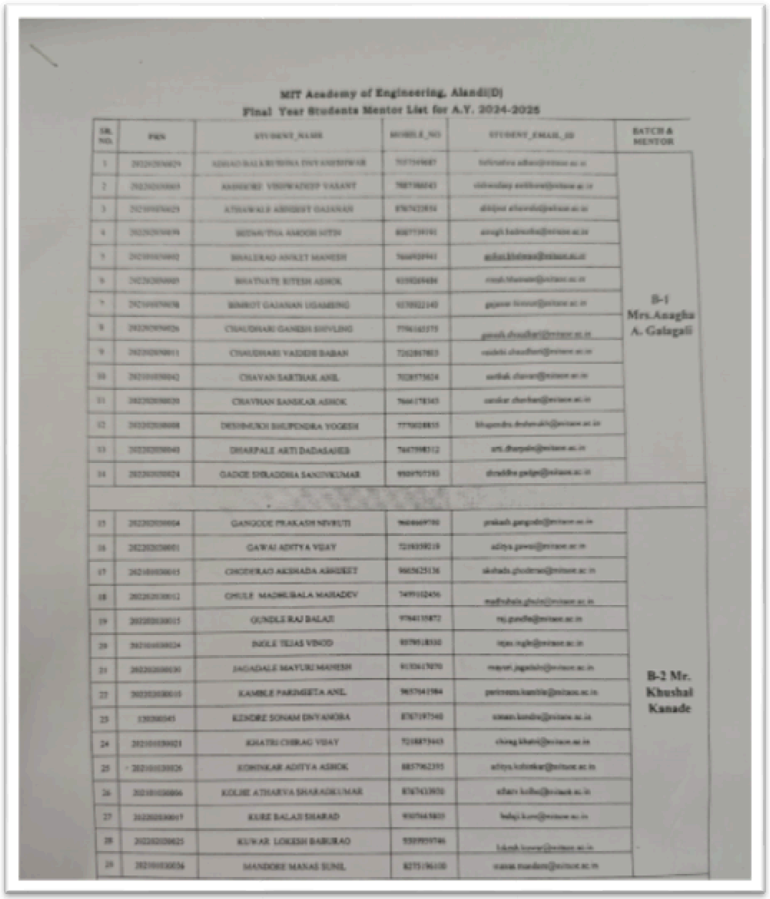
4. Compile the record personal information and periodically update the same.

5. Motivation of participation in co-curricular and extracurricular activities.

9.2.4 Department Mentoring system:

- List of mentors: B.Tech Civil class 2024-25

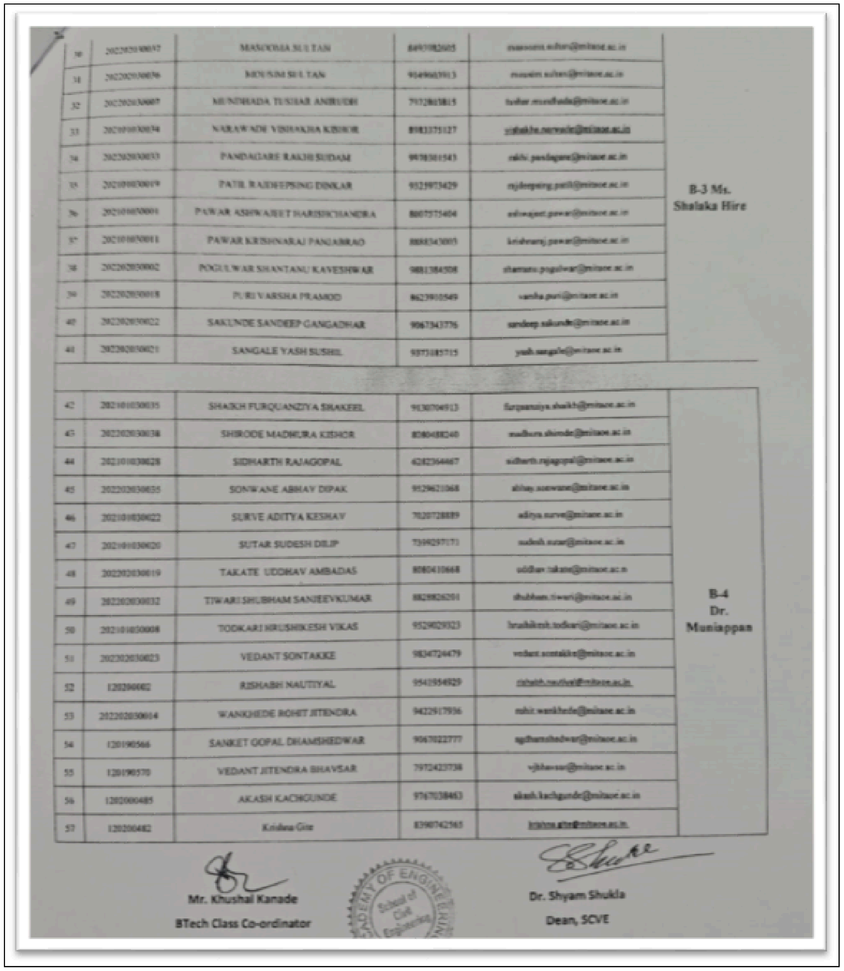
Name of the faculty	Batch 2024-25
Mrs. Anagha Galagali	B.Tech Civil B1
Mr. Khushal Kanade	B.Tech Civil B2
Ms. Shalaka Hire	B.Tech Civil B3
Dr. Muniappan	B.Tech Civil B4



MIT Academy of Engineering, Alandi(D)
Final Year Students Mentor List for A.Y. 2024-2025

SR. NO.	PRN	STUDENT_NAME	MOBILE_NO	STUDENT_EMAIL_ID	BATCH & MENTOR
1	[illegible]	ADHAO BALAKRISHNA DNYANESHWAR	[illegible]	[illegible]	B-1 Mrs.Anagha A. Galagali
2	[illegible]	AASHORE VISHWADEEP VASANT	[illegible]	[illegible]	
3	[illegible]	ATHAWALE ABHIJEET GAJANAN	[illegible]	[illegible]	
4	[illegible]	BEDAVTHA AMOGH NITIN	[illegible]	[illegible]	
5	[illegible]	BHALERAO ANIKET MANESH	[illegible]	[illegible]	
6	[illegible]	BHATNATE RITESH ASHOK	[illegible]	[illegible]	
7	[illegible]	BIMROT GAJANAN UGAMSING	[illegible]	[illegible]	
8	[illegible]	CHAUDHARI GANESH SHIVLING	[illegible]	[illegible]	
9	[illegible]	CHAUDHARI VAIDEHI BABAN	[illegible]	[illegible]	
10	[illegible]	CHAVAN SARTHAK ANIL	[illegible]	[illegible]	
11	[illegible]	CHAVHAN SANSKAR ASHOK	[illegible]	[illegible]	
12	[illegible]	DESHMUKH BHUPENDRA YOGESH	[illegible]	[illegible]	
13	[illegible]	DHARPALE ARTI DADASAHEB	[illegible]	[illegible]	
14	[illegible]	GADGE SHRADDHA SANJIVKUMAR	[illegible]	[illegible]	
15	[illegible]	GANGODE PRAKASH NIVRUTI	[illegible]	[illegible]	B-2 Mr. Khushal Kanade
16	[illegible]	GAWAI ADITYA VIJAY	[illegible]	[illegible]	
17	[illegible]	GHODERAO AKSHADA ABHIJEET	[illegible]	[illegible]	
18	[illegible]	GHULE MADHUBALA MAHADEV	[illegible]	[illegible]	
19	[illegible]	GUNDLE RAJ BALAJI	[illegible]	[illegible]	
20	[illegible]	INGLE TEJAS VINOD	[illegible]	[illegible]	
21	[illegible]	JAGADALE MAYURI MAHESH	[illegible]	[illegible]	
22	[illegible]	KAMBLE PARIMEETA ANIL	[illegible]	[illegible]	
23	[illegible]	KENDRE SONAM DNYANOBA	[illegible]	[illegible]	
24	[illegible]	KHATRI CHIRAG VIJAY	[illegible]	[illegible]	
25	[illegible]	KOHINKAR ADITYA ASHOK	[illegible]	[illegible]	
26	[illegible]	KOLHE ATHARVA SHARADKUMAR	[illegible]	[illegible]	
27	[illegible]	KURE BALAJI SHARAD	[illegible]	[illegible]	
28	[illegible]	KUWAR LOKESH BABURAO	[illegible]	[illegible]	
29	[illegible]	MANDORE MANAS SUNIL	[illegible]	[illegible]	

Fig.9.2.4.1 B.Tech Mentor List



30	[illegible]	MANSOORA SULTAN	[illegible]	[illegible]	B-3 Ms. Shalaka Hire
31	[illegible]	MOUSIM SULTAN	[illegible]	[illegible]	
32	[illegible]	MUNDHADA TUSHAR ANIRUDH	7972805815	[illegible]	
33	[illegible]	NARAWADE VISHAKHA KISHOR	[illegible]	[illegible]	
34	[illegible]	PANDAGARE RAKHI SUDAM	[illegible]	[illegible]	
35	[illegible]	PATIL RAJDEEPSING DINKAR	9325973429	[illegible]	
36	[illegible]	PAWAR ASHWAJEET HARISHCHANDRA	[illegible]	[illegible]	
37	[illegible]	PAWAR KRISHNARAJ PANJABRAO	[illegible]	[illegible]	
38	[illegible]	POGULWAR SHANTANU KAVESHWAR	[illegible]	[illegible]	
39	[illegible]	PURI VARSHA PRAMOD	[illegible]	varsha.puri@mitaoe.ac.in	
40	[illegible]	SAKUNDE SANDEEP GANGADHAR	9067343776	sandeep.sakunde@mitaoe.ac.in	
41	[illegible]	SANGALE YASH SUSHIL	[illegible]	yash.sangale@mitaoe.ac.in	
42	[illegible]	SHAIKH FURQUANZIYA SHAKEEL	[illegible]	[illegible]	B-4 Dr. Muniappan
43	[illegible]	SHIRODE MADHURA KISHOR	[illegible]	madhura.shirode@mitaoe.ac.in	
44	[illegible]	SIDHARTH RAJAGOPAL	[illegible]	[illegible]	
45	[illegible]	SONWANE ABHAY DIPAK	[illegible]	[illegible]	
46	[illegible]	SURVE ADITYA KESHAV	[illegible]	aditya.surve@mitaoe.ac.in	
47	[illegible]	SUTAR SUDESH DILIP	[illegible]	sudesh.sutar@mitaoe.ac.in	
48	[illegible]	TAKATE UDDHAV AMBADAS	[illegible]	[illegible]	
49	[illegible]	TIWARI SHUBHAM SANJEEVKUMAR	[illegible]	shubham.tiwari@mitaoe.ac.in	
50	[illegible]	TODKARI HRUSHIKESH VIKAS	[illegible]	[illegible]	
51	[illegible]	VEDANT SONTAKKE	[illegible]	[illegible]	
52	[illegible]	RISHABH NAUTIYAL	[illegible]	[illegible]	
53	[illegible]	WANKHEDE ROHIT JITENDRA	9422917936	[illegible]	
54	[illegible]	SANKET GOPAL DHAMSHEDWAR	[illegible]	[illegible]	
55	[illegible]	VEDANT JITENDRA BHAVSAR	[illegible]	[illegible]	
56	[illegible]	AKASH KACHGUNDE	[illegible]	akash.kachgunde@mitaoe.ac.in	
57	[illegible]	Krishna Gite	[illegible]	[illegible]	

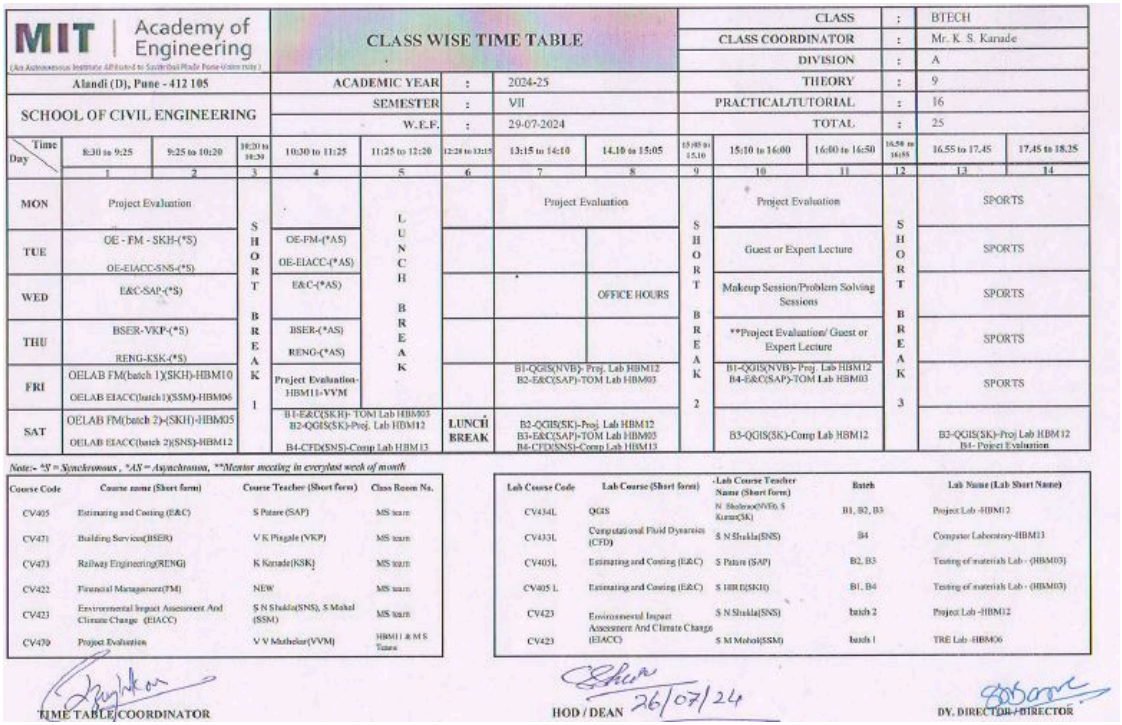
Mr. Khushal Kanade
BTech Class Co-ordinator

Dr. Shyam Shukla
Dean, SCVE

Fig. 9.2.4.2 B.Tech mentor List 2024-25

9.2.5 Timetables of Classes:

The institutional timetable formally allocates a mentoring session on the last working day of every week, namely Friday, ensuring regular interaction between mentors and mentees.



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Alandi (D), Pune - 412 105

SCHOOL OF CIVIL ENGINEERING

CLASS WISE TIME TABLE

ACADEMIC YEAR : 2024-25
SEMESTER : VII
W.E.F. : 29-07-2024

CLASS : BTECH
CLASS COORDINATOR : Mr. K. S. Karade
DIVISION : A
THEORY : 9
PRACTICAL/TUTORIAL : 16
TOTAL : 25

Time / Day	8:30 to 9:25	9:25 to 10:20	10:20 to 10:30	10:30 to 11:25	11:25 to 12:20	12:20 to 13:15	13:15 to 14:10	14.10 to 15:05	15:05 to 15.10	15:10 to 16:00	16:00 to 16:50	16.50 to 16:55	16.55 to 17.45	17.45 to 18.25
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MON	Project Evaluation		SHORT BREAK 1		LUNCH BREAK		Project Evaluation		SHORT BREAK 2	Project Evaluation		SHORT BREAK 3	SPORTS	
TUE	OE - FM - SKH-(*S) OE-EIACC-SNS-(*S)			OE-FM-(*AS) OE-EIACC-(*AS)						Guest or Expert Lecture			SPORTS	
WED	E&C-SAP-(*S)			E&C-(*AS)				OFFICE HOURS		Makeup Session/Problem Solving Sessions			SPORTS	
THU	BSER-VKP-(*S) RENG-KSK-(*S)			BSER-(*AS) RENG-(*AS)						**Project Evaluation/ Guest or Expert Lecture			SPORTS	
FRI	OELAB FM(batch 1)(SKH)-HBM10 OELAB EIACC(batch1)(SSM)-HBM06			Project Evaluation-HBM11-VVM			B1-QGIS(NVB)- Proj. Lab HBM12 B2-E&C(SAP)-TOM Lab HBM03			B1-QGIS(NVB)- Proj. Lab HBM12 B4-E&C(SAP)-TOM Lab HBM03			SPORTS	
SAT	OELAB FM(batch 2)-(SKH)-HBM05 OELAB EIACC(batch 2)(SNS)-HBM12			B1-E&C(SKH)- TOM Lab HBM03 B2-QGIS(SK)-Proj. Lab HBM12 B4-CFD(SNS)-Comp Lab HBM13		LUNCH BREAK	B2-QGIS(SK)-Proj. Lab HBM12 B3-E&C(SAP)-TOM Lab HBM03 B4-CFD(SNS)-Comp Lab HBM13			B3-QGIS(SK)-Comp Lab HBM12			B3-QGIS(SK)-Proj Lab HBM12 B4- Project Evaluation	

*Note:- *S = Synchronous , *AS = Asynchronous, **Mentor meeting in everylast week of month*

Course Code	Course name (Short form)	Course Teacher (Short form)	Class Room No.
CV405	Estimating and Costing (E&C)	S Patare (SAP)	MS team
CV471	Building Services(BSER)	V K Pingale (VKP)	MS team
CV473	Railway Engineering(RENG)	K Karade (KSK)	MS team
CV422	Financial Management(FM)	NEW	MS team
CV423	Environmental Impact Assessment And Climate Change (EIACC)	S N Shukla(SNS), S Mahal (SSM)	MS team
CV470	Project Evaluation	V V Mutheker(VVM)	HBM11 & M S Teams

Lab Course Code	Lab Course (Short form)	Lab Course Teacher Name (Short form)	Batch	Lab Name (Lab Short Name)
CV434L	QGIS	N. Shelke(NVB), S Karad(SK)	B1, B2, B3	Project Lab -HBM12
CV433L	Computational Fluid Dynamics (CFD)	S N Shukla(SNS)	B4	Computer Laboratory-HBM13
CV405L	Estimating and Costing (E&C)	S Patare (SAP)	B2, B3	Testing of materials Lab - (HBM03)
CV405 L	Estimating and Costing (E&C)	S HIRE(SKH)	B1, B4	Testing of materials Lab - (HBM03)
CV423	Environmental Impact Assessment And Climate Change (EIACC)	S N Shukla(SNS)	batch 2	Project Lab -HBM12
CV423		S M Mahal(SSM)	batch 1	TRE Lab -HBM06

TIME TABLE COORDINATOR

HOD / DEAN 26/07/24

DY. DIRECTOR / DIRECTOR

9.2.6 Meeting Notice:

A formal mentoring meeting notice is issued by the mentor to the students of the respective batch to ensure timely communication and effective participation in the scheduled session.

MIT Academy of Engineering

Mentoring Meeting Notice:B2 BATCH

This to inform you that mentoring meeting is arranged on 17th of August 2024.

Batch-B2

Mentor Name:Mr.Khushal Kanade

Time-3pm

Venue-HBM11

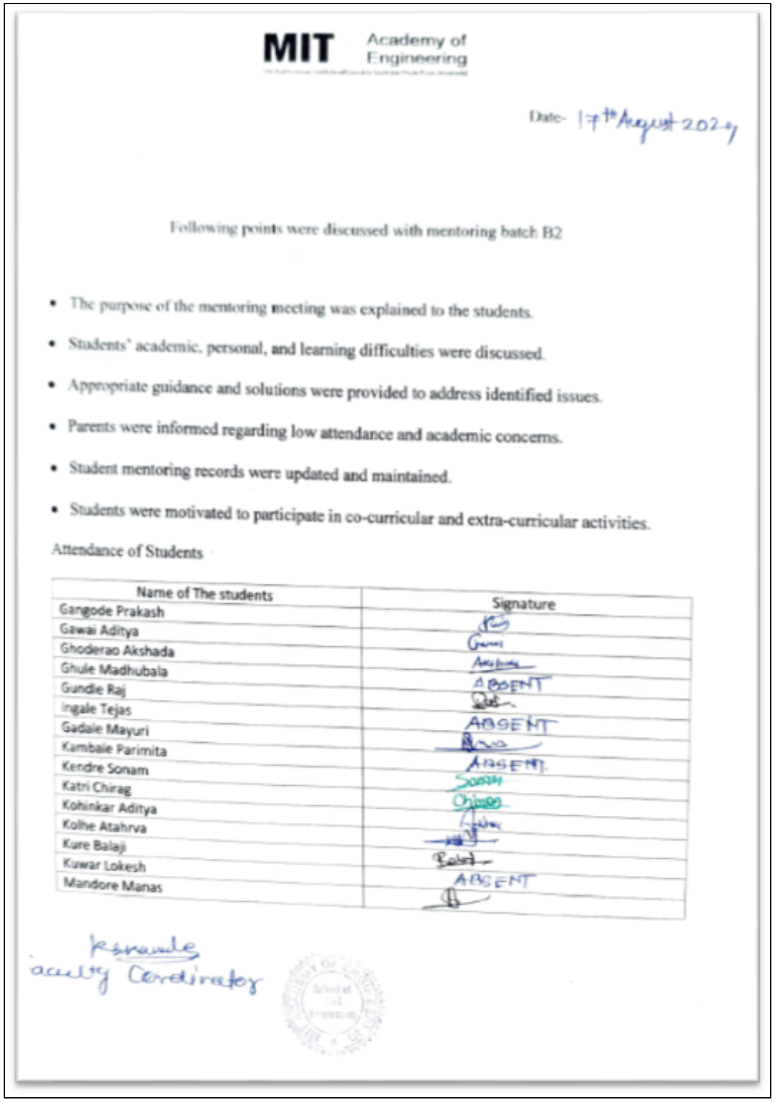
All students are informed to be present for the meeting and actively participation into the mentoring session.

Meeting is arranged for the academic Progress and to resolve other difficulties of the students.

Fig. 9.2.5.6 Mentor meeting notice

9.2.7:Minutes of Meeting with the attendance of Students:

The MoM of a mentor meeting reflects documented evidence of student–mentor interaction and academic monitoring. It typically shows the following aspects:



MIT Academy of Engineering

Date- 17th August 2024

Following points were discussed with mentoring batch B2

- The purpose of the mentoring meeting was explained to the students.
- Students' academic, personal, and learning difficulties were discussed.
- Appropriate guidance and solutions were provided to address identified issues.
- Parents were informed regarding low attendance and academic concerns.
- Student mentoring records were updated and maintained.
- Students were motivated to participate in co-curricular and extra-curricular activities.

Attendance of Students

Name of The students	Signature
Gangode Prakash	
Gawai Aditya	
Ghoderao Akshada	
Ghule Madhubala	ABSENT
Gundle Raj	
Ingale Tejas	ABSENT
Gadale Mayuri	
Kambale Parimita	ABSENT
Kendre Sonam	
Katri Chirag	
Kohinkar Aditya	
Kolhe Atahrva	
Kure Balaji	
Kuwar Lokesh	ABSENT
Mandore Manas	

Kshirsagar
Faculty Coordinator

Fig.9.2.7.1 MOM with the attendance of students

9.2.8: Support System: Form No 1

Attached images shows a 'Student Information and Counseling Record form.Students fills there personal information, academic performance, academic performance, placement details and the information about their counselling into the form. Every year mentor verify this data and this record get updated from the FY to Btech.

Students also attached Circular and extracurricular certificates to the form as per the participation at Institute level or at Intercollege level.

MIT | Academy of Engineering (An Autonomous Institute Affiliated to Savitribai Phule Pune University)	STUDENT INFORMATION & COUNSELING RECORD
Alandi (D), Pune – 412105	
SCHOOL OF CIVIL ENGG.	

PERSONAL DETAILS		
Name of the Student	ADITYA VIJAY GAWAI	
Permanent Address	MOTHI UMBRI, SAINIK COLONY, NEAR ENGINEERING COLONY,AKOLA-444001	
Contact No.	7219359219	
Email ID	aditya.gawai@mitaoe.ac.in	
Date of Birth	29 January 2003	
Blood Group	B+	
Year of Admission	2022	
Name of Parent	VIJAY BALIKRAM GAWAI JYOTI VIJAY GAWAI	
Contact No.	9011570608	
Email ID	vijaygawai225@gmail.com	

ACADEMIC DETAILS (*Enclose Copies of Mark sheets*)	
FY BTECH	NA
SY BTECH	8.43
TY BTECH	8.76
BTECH	8.92

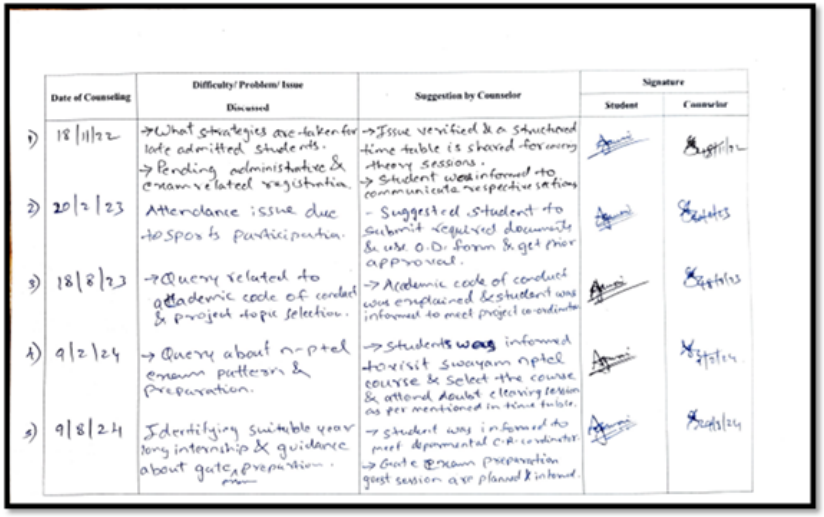
Fig.9.2.8.1 Academic Details : Aditya Gawai form

PLACEMENT DETAILS (*Enclose Details*)	
Name of the Company	-
Package	-
Offer Letter Received	-

COMPETITIVE EXAMS – GATE/ GRE/ TOEFL/ CAT, etc (*You can add any other*)						
Exam	**GATE**	**GRE**	**TOEFL**	**CAT**		
Score	297	-	-	-		

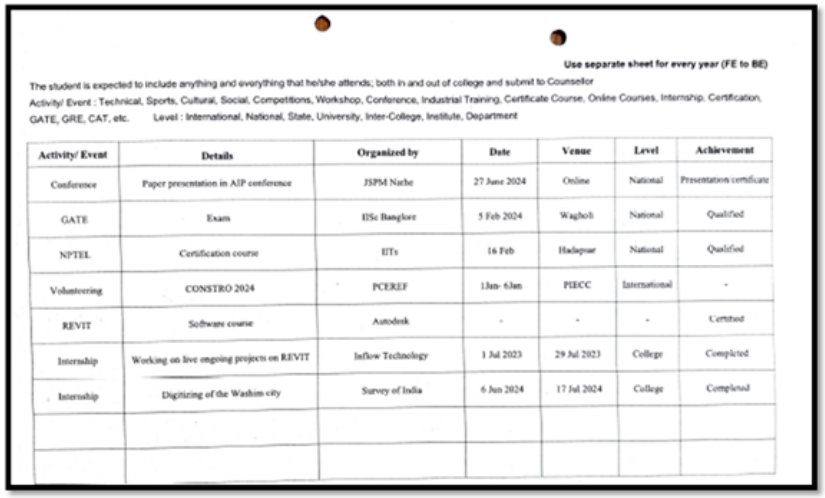
PARTICIPATION IN OTHER ACTIVITIES (*You can add any other type*)		
Type	**In the College (Nos.)**	**Outside College Nos.)**
Workshops & Seminars	-	-
Conference & Symposium	0	1
Certificate Course	1	1
Online Course	1	0
Certification	0	1
Industrial Training/ Internship	3	0
Paper Presentation	0	1
Technical Competitions **(Any)**	0	0
Sports	0	0
Cultural	0	0
Social	1	0
Literary	0	0
Volunteer	1	1
Publications	1	0

Fig.9.2.8.2 Placement Participation: Aditya Gawai form



	Date of Counseling	Difficulty/ Problem/ Issue Discussed	Suggestion by Counselor	Signature: Student	Signature: Counselor
1)	18/11/22	→What strategies are taken for late admitted students. →Pending administrative & exam related registration.	→Issue verified & a structured time table is shared for covering theory sessions. → Student was informed to communicate respective sections		
2)	20/2/23	Attendance issue due to sports participation.	- Suggested student to submit required documents & use O.D. form & get prior approval.		
3)	18/8/23	→Query related to academic code of conduct & project topic selection.	→Academic code of conduct was explained & student was informed to meet project co-ordinator		
4)	9/2/24	→Query about n-ptel exam pattern & preparation.	→Student was informed to visit swayam nptel course & select the course & attend Acubat clearing session as per mentioned in time table.		
5)	9/8/24	Identifying suitable year long internship & guidance about gate preparation.	→student was informed to meet departmental C.A. coordinator. →Gate Exam preparation guest session are planned & intimated.		

Fig.9.2.8.3 Counselling Discussion: Aditya Gawai form



Use separate sheet for every year (FE to BE)

The student is expected to include anything and everything that he/she attends; both in and out of college and submit to Counsellor
Activity/ Event : Technical, Sports, Cultural, Social, Competitions, Workshop, Conference, Industrial Training, Certificate Course, Online Courses, Internship, Certification, GATE, GRE, CAT, etc. Level : International, National, State, University, Inter-College, Institute, Department

Activity/ Event	Details	Organized by	Date	Venue	Level	Achievement
Conference	Paper presentation in AIP conference	JSPM Narhe	27 June 2024	Online	National	Presentation certificate
GATE	Exam	IISc Banglore	5 Feb 2024	Wagholi	National	Qualified
NPTEL	Certification course	IITs	16 Feb	Hadapsar	National	Qualified
Volunteering	CONSTRO 2024	PCEREF	13th- 6Jan	PIECC	International	-
REVIT	Software course	Autodesk	-	-	-	Certified
Internship	Working on live ongoing projects on REVIT	Inflow Technology	1 Jul 2023	29 Jul 2023	College	Completed
Internship	Digitizing of the Washim city	Survey of India	6 Jun 2024	17 Jul 2024	College	Completed

Fig.9.2.8.4 Curricular & Extracurricular Details -Aditya Gawai counselling form

9.2.9:Form No :2:Student Information and Counseling Record

Format No.: ACAD/DI/DOS/22 Rev. No. : 00 Rev. Date : 01/08/2024

MIT | Academy of Engineering
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)
Alandi (D), Pune – 412105
SCHOOL OF CIVIL ENGG.

STUDENT INFORMATION & COUNSELING RECORD

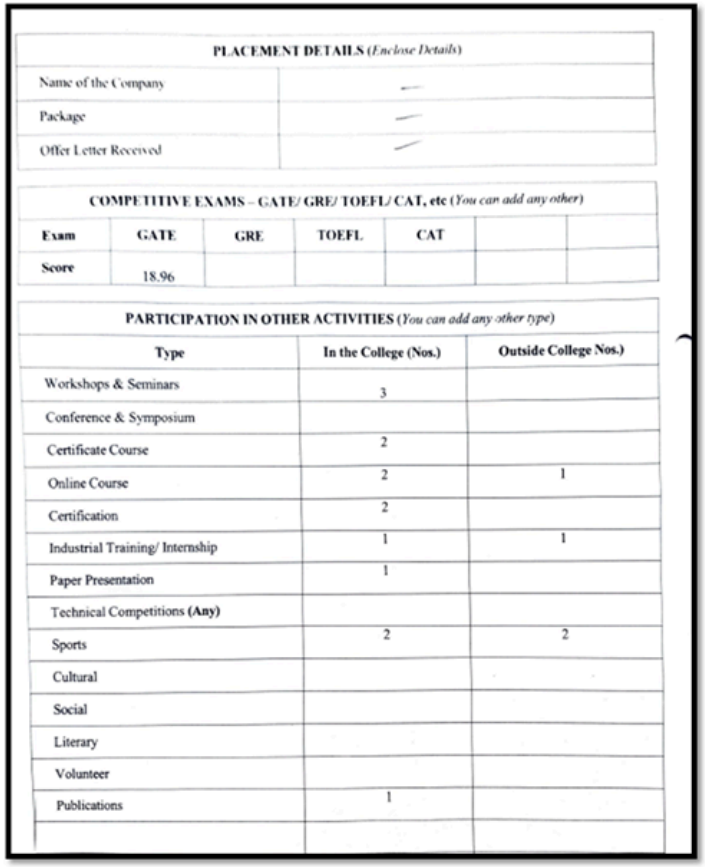
PERSONAL DETAILS

Name of the Student	Akshada Abhijeet Ghoderao
Permanent Address	N-42-AB-I-11/2 4th Scheme Cidco , Pawan nagar. Behind Merchant Bank , Nashik - 422008
Contact No.	9665625136
Email ID	akshada.ghoderao@mitaoe.ac.in
Date of Birth	27/10/2003
Blood Group	A+
Year of Admission	2021
Name of Parent	Abhijeet Ramesh Ghoderao
Contact No.	9552540823
Email ID	abhijeetrghoderao@gmail.com

ACADEMIC DETAILS (*Enclose Copies of Mark sheets*)

FY BTECH	7.28
SY BTECH	7.66
TY BTECH	8.00
BTECH	

Fig.9.2.9.1 Personal and Academic details: Akshada Ghoderao



PLACEMENT DETAILS (*Enclose Details*)

Name of the Company	—
Package	—
Offer Letter Received	—

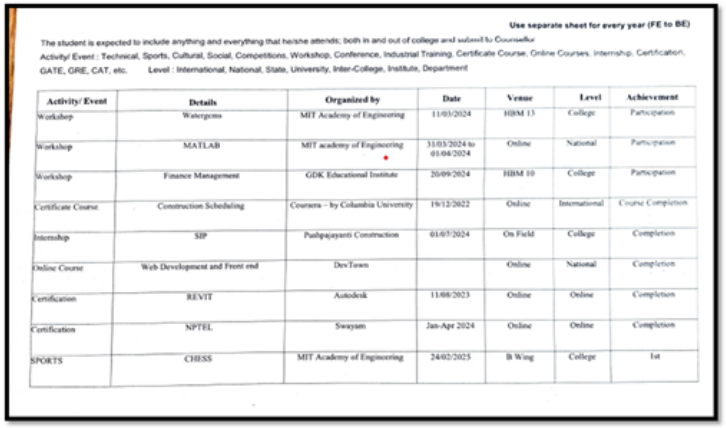
COMPETITIVE EXAMS – GATE/ GRE/ TOEFL/ CAT, etc (*You can add any other*)

Exam	GATE	GRE	TOEFL	CAT		
Score	18.96					

PARTICIPATION IN OTHER ACTIVITIES (*You can add any other type*)

Type	In the College (Nos.)	Outside College Nos.)
Workshops & Seminars	3	
Conference & Symposium		
Certificate Course	2	
Online Course	2	1
Certification	2	
Industrial Training/ Internship	1	1
Paper Presentation	1	
Technical Competitions **(Any)**		
Sports	2	2
Cultural		
Social		
Literary		
Volunteer		
Publications	1	

Fig.9.2.9.2 Activity Participation : Akshada Ghoderao



Use separate sheet for every year (FE to BE)

The student is expected to include anything and everything that he/she attends; both in and out of college and submit to Counsellor.
Activity/ Event : Technical, Sports, Cultural, Social, Competitions, Workshop, Conference, Industrial Training, Certificate Course, Online Courses, Internship, Certification, GATE, GRE, CAT, etc. Level : International, National, State, University, Inter-College, Institute, Department

Activity/ Event	Details	Organized by	Date	Venue	Level	Achievement
Workshop	Watergems	MIT Academy of Engineering	11/03/2024	HBM 13	College	Participation
Workshop	MATLAB	MIT academy of Engineering	31/03/2024 to 01/04/2024	Online	National	Participation
Workshop	Finance Management	GDK Educational Institute	20/09/2024	HBM 10	College	Participation
Certificate Course	Construction Scheduling	Coursera – by Columbia University	19/12/2022	Online	International	Course Completion
Internship	SIP	Pushpajayanti Construction	01/07/2024	On Field	College	Completion
Online Course	Web Development and Front end	DevTown		Online	National	Completion
Certification	REVIT	Autodesk	11/08/2023	Online	Online	Completion
Certification	NPTEL	Swayam	Jan-Apr 2024	Online	Online	Completion
SPORTS	CHESS	MIT Academy of Engineering	24/02/2025	B Wing	College	1st

Fig.9.2.9.3 Details of Akshada Ghoderao participation

	Date of Counseling	Difficulty/ Problem/ Issue Discussed	Suggestion by Counselor	Signature	
				Student	Counselor
1)	12/9/22	- Difficulty in understanding core subjects in class.	- Regularly revise & solve numerical problems. - Focus on strengthening fundamental engineering subjects.		
2)	20/2/23	Moodle account blocked.	- Issue noted & verified.		
3)	18/8/23	Issue in open elective course & project topic selection.	- Issue is verified & suggested student to opt. for interdisciplinary project & elective.		
4)	9/2/24	ERP - data updation issue	- Suggested student to contact dept ERP co-ordinator		
5)	9/8/24	Finding a suitable year long internship opportunity	- Suggested student to contact dept. C.R. coordinator		

Fig.9.2.9.4 Counselling Details: Akshada Ghoderao

Fig.9.2.9.5 Autodesk Participation Akshada Ghoderao

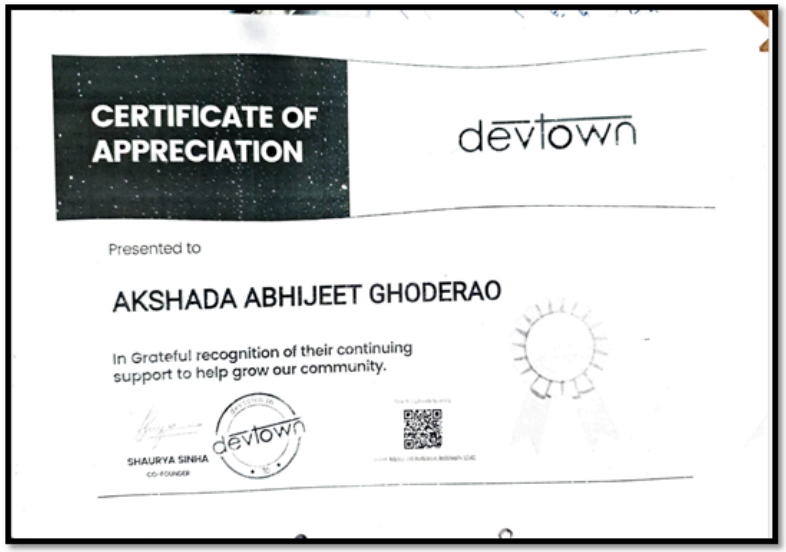


Fig.9.2.9.5 Akshada Ghoderao Participation Certificate

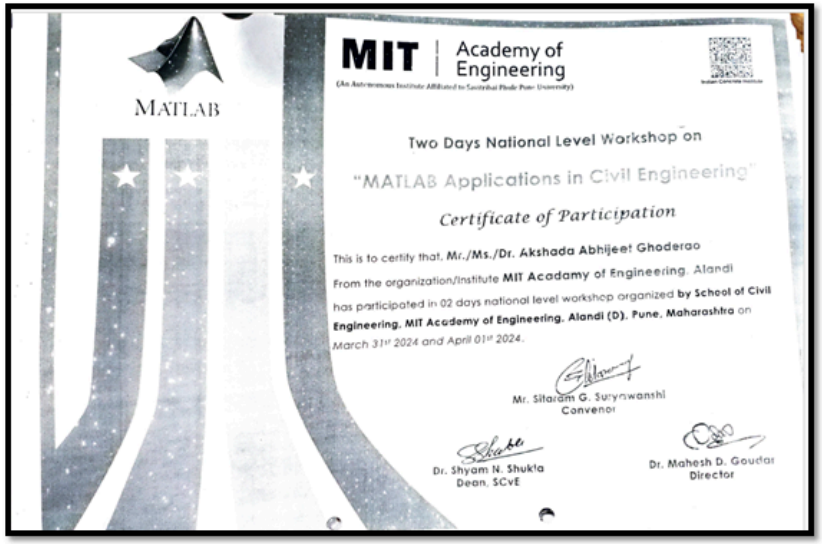


Fig.9.2.9.6 Akshada Ghoderao MATLAB Certificate

9.2.10:Resolving issues of Students under mentoring system:

Documenting both the *scope of issues* and *issues resolved* ensures a structured, outcome-based mentoring system that focuses on student welfare, academic success, and holistic development, while also strengthening institutional quality and compliance requirements.

Samples of the scope and issue resolve document is attached herewith:

MIT Academy of Engineering

(An Autonomous Institute affiliated to Savitribai Phule Pune University)

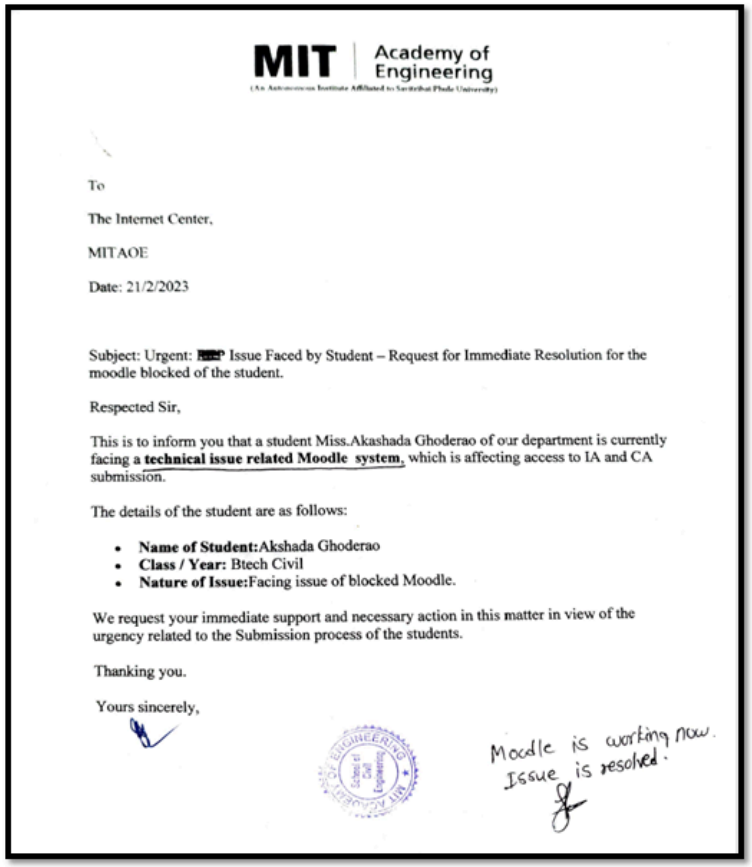
Mentoring Meeting B2 Batch Points discussed and Resolved

Following issues were raised and resolved :

1) **Students –Aditya Gawai and Parimita raised a issue of OD when they are visiting outsite of the institute or to any industry.**
   Issue was addressed and students will fill a form of OD to participate into the different Circular and Extra Curricular Activities.
2) **Chirag Khatri raised a issue of not getting the proper network into the department.**
   Issue resolved again resetting the password of WIFI and password again share with Students.
3) **All the students were guided by the research work and by introducing a different competitions.**

MIT ACADEMY OF ENGINEERING
School of Civil Engineering

Fig.9.2.10.1 Mentoring meeting batch issues and issue resolved



MIT | Academy of Engineering

(An Autonomous Institute Affiliated to Savitribai Phule University)

To

The Internet Center,

MITAOE

Date: 21/2/2023

Subject: Urgent: [redacted] Issue Faced by Student – Request for Immediate Resolution for the moodle blocked of the student.

Respected Sir,

This is to inform you that a student Miss.Akashada Ghoderao of our department is currently facing a **technical issue related Moodle system**, which is affecting access to IA and CA submission.

The details of the student are as follows:

- **Name of Student:**Akshada Ghoderao
- **Class / Year:** Btech Civil
- **Nature of Issue:**Facing issue of blocked Moodle.

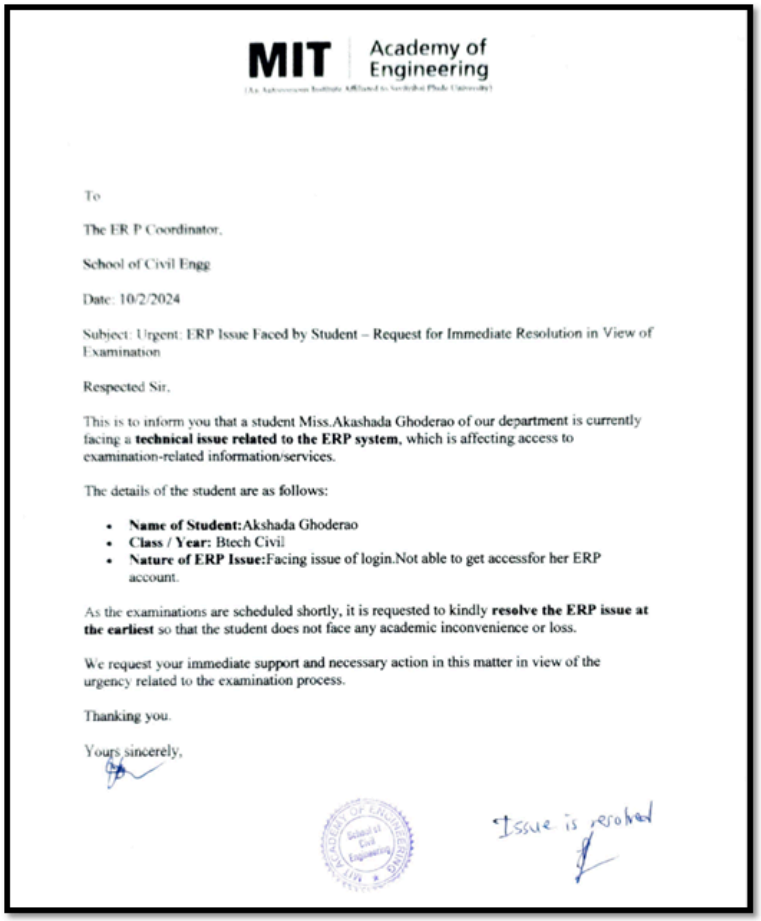
We request your immediate support and necessary action in this matter in view of the urgency related to the Submission process of the students.

Thanking you.

Yours sincerely,

Moodle is working now.
Issue is resolved.

Fig.9.2.10.2 Resolution of Issue Raised by Akshada Ghoderao



MIT Academy of Engineering

(An Autonomous Institute Affiliated to Savitribai Phule University)

To

The ER P Coordinator,

School of Civil Engg

Date: 10/2/2024

Subject: Urgent: ERP Issue Faced by Student – Request for Immediate Resolution in View of Examination

Respected Sir,

This is to inform you that a student Miss.Akashada Ghoderao of our department is currently facing a **technical issue related to the ERP system,** which is affecting access to examination-related information/services.

The details of the student are as follows:

- **Name of Student:**Akshada Ghoderao
- **Class / Year:** Btech Civil
- **Nature of ERP Issue:**Facing issue of login.Not able to get accessfor her ERP account.

As the examinations are scheduled shortly, it is requested to kindly **resolve the ERP issue at the earliest** so that the student does not face any academic inconvenience or loss.

We request your immediate support and necessary action in this matter in view of the urgency related to the examination process.

Thanking you.

Yours sincerely,

*Issue is resolved

Fig.9.2.10.3 Illustrates the concern submitted by Akshada Ghoderao regarding the ERP system and the subsequent resolution.

Impact of Mentor System:

- **Academic Improvement:** Early identification of learning gaps, guidance on study strategies, and timely academic interventions improve performance and attainment.
- **Student Retention:** Regular interaction builds trust, reduces dropout risk, and supports continuity through challenges.
- **Personal Development:** Mentoring enhances confidence, self-discipline, goal setting, and decision-making skills.
- **Attendance and Discipline:** Close monitoring encourages regular attendance and positive classroom behavior.
- **Emotional and Psychological Support:** Safe space for sharing concerns reduces stress and promotes well-being.
- **Career Readiness:** Guidance on internships, projects, higher studies, certifications, and career pathways improves employability.
- **Parental Engagement:** Structured communication aligns student support at home and institution.
- **Holistic Growth:** Motivation for co-curricular and extracurricular participation develops leadership and teamwork.
- **Early Intervention:** Timely counseling prevents minor issues from escalating into major problems.

9.3 Feedback Analysis (10) Total Marks 10.00

9.3.1 Feedback on Teaching and Learning Process and Corrective Measures Taken, if any (5)

Institute Marks : 5.00

Feedback on teaching learning process is collected from students through ERP-based online forms. The feedback is collected periodically, analyzed by the IQAC cell as well as department, and necessary corrective actions are implemented. Action taken reports are maintained, and continuous improvement is ensured as per feedback analysis.

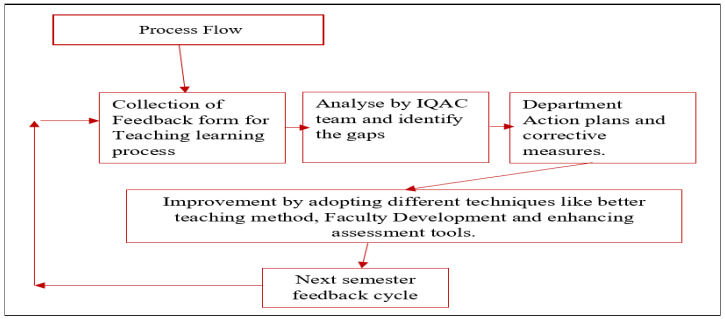


Fig No 9.3.1 Flow chart for process of feedback

This flowchart outlines a systematic, closed-loop process for leveraging student feedback to drive continuous improvement in teaching and learning is shown in figure no 9.3.1. The cycle is initiated at the end of each semester when the institutes ERP system automatically opens an online feedback portal and notifies students to submit anonymous evaluations of faculty and courses. A crucial quality control step is the enforcement of a minimum 80% student participation rate; if this threshold is not met, automated reminders are triggered to ensure the data collected is statistically significant and representative. This structured collection phase ensures the process begins with reliable, comprehensive input from the primary stakeholders, the students.

Once sufficient feedback is gathered, the responsibility shifts to the Internal Quality Assurance Cell (IQAC) for analysis. The IQAC compiles the data, examining it for recurring patterns and critical gaps across three core areas: teaching effectiveness, course content relevance, and assessment methods. By prioritizing the most pressing issues identified, the analysis transitions from data collection to actionable insight. This phase is foundational, as it transforms raw student opinions into a clear, prioritized agenda for institutional improvement, ensuring that subsequent actions are data-driven and focused on the most impactful areas.

The final stages of the cycle are dedicated to action, measurement, and perpetuation. Based on the IQACs analysis, specific corrective plans are developed, responsibilities are assigned, and all actions are formally documented to maintain accountability and transparency. Implementation is threefold: enhancing teaching methodologies, launching targeted faculty development programs, and revising curriculum and assessment strategies. The impact of these interventions is then measured through improved student learning experiences, increased faculty competence, and higher academic performance metrics. The process concludes by feeding these results back into the system, formally restarting the cycle for the next semester. This creates a self-reinforcing loop of evaluation, action, and enhancement, embedding a culture of continuous quality improvement within the institution.

A. Process:

Feedback on the Teaching Learning Process at MIT Academy of Engineering (MITAOE) is systematically collected online at the end of each semester through the institute's integrated ERP system in alignment with the quality assurance practices recommended by the National Board of Accreditation. The process is structured, transparent, and fully digitalized, using the Institute ERP Faculty and Student Portal as the platform, and is conducted twice yearly covering all theory, laboratory, and project-based courses. Student responses are kept anonymous to ensure honest and unbiased feedback. Automated notifications are sent to students via ERP and email, following which students log into the ERP portal and submit course-wise feedback based on parameters such as course content relevance, teaching effectiveness, use of teaching aids and technology, fairness of assessment, and faculty availability and support. The feedback window remains open for two weeks, and late submissions are not accepted, ensuring timely collection and further analysis for continuous improvement.

B. Implementation:

The ERP system automatically sends three reminders through email and SMS to students who have not submitted their feedback, while Heads of Departments (HODs) and faculty mentors actively encourage participation during tutorials and mentoring sessions. Additionally, submission of feedback is linked to student access to course materials and grade cards in the subsequent semester, which motivates timely completion; as a result, institutional records indicate an average participation rate of around 70–80% across departments. The collected feedback data is centrally compiled and analyzed by the Internal Quality Assurance Cell (IQAC) to identify gaps and areas requiring improvement. Based on the IQAC analysis, departments formulate corrective action plans, and all actions are systematically documented in IQAC meeting minutes, departmental meeting records, and the Annual Quality Assurance Report (AQAR). The IQAC also monitors the implementation of these corrective measures and reviews their effectiveness in the subsequent feedback cycle to ensure continuous quality improvement.

C. Impact Analysis:

Based on the analysis of student feedback and in line with the continuous improvement practices, several corrective measures have been implemented to enhance the Teaching–Learning process. Teaching methodologies were improved through the adoption of blended learning approaches, including increased use of Learning Management Systems (LMS), video lectures, and simulation tools, particularly in courses that previously recorded low engagement scores. Faculty also incorporated more interactive pedagogical methods such as flipped classrooms, case studies, and peer teaching in response to student suggestions, along with enhanced assessment practices emphasizing continuous and formative evaluation through quizzes, presentations, and project-based learning. In addition, Faculty Development Programs (FDPs) were initiated through the Center for Excellence in Learning and Teaching (CELT), focusing on effective use of ICT tools, Outcome-Based Education (OBE), assessment strategies, and student engagement techniques. Senior faculty members also conduct peer observation and mentoring for colleagues with lower feedback scores, and micro-teaching sessions are organized to help faculty practice and refine their instructional skills, thereby ensuring sustained improvement in teaching quality.

Feedback analysis for Civil engineering department for academic year 2023-24

1. **Overall Performance & Trends Across Semesters**

Table 9.3.1Average Score by Semester

Semester	Avg. Theory Score	Avg. Lab Score	Composite Avg.	Remarks
II	**89.28**	**93.10**	**91.19**	Exceptionally high satisfaction in foundational year.
IV	**84.38**	**85.21**	**84.80**	Noticeable dip; introduction of core engineering subjects.
VI	**88.58**	**88.88**	**88.73**	Recovery; high scores in electives and project courses.
VIII	**85.51**	**85.23**	**85.37**	Slight decline; capstone and internship courses show variance.
Grand Average	**86.94**	**88.11**	**87.52**	**Overall Strong Positive Feedback.**

Table 9.3.2 Outstanding Courses (Avg. Rating ≥ 95)

Semester	Course Name & Code	Instructor	Type	Avg. Rating
II	2301104IT Science of Nature (Cc)	Amol madhav kapse	Lab	99.00
II	2301103IT statistics and integral calculus (cc)	Sini ronson	Lab	100.00
II	2303111T Basics of civil engineering (cc)	Swapnil abasaheb patare	Theory	100.00
VI	2305334T/L Product management	Vinod dinkar pakhale	Theory & Lab	100.00
VI	2312332L Predictive Analytics Lab (A4)	Shubhangi prabhakar kale	Lab	100.00
VI	2303326L Contracts Management Lab	Shalaka k hire	Lab	93.60

Table 9.3.3 Strong and Consistent Performers (Faculty with multiple courses >90)

Faculty Name	Semesters	Avg. Rating Range	Consistency
Vinod Dinkar Pakhale	VI	92.00 - 100.00	Consistently exceptional.
Shalaka K Hire	VI	90.54 - 93.60	Excellent in both theory and lab.
Khushal suresh kanade	IV, VIII	87.64 - 95.05	Strong in hydraulics and lab instruction.
Nilesh champalal baglekar	VI, IV	87.88 - 95.28	Reliable in core subjects like RCC and Data Analysis.
Sini ronson	II	92.50 - 100.00	Perfect lab instruction in Mathematics.

Critical Areas Requiring Immediate Attention

Table 9.3.4 Lowest Performing Courses (Avg. Rating ≤ 80)

Semester	Course Name & Code	Instructor	Type	Avg. Rating
I	2303101 Applied mechanics	Sushilkumar buddhanand magade	Theory	**66.24**
VIII	CV480L Capstone Portfolio	Anagha Anirudh Galagali	Lab	**77.53**

D. Sample case study and action taken

The institute follows a structured and documented corrective and recognition mechanism based on student feedback analysis, wherein faculty members receiving consistently high feedback are issued formal appreciation letters by the Head of the Department/Principal in recognition of effective teaching learning practices, innovative pedagogy, and positive student outcomes, while faculty members receiving comparatively low feedback are issued formal warning/advisory letters highlighting specific gaps identified through feedback analysis, along with clearly defined corrective actions such as participation in FDPs, mentoring by senior faculty, adoption of improved teaching methodologies, and periodic monitoring by the IQAC; this balanced approach of appreciation and warning ensures motivation, accountability, and professional development of faculty members.

MIT Academy of Engineering (An Autonomous Institute)	APPRICIATION LETTER	
Alandi (D), Pune – 412105	ACADEMIC YEAR	2024-2025
SCHOOL OF CIVIL ENGINEERING	Programme	UG Civil

To,
The Faculties
Deparment of civil engineering,
MIT Academy of Engineering
Alandi, Pune

Subject: Appreciation for Positive Feedback and Outstanding Efforts

I am writing to express my sincere appreciation for your exceptional efforts and dedication that have resulted in such positive feedback from students. Your commitment to excellence in teaching and fostering an engaging learning environment has not gone unnoticed.

The recent feedback has highlighted your hard work, innovative teaching methods, and your ability to inspire and connect with students. These qualities are at the core of our institution's mission, and you have certainly set a high standard for others to follow.

We are grateful for the contributions you've made in shaping the academic journey of our students and the positive impact you continue to have on our institution's reputation.

Following is list of faculties

Sr No	Name of Faculty	Feedback on scale 10
1	Dr Swapnil Patare	9.8
2	Mr Nilesh Bagalekar	9.5
3	Mr. Khushal Kanade	9.5
4	Dr Shalakha Hire	9.3

Dean Civil
(Dr Shayam Shukla)
DEAN
School of Civil Engineering
MIT Academy of Engineering
Alandi (D.), Pune-412 105.

ACADEMY OF ENGINEERING Dept. of Civil Engg.

Fig 9.3.2 Letter appreciation for feedback on teaching learning

MIT Academy of Engineering (An Autonomous Institute)	Steps for Refining Course Delivery	
Alandi (D), Pune – 412105	ACADEMIC YEAR	2023-2024
SCHOOL OF CIVIL ENGINEERING	Programme	UG Civil

INTERNAL: FOR QUALITY ENHANCEMENT

To:
Dr. Sushilkumar Magade
Associate Professor

From:
Dr Shyam Shukla

Dean, School of Civil Engineering

Date: 1/1/2024

Subject: Proactive Initiative to Enhance Clarity of Student Progress in Course 2303101 - Applied Mechanics

Dear Dr. Magade,

As part of our continuous efforts to achieve the highest standards of teaching and learning, our department routinely analyses student feedback to identify opportunities for refinement. The feedback for your course, **2303101 - Applied Mechanics**, was overwhelmingly positive, reflecting your strong command over the subject and dedication to teaching.

In our detailed analysis, we observed that while all parameters were satisfactory, the score for **"Clarity of expectations of students' progress"** was marginally lower relative to the other high-scoring parameters. This is a common area for fine-tuning and presents an excellent opportunity to further elevate an already strong student learning experience.

Even a small improvement in this area can significantly boost student confidence, motivation, and their ability to take ownership of their learning in a foundational course like Applied Mechanics.

MIT ACADEMY OF ENGINEERING School of Civil Engineering

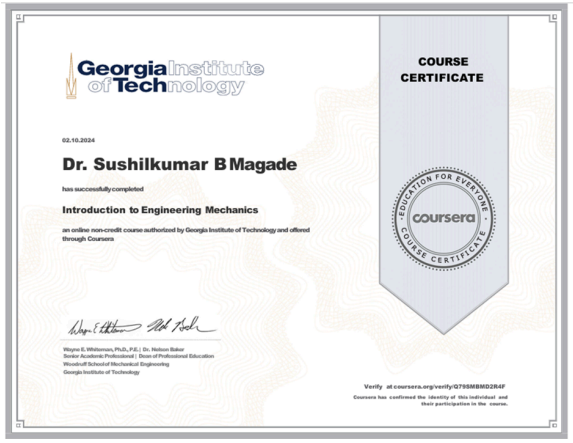
Dean, Civil

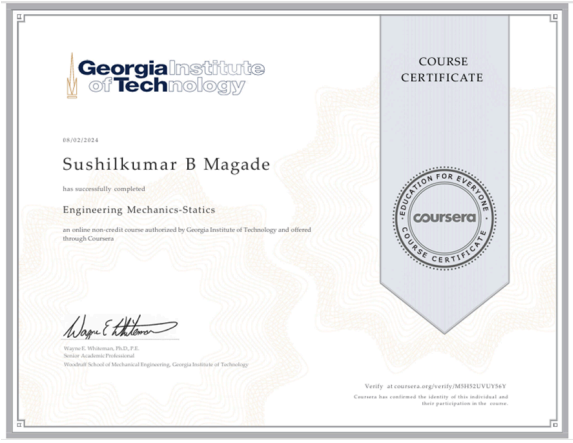
DEAN
School of Civil Engineering
MIT Academy of Engineering
Alandi (D.), Pune-412 105.

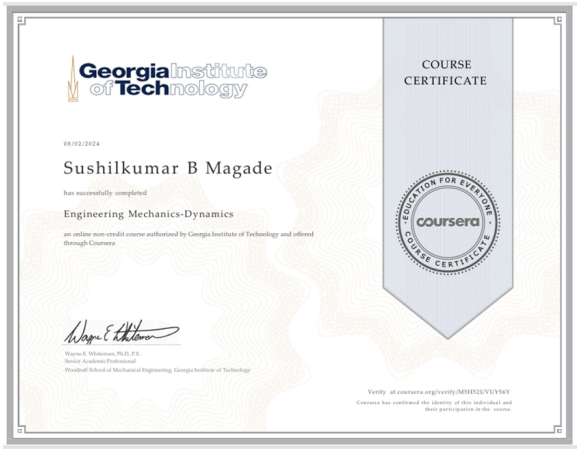
Fig 9.3.3 Letter for less feedback on teaching learning

Steps taken for feedback

Faculty asked to enrol the similar courses on any platform to enhance the knowledge for the course.







MIT | Academy of Engineering

(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

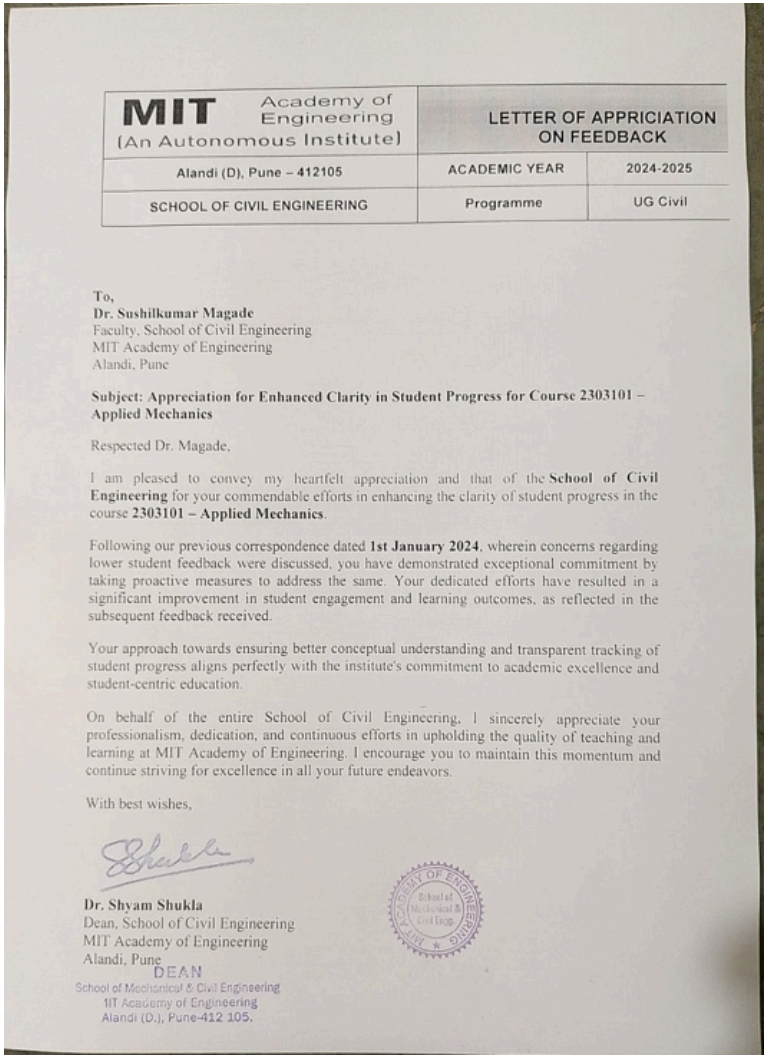
360 DEGREES FEEDBACK

Feedback Date	:	05-03-2025
Class Name & Semester	:	II (Section CC)
Total Number of Students	:	23
Number of Students Responded :	:	4
Staff Name	:	SUSHILKUMAR BUDDHANAND MAGADE
Course Code and Name	:	2303101T APPLIED MECHANICS

Sr. No.	Questions	Grade Point
1	Clarity of expectations of students' progress.	8.50
2	Effectiveness of Teacher in terms: - Technical content/course contents - Communication Skills - Use of teaching aids	8.50
3	Feedback provided on Students' progress	9.00
4	Has the Teacher covered entire Syllabus as prescribed by Institute?	9.00
5	Has the Teacher covered relevant topics beyond syllabus.	9.00
6	Motivation and inspiration for students to learn.	9.00
7	Overall, how do you rate your experience in this course?	9.00
8	Pace on which content were covered.	9.00
9	Support for the development of students skill - Practical Demonstration - Hands on training	9.00
10	Willingness to offer help and advice to students	9.00

Overall Average for the subject : 8.90

Fig 9.3.4a Appreciation for good feedback on teaching learning



MIT Academy of Engineering (An Autonomous Institute)	LETTER OF APPRICIATION ON FEEDBACK	
Alandi (D), Pune – 412105	ACADEMIC YEAR	2024-2025
SCHOOL OF CIVIL ENGINEERING	Programme	UG Civil

To,
Dr. Sushilkumar Magade
Faculty, School of Civil Engineering
MIT Academy of Engineering
Alandi, Pune

Subject: Appreciation for Enhanced Clarity in Student Progress for Course 2303101 – Applied Mechanics

Respected Dr. Magade,

I am pleased to convey my heartfelt appreciation and that of the **School of Civil Engineering** for your commendable efforts in enhancing the clarity of student progress in the course **2303101 – Applied Mechanics**.

Following our previous correspondence dated **1st January 2024**, wherein concerns regarding lower student feedback were discussed, you have demonstrated exceptional commitment by taking proactive measures to address the same. Your dedicated efforts have resulted in a significant improvement in student engagement and learning outcomes, as reflected in the subsequent feedback received.

Your approach towards ensuring better conceptual understanding and transparent tracking of student progress aligns perfectly with the institute's commitment to academic excellence and student-centric education.

On behalf of the entire School of Civil Engineering, I sincerely appreciate your professionalism, dedication, and continuous efforts in upholding the quality of teaching and learning at MIT Academy of Engineering. I encourage you to maintain this momentum and continue striving for excellence in all your future endeavors.

With best wishes,

Dr. Shyam Shukla
Dean, School of Civil Engineering
MIT Academy of Engineering
Alandi, Pune

DEAN
School of Mechanical & Civil Engineering
MIT Academy of Engineering
Alandi (D.), Pune-412 105.

9.3.2 Feedback on Academic Facilities (5)

Institute Marks : 5.00

The process begins with the systematic collection of feedback from multiple stakeholders students, faculty, technical staff, alumni, and visiting experts primarily through end-semester surveys, departmental meetings, and dedicated feedback forms as mentioned in figure 9.3.2.1 This input is consolidated quarterly by the Internal Quality Assurance Cell (IQAC).

The consolidated feedback is then categorized and analyzed based on facility type (Laboratories, Library, ICT, Classrooms) and a priority scale derived from average ratings. Issues rated below 3.5 on a 5-point scale are tagged as High Priority (e.g., safety hazards, non-functional equipment) and trigger immediate corrective actions. Ratings between 3.5-4.0 are Medium Priority for short-term improvements, while scores above 4.0 lead to Low Priority long-term enhancement projects.

Implementation is handled by designated committees (Lab Committee, ICT Committee, Estate Committee). After execution, a verification step ensures the actions meet requirements, followed by detailed documentation in IQAC reports, AQAR, and departmental records. The loop closes with communication of actions taken to stakeholders and continuous monitoring in the next feedback cycle, ensuring a closed-loop system for sustained facility improvement.

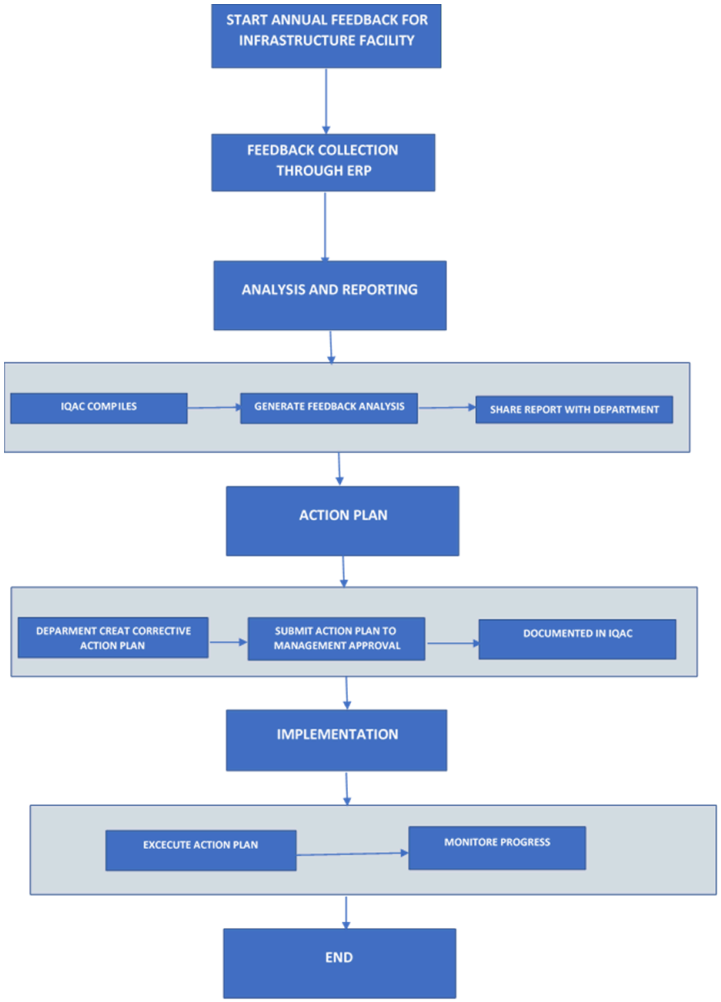


Fig. No 9.3.2.1 Process for feedback on facility

A Process:

Facility feedback at MIT Academy of Engineering (MITAOE) is collected annually through a structured digital survey administered via the institute's ERP system to ensure a safe, adequate, and conducive learning and working environment. The feedback is collected once every academic year using an online ERP-based feedback module and covers all major institutional facilities including laboratories (equipment availability, safety, and accessibility), library services (learning resources, digital access, ambiance, and timings), ICT infrastructure (Wi-Fi connectivity, licensed software, computer laboratories, and digital classrooms), and classrooms and general

infrastructure (furniture, lighting, ventilation, projectors, and acoustics). The survey is participated in by students, faculty members, and technical staff, and all responses are kept anonymous to encourage honest and unbiased input. The survey structure includes rating-based questions using a 1–5 Likert scale along with open-ended sections for specific suggestions, and the collected data is categorized department-wise and facility-wise to facilitate systematic analysis and implementation of corrective measures for continuous improvement.

B Implementation:

The facility feedback process at MIT Academy of Engineering (MITAOE) is systematically implemented and monitored in alignment with the continuous improvement requirements. The process begins with annual feedback collection, where notifications are sent through the ERP system, email, and campus digital notice boards, and the feedback window remains open for three weeks with periodic reminders; Heads of Departments ensure a minimum participation rate of more than 75% from stakeholders. All collected feedback is then centrally compiled and analyzed by the Internal Quality Assurance Cell (IQAC), which prepares a comprehensive Facility Feedback Analysis Report highlighting average ratings for each facility, recurring issues, suggestions, and priority areas requiring improvement. These reports are shared with concerned departments such as Library, IT, Laboratories, and Estate for review. Based on the findings, the respective departments prepare detailed corrective action plans specifying proposed interventions, budget requirements, implementation timelines, and responsible personnel. These action plans are submitted to the Management and Governing Body for approval, and once approved, they are formally documented in IQAC meeting minutes, departmental records, and the Annual Quality Assurance Report (AQAR), ensuring proper implementation and continuous enhancement of institutional facilities.

C. Impact Analysis:

Based on facility feedback received from stakeholders, several significant infrastructure enhancements were implemented at MIT Academy of Engineering (MITAOE). Civil engineering laboratories were upgraded by procuring updated software licenses such as AutoCAD, MATLAB, and ANSYS, and by improving safety provisions including fire extinguishers, first-aid kits, and safety signage, which enhanced students' practical learning experience, project quality, and research capability. In response to student requests for extended access, library working hours were increased from 8:00 AM–8:00 PM to 8:00 AM–10:00 PM on weekdays and from 9:00 AM–5:00 PM to 9:00 AM–8:00 PM on Saturdays, along with the provision of 24/7 digital library access through the institute LMS. ICT infrastructure was strengthened by upgrading internet bandwidth from 1 Gbps to 2 Gbps, installing additional Wi-Fi access points in hostels and common areas, and implementing a dedicated VPN to enable remote laboratory access. Additionally, classrooms were modernized by replacing outdated projectors with HD laser projectors and renovating seating arrangements with ergonomic furniture and improved acoustics, thereby creating a more effective and comfortable teaching learning environment.

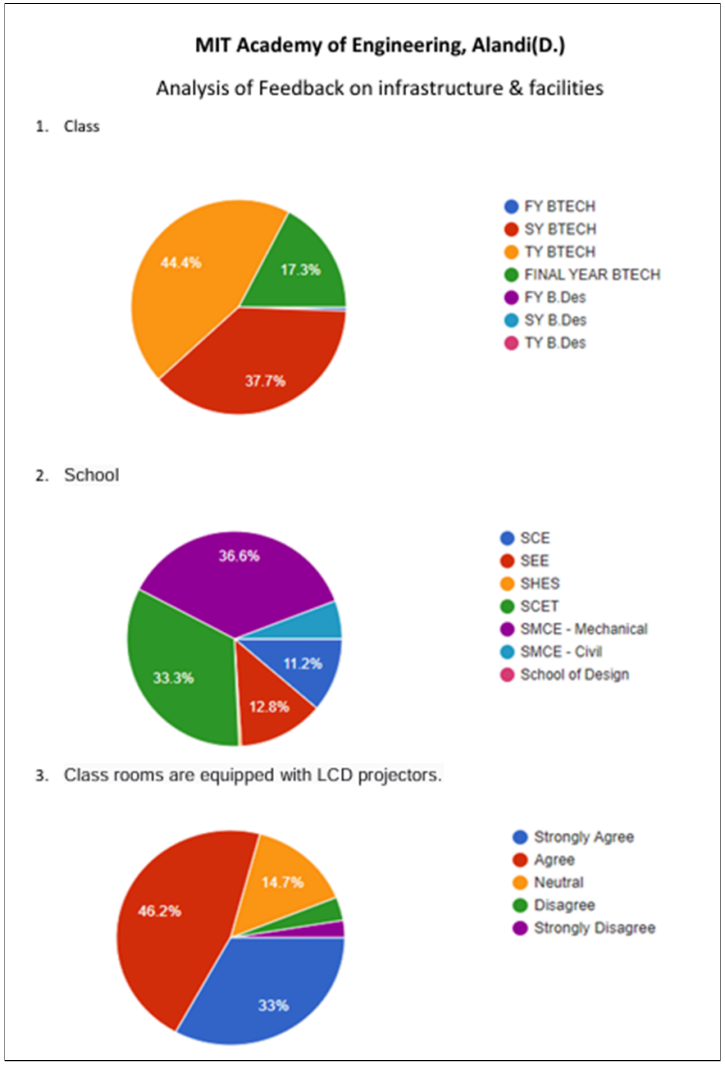
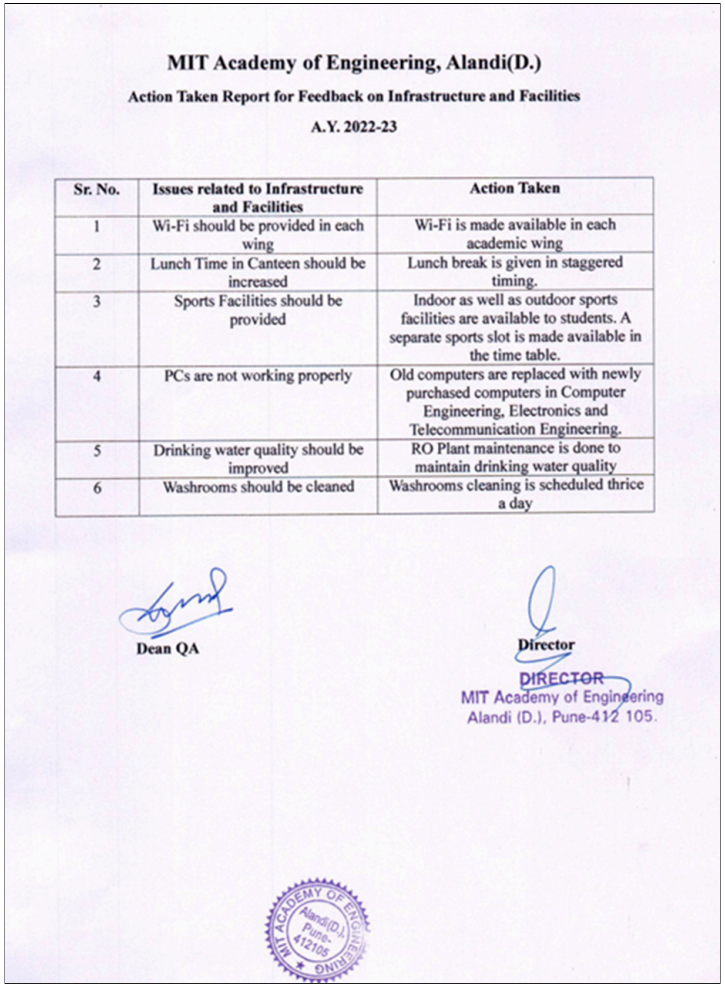


Fig no 9.3.2.2 Sample feedback form



MIT Academy of Engineering, Alandi(D.)

Action Taken Report for Feedback on Infrastructure and Facilities

A.Y. 2022-23

Sr. No.	Issues related to Infrastructure and Facilities	Action Taken
1	Wi-Fi should be provided in each wing	Wi-Fi is made available in each academic wing
2	Lunch Time in Canteen should be increased	Lunch break is given in staggered timing.
3	Sports Facilities should be provided	Indoor as well as outdoor sports facilities are available to students. A separate sports slot is made available in the time table.
4	PCs are not working properly	Old computers are replaced with newly purchased computers in Computer Engineering, Electronics and Telecommunication Engineering.
5	Drinking water quality should be improved	RO Plant maintenance is done to maintain drinking water quality
6	Washrooms should be cleaned	Washrooms cleaning is scheduled thrice a day

Fig. No 9.3.2.2 Analysis of Feedback on Infrastructure and Facilities

Table 9.3.2.1 Impact analysis of feedback for 2024-25

Feedback Area	Feedback Received	Action Taken	Impact/Outcome
Lab Equipment	Outdated equipment in Electronics and Mechanical Labs	• Procured new oscilloscopes, signal generators, and CNC machines • Upgraded software licenses (AutoCAD, MATLAB, Ansys) • Enhanced safety equipment (fire extinguishers, first-aid kits, safety signage)	Improved student hands-on experience, better project outcomes, and increased research capability

Feedback Area	Feedback Received	Action Taken	Impact/Outcome
Library Hours	Need for longer access to library resources, especially during examinations and project work	• Extended library hours: - Weekdays: 8:00 AM – 8:00 PM → 8:00 AM – 10:00 PM - Saturdays: 9:00 AM – 5:00 PM → 9:00 AM – 8:00 PM • Introduced 24/7 digital library access via institute LMS	Increased accessibility for students, better support during exam periods and project work
ICT Infrastructure	Issues with Wi-Fi connectivity and speed	• Upgraded bandwidth from 1 Gbps to 2 Gbps • Installation of additional access points in hostels and common areas • Implementation of dedicated VPN for remote lab access	Improved internet connectivity, better access in all campus areas, enhanced remote learning capabilities
Classroom Facilities	Poor projector clarity and uncomfortable seating	• Replacement of old projectors with HD laser projectors • Renovation of 10 classrooms with ergonomic furniture and improved acoustics	Better visual clarity for presentations, improved student comfort, enhanced learning environment

Table 9.3.2.2 Student Satisfaction Survey Analysis: Campus Infrastructure & Support Services (Academic Year 2024–25)

Parameter	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Overall Sentiment
Classrooms equipped with LCD projectors	45%	35%	10%	5%	5%	✅ Positive
Classrooms & labs cleaned regularly	50%	40%	7%	2%	1%	✅ Very Positive
WiFi & internet availability	30%	25%	15%	20%	10%	⚠️ Needs Improvement
Food quality & hygiene in canteen	40%	35%	15%	7%	3%	✅ Positive
Washrooms cleaned regularly	42%	38%	10%	6%	4%	✅ Positive
Quality drinking water available	48%	35%	10%	4%	3%	✅ Positive
Ecosystem for extracurricular activities	35%	30%	15%	10%	10%	⚠️ Mixed

Sports facilities available	30%	25%	20%	15%	10%	⚠️ Needs Improvement
Library facility – Availability of books	55%	30%	10%	3%	2%	✅ Very Positive
Counseling & motivation for extracurriculars	40%	35%	15%	6%	4%	✅ Positive
Medical/Counseling facility available	38%	40%	15%	5%	2%	✅ Positive
Student Section availability	35%	38%	18%	6%	3%	✅ Positive
Exam Section availability	40%	35%	15%	7%	3%	✅ Positive
Overall impression of the institute	40%	35%	15%	6%	4%	✅ Satisfactory

Table 9.4.3Consolidated Student Grievances and Feedback Analysis: Key Issue Categories, Impact, and Evidence

Sr No	Issue Category	Key Issues	Impact	Sample Student Quote
1	WiFi & Internet Connectivity	Unreliable, slow, or absent in certain wings (A, H)	Hinders online learning, exam preparation, and research	"WiFi in A wing should be improved."
2	Sports & Recreational Facilities	Lack of proper grounds, equipment, and organized sports activities	Affects physical health, stress relief, and holistic development	"College is just a construction site… no ground for playing."
3	Extracurricular & Event Engagement	Few fests, events, or club activities; overemphasis on academics	Poor campus life experience, student disengagement, mental fatigue	"There should be some relief from academics at least once in two weeks."
4	Campus Infrastructure & Roads	Poor road conditions, ongoing construction, noise, and congestion	Accessibility issues, safety concerns, negative campus aesthetics	"Please take care of the road of the MIT campus."
5	Classroom & Lab Infrastructure	Broken benches, poor lighting, non-functional fans, outdated PCs	Uncomfortable learning environment, distraction, reduced productivity	(Multiple mentions of broken benches, poor lighting, etc.)

6	Administrative Responsiveness	Exam section and student section perceived as uncooperative/inaccessible	Delays in grievance resolution, hall ticket issuance, and support	(General feedback on exam/student section delays)
7	Gender-Specific Concerns	Lack of sports engagement for girls, inadequate washroom amenities	Equity issues, discomfort, and lower participation	“More engagement in sports activities for girls. Extracurricular programs are not conducted.”

9.4 Training and Placement Support (10) Total Marks 10.00

Institute Marks : 10.00

At MIT Academy of Engineering, the Training and Placement Cell provides comprehensive support to enhance students' employability and career readiness through structured training and industry interaction. The cell organizes campus recruitment drives for undergraduate and postgraduate students and facilitates interactions with reputed companies and industry professionals. It conducts regular training programs focusing on aptitude development, soft skills, communication skills, personality development, resume writing, group discussion techniques, and interview preparation. Mock interviews, career guidance sessions, and expert talks are arranged to prepare students for competitive recruitment processes. The cell also promotes internships, in-plant training, and industry-based projects to provide practical exposure and hands-on experience. In addition, it guides students for higher education and entrepreneurial opportunities, ensuring holistic career development and improving placement outcomes across various engineering disciplines.

Objectives and Strategies

- **Early Career Assessment and Guidance:**
  From the first year, students undergo structured career assessment tests such as AMCAT and BTechGuru. These evaluations are followed by individual counselling sessions to help students plan their academic and career goals effectively.
- **Integrated Employability Training:**
  Soft skills, communication, personality development, and aptitude are integral components embedded into the academic curriculum through mandatory courses. Co-curricular activities further supplement the students' corporate readiness.
- **Domain-Specific Technical Training:**
  Students are exposed to various technical workshops and industry expert sessions covering current and emerging technologies. These sessions improve domain knowledge and help bridge the gap between classroom learning and industry expectations.
- **Super 30 Program:**
  A special initiative that trains 120 meritorious students from second and third year under the **"**Super 30" program, preparing them intensively for elite placements through tailored sessions and mentoring.
- **Real-World Exposure through Product Audits:**
  Product audit sessions by industry experts are organized for third-year students, offering hands-on experience in problem-solving and grooming them for technical interviews.
- **Entrepreneurial and Higher Education Support:**
  Dedicated guidance is provided for competitive exams such as GATE, GRE, CAT, and TOEFL. The institute motivates students to explore higher studies and entrepreneurship through expert sessions, mentorship, and support in admission and scholarship processes.

Industry Connect and Opportunities

- Over 500+ companies collaborate with MITAOE annually for placement drives, internships, industry projects, and technical training.
- Regular sessions such as webinars, panel discussions, and boot camps are conducted in association with domain experts and hiring managers from reputed firms.
- Students are encouraged to participate in Semester-Long Internship Programs (SLIP) and Short-Term Internships (SIP) to gain valuable industry experience.

The Corporate Relations team facilitates connections between students and industry mentors for long-term growth and readiness.

The activities related to Training and Placement (T&P) are mentioned in the academic calendar, as shown in the figure 9.4.1. These include value addition programs aimed at skill development, AMCAT assessments for employability testing, and technical and cultural events to foster holistic growth. The calendar also allocates a dedicated period for summer internships, providing students with essential industrial exposure. These strategically planned activities are designed to enhance student employability and bridge the gap between academic learning and industry expectations.

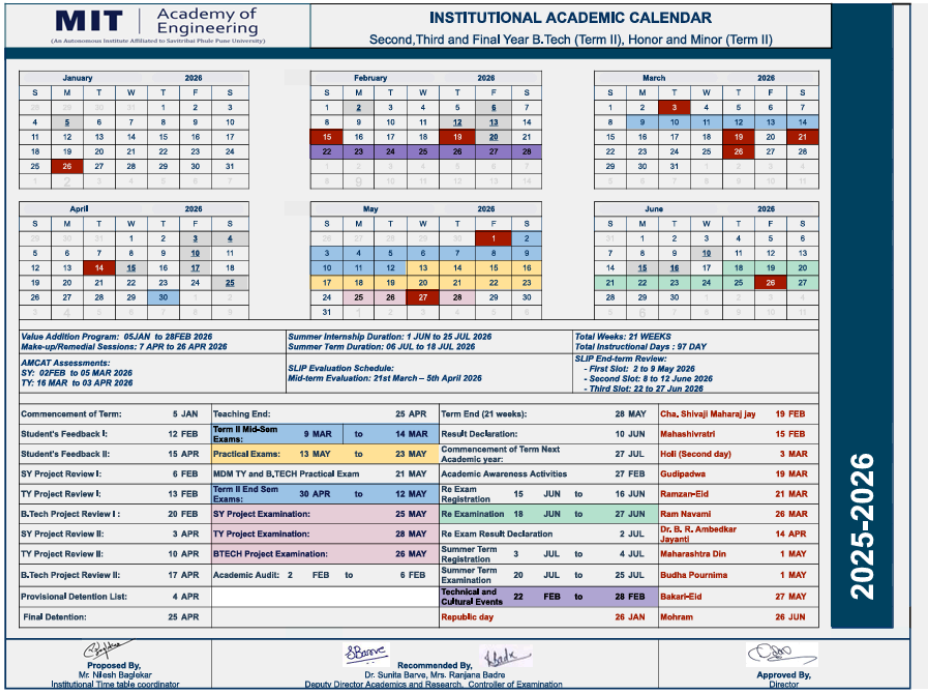


Figure 9.4.1 Calender for trainig and placement events

A. Process

The Training and Placement Cell (TPC) at MIT Academy of Engineering functions as a centralized and proactive unit responsible for planning and implementing a structured annual training and placement program to make students industry-ready and bridge the gap between academic learning and professional requirements. At the beginning of each academic year, typically in July, the TPC prepares a comprehensive Annual Training and Placement Calendar with inputs from key stakeholders including industry partners, alumni, faculty members, and students to ensure relevance and effectiveness. This calendar includes scheduled activities such as aptitude and technical training programs, soft skills and communication development workshops, industry interaction sessions, internship drives, and on-campus and off-campus placement drives. It also incorporates higher education counseling sessions to guide students interested in pursuing postgraduate studies, thereby ensuring systematic preparation and holistic career support for all students.

B. Implementation:

The Training and Placement Cell at MIT Academy of Engineering provides comprehensive and structured training programs to enhance students' employability through aptitude development, soft skills training, internship facilitation, and career counseling. The aptitude and soft skills training is organized into structured modules covering quantitative aptitude, logical reasoning, verbal ability, technical aptitude, group discussion and personal interview skills, as well as resume building and LinkedIn profile development. These programs are delivered through classroom sessions conducted by internal trainers and external experts, supported by online modules available on the institute LMS and assessment platforms such as AMCAT and CoCubes, along with mock tests and simulated interviews conducted with industry mentors. These sessions are conducted weekly throughout the academic year, with increased intensity during the pre-placement period. The cell also organizes Summer Internship Programs (SIP) and Semester Long Internship Programs (SLIP) in collaboration with partnered companies, and conducts regular pre-placement talks where industry representatives present company profiles, explain job roles, and conduct preliminary interactions. The institute maintains strong industry connections with more than 200 companies across IT, core engineering, consulting, and research sectors. In addition, dedicated career counseling and higher education support are provided through specialized guidance for competitive examinations such as GATE, collaborations with international universities for higher studies, and active alumni mentorship programs to help students plan their careers and academic progression effectively.

C Impact Analysis:

The training and placement initiatives implemented by the Training and Placement Cell at MIT Academy of Engineering have resulted in significant positive impact on students' employability, professional skills, and career outcomes. Continuous aptitude, technical, and soft skills training has improved students' performance in recruitment processes by enhancing their problem-solving ability, communication skills, and interview confidence. Structured internship programs and industry interactions have strengthened practical knowledge, industry exposure, and work readiness, enabling students to align their academic learning with real-world applications. Career counseling, higher education guidance, and alumni mentorship have increased student awareness about diverse career pathways, including higher studies, entrepreneurship, and competitive examinations. As a result, the institute has observed improved placement percentages, higher quality job offers from reputed companies, increased internship participation, and overall enhancement in student career readiness, reflecting the effectiveness of the structured training and placement support system.

Improved Placement Percentage

Table 9.4.1 Data (Last 5 Years)

Academic Year	Placed Students
2021–22	408
2022–23	468
2023–24	517
2024-25	566

Career Counselling and Training Programs:

MITAOE regularly organizes expert-led training initiatives aimed at student development. Furnished below some of the activities conducted in the last year:

Table 9.4.2 training sessions for career guidance (2024-25)

Details of career counselling sessions	Date	Number of students attended
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	12-Dec-2023	126
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	13-Dec-2023	164
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	14-Dec-2023	64
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	15-Dec-2023	73
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	18-Dec-2023	80
GATE - Orientation Sessions	10 & 14 Oct. 2023	271
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	02-Feb-2024	115
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	06-Feb-2024	110
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	07-Feb-2024	105
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	08-Feb-2024	80
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	20-March-2024	50

Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	02-April-2024	68
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	03-April-2024	97
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	04-April-2024	80
Career Guidance Session - To create awareness about various Career opportunities as well as to provide guidelines on how to prepare for the on-campus and off-campus recruitment processes	05-April-2024	80
Expert Session by Alumni : A talk was delivered on "Driving Innovation: Charting the Future of the Automotive Industry with Insights from Our Esteemed Alumni"	17th Jan 2024	101
Expert Session by Alumni : A talk was delivered on “Role of Costing and procurement Engineer in Core Industry	24th Jan 2024	75
Expert Session by Alumni : A talk was delivered on” Booming of Water Industry and Role of Chemical and Mechanical Engineer in Water Industry”	31st Jan 2024	31
Expert Session by Alumni : A talk was delivered on “Employability opportunity for todays Engineer for all discipline”	07th Feb 2024	78
GATE - Orientation Session	19 Sept. 2024	76

Data for Civil engineering department

Table 9.4.3 Placement, higher studies, and entrepreneurship details for civil.

Item	2024-25	2023-24	2022-23
Total no. of final year students	81	78	80
No. of students placed	21	35	26
No. of students admitted to higher studies	5	5	2
No. of students taking up entrepreneurship	0	0	0
Total students placed plus higher studies	26	40	28

Table 9.4.4 Placement Overview for Civil Engineering

Sr. No	Year	Link
1	2021-22	https://drive.google.com/file/d/1aHDWkpU-B5xaFVXkIxnacWWM0skIuqgR/view
2	2022-23	https://drive.google.com/file/d/1Fj52NOIqn-LFRQEmwznW8_GyDF9yASTm/view

Table 9.4.5 Placement Information AY 2O24-25

Sr. No.	PRN	Name of Student	Name of Industry	CTC
1	120200485	Akash Kachgunde	AMS Concrete Consultant	4.2
2	202202030017	Balaji S. Kure.	vConstruct Private Limited	5.3
3	202202030033	Rakhi Pandagare	Technip Energies	6.5
4	202202030037	Masooma Sultan	Sydac Simulation Technology India Pvt Ltd	3.8
5	202202030026	Ganesh Chaudhari	Pearl Construction	3.6
6	202202030038	Madhura Shirode	Biofarmax	2.8
7	202202030022	Sakunde Sandeep Gangadhar	vConstruct Private Limited	6.5
8	202202030036	Mousin Sultan	Schlumberger	3.5
9	202202030001	Aditya Gawai	WINNTUS	2.8
10	202202030021	Yash Sushil Sangale	Mantra	3.5
11	202202030019	Takate Uddhav	Durocrete	2.8

Table 9.4.6 Placement Information AY 2023-24

Sr. No.	PRN	Name of Student	Name of Industry	CTC
1	202102030031	Samruddhi Ankalkhope	Technip Energies	6.5
2	202102030029	Prajwal Bambal	Cloud 4c	4.5
3	120200445	Gayatri Londhekar	Mantra Properties	4
4	120200521	Priyank Nandanwar	Mantra Properties	4
5	120200409	Abhishek Vinchu	Mantra Properties	4
6	120200639	Mohit Soni	Mantra Properties	4
7	120200642	Shrushti Jadhav	Mantra Properties	4
8	120200043	Darshan Madan Pawar	AMS Concrete Consultant	3.2-4.5
9	120200015	Aditya Ashok Palve	AMS Concrete Consultant	3.2-4.5
10	120200547	Gayatri Sudhakar Pansare	AMS Concrete Consultant	3.2-4.5
11	120200588	Mamta Sanjay Dawale	AMS Concrete Consultant	3.2-4.5
12	202102030033	Mohini Shivaji Gulve	AMS Concrete Consultant	3.2-4.5
13	202102030011	Pranav Amar Kusalkar	AMS Concrete Consultant	3.2-4.5
14	120200451	Sairam Tulshiram Rathod	AMS Concrete Consultant	3.2-4.5
15	120200382	Ashitosh Chandrakant Bhosale	AMS Concrete Consultant	3.2-4.5
16	120200313	Vinit Pravin Samdure	AMS Concrete Consultant	3.2-4.5
17	120200523	Yashraj Keshavrao Ghodake	AMS Concrete Consultant	3.2-4.5
18	120200424	Bira Chandrakant Narbat	Panchshil Realty	4.5 - 5.5
19	202102030030	Nikita Dabhade	Panchshil Realty	4.5 - 5.5

20	202102030012	Kirti Ramkrishna Kumbhar	Panchshil Realty	4.5 - 5.5
21	202102030018	Aaditya Todkar	Panchshil Realty	4.5 - 5.5
22	202102030003	Uday Andhale	Panchshil Realty	4.5 - 5.5
23	202102030028	Aishwarya Wadhe	Panchshil Realty	4.5 - 5.5
24	202102030032	Uday Patharkar	Panchshil Realty	4.5 - 5.5
25	120200397	Priti Jadhavar	Panchshil Realty	4.5 - 5.5
26	202102030027	Ashwini Harne	Panchshil Realty	4.5 - 5.5
27	202102030001	Pooja Patil	Panchshil Realty	4.5 - 5.5
28	120200452	Vaishnavi Pande	CQRA Pvt LTD	4
29	120200366	Kajal Gite	Durocrete	3.2
30	202102030005	Kaustubh Vete	Durocrete	3.2

Table 9.4.7 Internship Overview for Civil Engineering (2024-25)

Sr.No	Name	Company	Stipend (₹/month)
1	Vedant Jitendra Bhavsar	AMs Project Consultants Pvt Ltd	10,000
2	Chavan Sarthak Anil	AMs Project Consultants Pvt. Ltd.	10,000
3	Furquanziya Shakeel Shaikh	CGRA Private Limited	10,000
4	Chavhan Sanskar Ashok	Durocrete Engineering Services Pvt. Ltd	10,000
5	Takate Uddhav Ambadas	Durocrete Engineering Services pvt.ltd	10,000
6	Chaudhari Vaidehi Baban	Durocrete Engineering Services Pvt.Ltd	10,000
7	Bhatnate Ritesh Ashok	Bhujal Abhiyan Trust	5,000
8	Pogulwar Shantanu Kaveshwar	Bhujal Abhiyan Trust	10,000
9	Bhalerao Aniket Manesh	Omkar Group	10,000
10	Kolhe Atharva Sharadkumar	Omkar Group	10,000
11	Sanket Gopal Dhamshedwar	Omkar Group	10,000
12	Mousim Sultan	SLB Technologies	30,000
13	Gawai Aditya Vijay	Winntus	15,000
14	Surve Aditya Keshav	Winntus	15,000
15	Dharpale Arti Dadasaheb	Winntus	15,000
16	Todkari Hrushikesh Vikas	Winntus	15,000
17	Pawar Krishnaraj Panjabrao	Winntus	15,000
18	Mandore Manas Sunil	Winntus	15,000
19	Patil Rajdeepsing Dinkar	Winntus	15,000
20	Gadge Shraddha Sanjiukumar	Winntus Aluform pvt Ltd	18,000
21	Vedant Sontakke	Winntus Aluform pvt Ltd	18,000

22	Tiwari Shubham Sanjeevkumar	Winntus Aluminium Formwork	15,000
23	Khatri Chirag Vijay	Winntus Aluminium Formwork Pvt Ltd.	15,000
24	Pawar Ashwajeet Harishchandra	Worldwide Total Building Solution	10,000
25	Kamble Parimeeta Anil	Worldwide Total Building Solution	10,000
26	Wankhede Rohit Jitendra	Worldwide Total Building Solutions	10,000
27	Narawade Vishakha Kishor	WORLDWIDE TOTAL BUILDING SOLUTIONS	10,000
28	Mayuri Mahesh Jagadale	Mantra Properties	4,000
29	Yash Sushil Sangale	Mantra Properties	4,000

9.5 Start-up and Entrepreneurship Activities (5) Total Marks 5.00

Institute Marks : 5.00

The organizational structure of the MIT Academy of Engineering Entrepreneurship Development Foundation (MITAoE EDF) is led by the Board of Directors, which provides strategic direction and governance. Reporting to the Board is the Head of the ED Cell and CEO of MITAoE EDF, who holds overall responsibility for the foundation's vision, operations, and initiatives. Supporting the CEO in day-to-day management is an Operations Executive, responsible for implementing programs and coordinating activities. The executive is assisted by an Operations Associate and Accountant, who handles administrative, logistical, and financial tasks. Additionally, the structure includes a Support Service function, which ensures the smooth running of backend operations, infrastructure, and auxiliary services required for the effective functioning of the EDF.

1. Organizational & Governance Initiatives:

The MIT Academy of Engineering has strengthened its innovation and entrepreneurship ecosystem through the establishment of the MITAoE Entrepreneurship Development Foundation (EDF), a dedicated body governed by a Board of Directors that provides strategic direction and policy support for entrepreneurial activities. The foundation operates under a structured leadership model headed by a Chief Executive Officer (CEO) and supported by a professional operational team comprising an Operations Executive, Associate, Accountant, and support staff to ensure effective implementation of entrepreneurship initiatives. To provide expert guidance, the EDF has developed a strong professional mentorship network consisting of more than 40 experienced mentors from industry and startup domains who support students and faculty in startup development and innovation. In addition, capacity building has been emphasized through active faculty involvement, with more than 50 Faculty Development Programs (FDPs) and training sessions attended by faculty and staff to enhance their knowledge in entrepreneurship, innovation management, and startup mentoring, thereby creating a sustainable and supportive entrepreneurial ecosystem within the institute.

2. Partnership & Networking Initiatives:

The MIT Academy of Engineering has actively strengthened its entrepreneurship ecosystem through strategic partnership and networking initiatives by establishing 15 industry–academia Memoranda of Understanding (MoUs) with reputed national and international organizations. These include collaborations with the Wadhwani Foundation to promote entrepreneurial competencies among students, AIC Pinnacle and Bhau Institute for incubation support and startup networking, De Asra Foundation for legal, financial, and detailed project report assistance, and MS Law Partners to provide intellectual property rights and legal advisory services. Financial literacy and investment awareness are supported through association with Finstreet, while seed funding opportunities and entrepreneurial networking are facilitated through Navyuvak Entrepreneurs. Additionally, global exposure and funding access are enabled through collaboration with the Indian STEPs and Business Incubators Association, and social entrepreneurship initiatives are promoted in association with the Pune Traffic Police. These partnerships provide students and faculty with access to mentorship, incubation, funding opportunities, legal support, and real-world entrepreneurial exposure, thereby strengthening the institute's innovation and startup ecosystem.

3. Financial Support Initiatives

The MIT Academy of Engineering actively supports student entrepreneurship through effective implementation of various government schemes and funding initiatives. The institute has received approval of ₹2 Crore under the Startup India Seed Fund Scheme to provide financial assistance for student startups at early stages. It is also recognized as a Host Institute under the Ministry of Micro, Small and Medium Enterprises (MSME), enabling access to government support, training, and incubation benefits. Additionally, the institute receives ₹10 lakh per year under the Ambedkar Social Innovation and Incubation Mission to promote socially relevant innovations. Seed funding support is further strengthened through partnership with Navyuvak Entrepreneurs, which helps startups with financial and networking assistance. The institute also provides extensive support for government registrations, including MSME registration, with more than 50 student startups successfully registered, enabling them to access financial incentives, subsidies, and business development opportunities.

4. Physical Infrastructure & Facilities

The MIT Academy of Engineering provides strong infrastructure support to nurture startups and innovation through dedicated incubation and co-working facilities. The institute offers 15 dedicated incubation spaces for incubatees, providing a professional environment for startup development, collaboration, and business operations. In addition, co-working facilities are made available through its partnership with the Bhau Institute, enabling student entrepreneurs to access advanced incubation resources, networking opportunities, and expert guidance. The institute also provides robust digital infrastructure, including access to industry networks, startup ecosystems, and expert mentors, which helps incubated teams connect with investors, technical experts, and business leaders, thereby accelerating the growth and success of student startups.

5. Capacity Building Programs:

The MIT Academy of Engineering conducts regular capacity building programs to enhance the entrepreneurial, technical, and mentoring skills of faculty, staff, and students. These programs include Faculty Development Programs (FDPs), workshops, and training sessions on innovation, startup management, intellectual property rights, and incubation practices. Such initiatives strengthen the institute's internal ecosystem to effectively support innovation, research commercialization, and startup development.

Table 9.5.1 Number of Events conducted

Sr. No.	Academic Year	Total No. of Events/programme
1	2024-2025	18
2	2023-2024	17
3	2022-2023	8

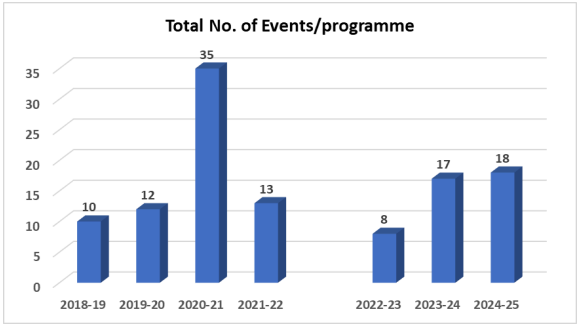


Fig 9.5.1 Number of events per year

Table 9.5.2 List of MOU's

Sr. No.	Organisation Name	Date of Signing	Purpose
1.	Wadhwani Foundation	04/05/2018	To Empower students entrepreneurial traits and build leadership
2.	IntoIT Solutions	26/8/2019	Mentoring and Pre-incubation
3.	AIC Pinnacle	12/12/2019	Incubation and Networking
4.	MS Law Partners	29/1/2020	IPR Legal
5.	DLFC	28/10/2020	Legal, Finance, DPR and End to End support for start-up
6.	Finstreet	1/11/2020	Financial Literacy
7.	Navyuvak Entrepreneurs	6/1/2021	Seed money and Networking
8.	Bhau's Incubation Centre, Pune	5/7/2021	Co-working space, networking, mentoring and funding assistance for incubate
9.	Pimpri Chinchwad Startup Incubation Centre	30/11/2021	student startup support
10.	Amplinext Innovation Catalyst	13/12/2023	To provide incubation & acceleration services for startups
11.	Avantika Innovation & Incubation Center (AIIC)	28/02/2024	For mentoring & coaching programs ,to provide access to industry experts, helping in organising startup expo, hackathon etc.
12.	MITADT University, Pune	31/05/2024	To Establish a comprehensive, long term collaborative, Initiative for mentoring, coaching, access to a network to a industry expert. Organizing start up Expo.
13.	Indian STEP and Bussiness association (ISBA)	23/10/2024	Useful for fetching funding, networking with national & international stake holders & Govt. officials

14.	FUNDENABLE	15/10/2024	Useful startup groups experiential learning
15.	Deputy Commissioner of Police (Traffic), Pimpri Chinchwad, Pune	03/04/2025	Development of application to empower citizens for directly reporting traffic issues to DCP office

5.1 Specialized Programs:

The MIT Academy of Engineering organizes various capacity building and entrepreneurship support activities to develop students' innovation and startup capabilities. These include mentoring and coaching programs conducted by industry experts to guide students in startup development, along with startup expos and hackathons that provide opportunities to present innovative ideas and develop prototypes. The institute also conducts financial literacy workshops to help students understand funding, investment, and business planning, and organizes Intellectual Property Rights (IPR) awareness sessions in collaboration with legal experts to educate students about patent filing, copyright, and protection of innovations, thereby strengthening the overall entrepreneurial ecosystem.

5.2 Quantitative Impact:

Table No 9.5.3: Impact of capacity building program

Sr. No.	Particular	Details
1	Number of student startups graduated	74
2	Number of student startups in pre-incubation	15
3	Number of incorporated student startups	18
4	Number of MSME registered student startups	50+
5	Number of startup patents	2
6	Startups incubated through Startup India Seed Fund Scheme (SISF)	13
7	Startups incubated through Ambedkar Social Innovation Incubation Mission (ASIIM)	1
8	Total number of MoUs with industries/incubators	15
9	Incubatee spaces available	15
10	Number of mentors available	40+
11	FDPs / training attended by faculty/staff related to entrepreneurship	50+

-

6.LIST OF BENEFICIARIES

6.1 Direct Beneficiaries

- Student Entrepreneurs: 74 graduated startups + 15 in pre-incubation
- Incorporated Startups: 18 legally registered companies
- MSME Entrepreneurs: 50+ registered small enterprises
- Patent Holders: 02 innovative startups with intellectual property

6.2 Scheme Beneficiaries:

- 13 startups under Startup India Seed Fund Scheme
- 01 startup under Ambedkar Social Innovation Incubation Mission
- Faculty Members: 50+ trained through entrepreneurship FDPs
- Student Participants: Hundreds trained through 100+ events over 7 years

6.3 Indirect Beneficiaries

- Local Ecosystem: Pune entrepreneurial community through networking events
- Industry Partners: 15 organizations through collaborative MoUs
- Academic Community: MITAoE students exposed to entrepreneurship culture
- Social Beneficiaries: Citizens through civic applications (traffic reporting system)
- Year-wise Beneficiary Growth
- Startup Creation: Consistent growth from 4 (2018-19) to 23 (2024-25) - 475% increase
- Event Participation: Peak of 35 events in 2020-21 showing adaptive response to pandemic
- Financial Beneficiaries: 14 startups receiving direct funding support
- Infrastructure Users: 15 startups utilizing incubation spaces annually

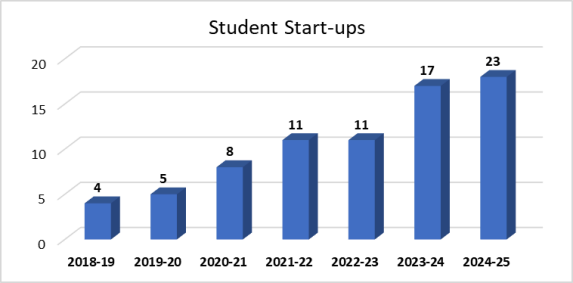


Fig 9.5 2 Starts-up per year

9.6 Governance and Transparency (25) Total Marks 25.00

9.6.1 Availability of the Institutional Strategic Plan and its Effective Implementation and Monitoring (10) Institute Marks : 10.00

1. Details of Strategic plan

The strategic plan of MIT Academy of Engineering was developed based on a comprehensive SWOC analysis and aligned with the transformative vision of the National Education Policy 2020, which emphasizes multidisciplinary learning, skill development, innovation, and holistic education. The plan is guided by the institute's vision to become a leading educational institution that creates leaders and innovators contributing to industrial, economic, and social growth, and its mission to function as a new-age learning center offering skill-based curricula, promoting lifelong learning, ethical values, and entrepreneurship. The plan is anchored in core values such as knowledge, excellence, integrity, transparency, and empathy, and is structured around ten focus areas categorized into core and supporting domains. The core focus areas include Teaching–Learning Process, Research and Consultancy, Student Support and Success, Enhanced Student Experience, and Enhanced Alumni Engagement, while the supporting focus areas include People and Welfare, Social Media Connect, Entrepreneurial and Innovation Ecosystem, Campus and Services, and Sustainability. Each focus area defines specific objectives, implementation actions, and measurable outcomes through clearly defined Key Performance Indicators (KPIs) for the academic years 2024–25, 2025–26, and 2026–27. For example, under the Teaching–Learning Process, targets include increasing curriculum flexibility from 36% to 46% and improving the number of students obtaining professional certifications from 500 to 600, while under Research and Consultancy, goals include increasing funded research and consultancy projects from 20 to 30 and enhancing intellectual property creation from 25 to 40 patents. This structured and outcome-driven strategic plan ensures continuous academic excellence, research growth, innovation, and overall institutional development.

2. Approval by competent authority:

The Strategic Plan (2024–2027) of MIT Academy of Engineering was developed and approved through a formal, structured, and participative process involving the institute's competent authority and key stakeholders. An institute core committee was constituted to prepare the draft strategic plan based on inputs collected from internal stakeholders such as faculty, students, and staff, as well as external stakeholders including alumni, industry experts, and academic partners. The draft plan was presented and discussed in multiple stakeholder meetings to obtain detailed feedback on major focus areas, objectives, and implementation strategies. The document was also reviewed in Internal Quality Assurance Cell (IQAC) meetings, where its alignment with institutional quality goals, accreditation requirements, and continuous improvement practices was critically examined and refined. Based on the recommendations and feedback received, the plan was finalized and formally approved by the institute's competent authority, such as the Governing Body and Director, and subsequently adopted as the official strategic roadmap to guide the institute's academic, research, innovation, and institutional development initiatives for the period 2024–2027.

3. Implementation:

The Strategic Plan (2024–2027) of MIT Academy of Engineering provides a well-defined framework for systematic implementation, monitoring, and continuous review to ensure effective achievement of institutional goals. The plan clearly outlines the strategy and quantitative targets for all academic and administrative functions, which are cascaded to individual departments and functional units for execution through annual action plans. Each focus area includes specific, measurable Key Performance Indicators (KPIs) with defined yearly targets, enabling objective assessment of progress and performance. To ensure accountability and timely progress, a structured review mechanism is established wherein the implementation status and outcomes are reviewed on a quarterly basis at the institute and department levels, including review in IQAC and management meetings. This periodic monitoring helps identify gaps, take corrective actions, and ensure alignment with the institute's vision and strategic priorities, thereby facilitating effective implementation and continuous institutional improvement.

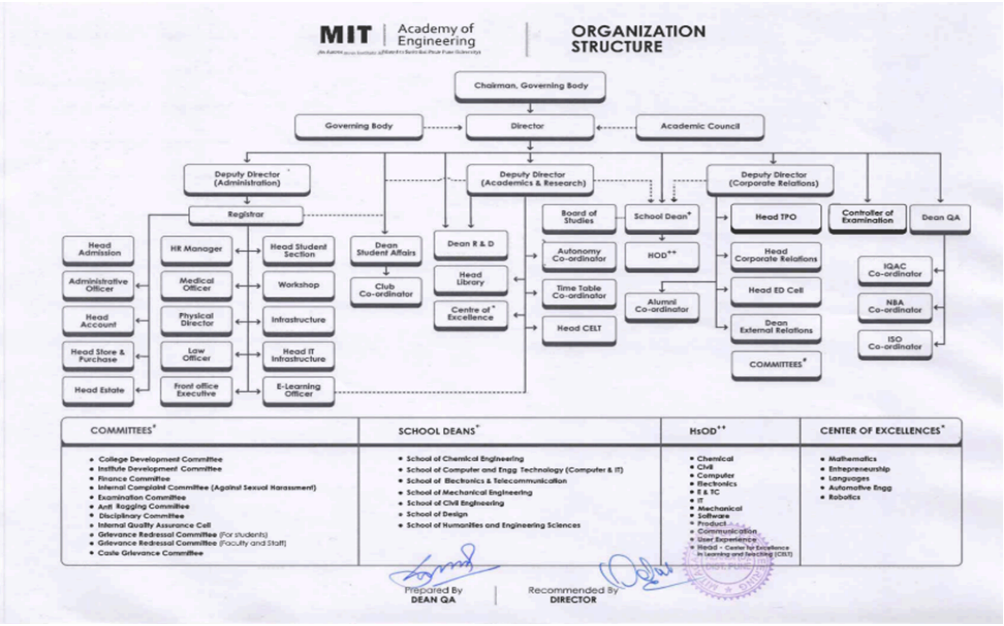
Link for strategic plan: https://mitaoe.ac.in/assets/images/pdf/Strategic-Planner-design-V4.pdf

The Strategic Plan of MIT Academy of Engineering is systematically reviewed and monitored in every quarterly meeting of the Internal Quality Assurance Cell (IQAC) to ensure effective implementation and alignment with the institute's vision and quality objectives. During these meetings, the progress of various strategic initiatives, key performance indicators (KPIs), and action plans across departments and functional units are discussed in detail. The IQAC evaluates the status of implementation, identifies gaps if any, and recommends corrective and preventive measures to ensure continuous improvement and timely achievement of the planned targets. The Minutes of Meeting (MoM) and the corresponding Action Taken Reports (ATR) are properly documented and made available on the institute's official website for transparency, accountability, and reference by stakeholders. This regular review mechanism ensures systematic execution of the strategic plan, promotes participative governance, and strengthens the institute's quality assurance framework.

Link for MOM and action taken: https://mitaoe.ac.in/mitaoe-quality-assurance.php

9.6.2 Governing Body, Administrative Setup, Functions of Various Bodies, Service Rules, Recruitment procedures and Promotion Policies (10) Institute Marks : 10.00

Organisation Structure



MIT Academy of Engineering has a well-defined organizational structure to ensure efficient governance and management through effective decision making. The main bodies have been constituted to formulate and execute policies and strategic plans based on its Vision and Mission to manage all the activities of the institute.

The roles and responsibilities of various bodies are clearly defined to ensure transparency and accountability to achieve its objectives.

List of committees are

1. Governing Body
2. Academic Council
3. Board of Studies
4. College Development Committee
5. Institute Development Committee
6. Finance Committee
7. Examination Committee
8. Internal Quality Assurance Cell
9. Disciplinary Committee (Faculty & Staff)
10. SC/ST Committee
11. Grievance Redressal Committee (Faculty & Staff)
12. Internal Complaint Committee (Committee against Sexual Harassment)
13. Anti-Ragging & Disciplinary Committee

1. GOVERNING BODY

Record of Governing Body Meetings

Sl. No.	Academic Year	No. of meetings conducted	Date of Meeting	Meeting No.
1	2025-2026	2	23th December	GB/2025/03/21
	2025-2026		27th October	GB/2025/02/20
2	2024-2025	2	24th June 2025	GB/2025/01/19
	2024-2025		27th December 2024	GB/2024/02/18
3	2023-2024	2	15th June 2024	GB/2024/01/17
			26th December 2023	GB/2023/02/16
4	2022-2023	2	15th June 2023	GB/2023/01/15
			20th December 2022	GB/2022/02/14
			19th July 2022	GB/2022/01/13
5	2021-2022	1	13th December 2021	GB/2021/02/12

Constitution of Governing Body

Sl. No.	NAMES	PROFILE	DESIGNATION
1.	Dr. Sanjay Dhande	Former Director of IIT Kanpur, is an innovative technologist, an acclaimed academician, an eminent researcher, a visionary institution builder and an able administrator, whose contributions are acknowledged not only in India but also in many other countries.	Chairman
2.	Dr. Sunil Karad	Trustee and Treasurer, Maharashtra Academy of Engineering and Educational Research. He is an educationist, scholar and visionary leader.	Member
3	Dr. Anant Chakradeo	Dean of MIT Institute of Design and Director International Relations for MIT Group of Institutions.	Member
4	Dr. Yogesh G. Bhalerao	Director of MIT Academy of Engineering and Professor in the Dept. of Mechanical Engineering. An enthusiastic engineering educator with adaptive styles of teaching, sizeable research experience, a rich depth and breadth of knowledge and excellent communication skills. He is a champion of both administrative and academic excellence.	Member Secretary
5	Dr. Mahesh D Goudar	Officiating Director of MITAOE, Pune and is a World Skill international Expert in the skill of Mobile Robotics	Member Secretary
6	Dr. B.B Ahuja	Former Director of the renowned College of Engineering, Pune (COEP).	Member

Sl. No.	NAMES	PROFILE	DESIGNATION
7	Dr. Sunil Bhagwat	Deccan Education Society, Fergusson College	University Nominee
8	Dr. Mrs. Manju Singh	Secretary of the University Grants Commission (UGC), Government of India	UGC Nominee
9	Dr. Aditya Abhyankar	Professor & Dean of the Department of Technology, Savitribai Phule Pune University (SPPU)	Government of Maharashtra Nominee
10	Dr. Prashant Kumar	Indian Institute of Technology, Kanpur	Member
11	Mr. Prakash Jagtap	Chairman and Managing Director, SAJ Test Plant Pvt. Ltd.	Member
12	Dr. B. P. Sabale	Ex. Vice-Chancellor, YCMOU, Maharashtra	Member
13	Dr. Dipti Sakhare	Professor and HOD, Department of Electronics and Telecommunication Engineering, MITAOE	Member Faculty Representative
14	Dr.Suyogkumar Taralkar	Professor in the Department of Chemical Engineering and Coordinator IQAC Cell	Member Faculty Representative

2. ACADEMIC COUNCIL

Record of Academic Council Meetings

Sl. No.	Academic Year	No. of meetings conducted	Date	Meeting No.
1	2025-2026	1	25th November 2025	AC/2021/02/20
2	2024-2025	2	14th May 2025	AC/2021/02/19
			16th December 2024	AC/2021/02/18
3	2023-2024	3	30th April 2024	AC/2021/02/17
			15th December 2023	AC/2021/02/16
			1st September 2023	AC/2021/02/15
4	2022-2023	2	4th May 2023	AC/2021/02/14
			9th December 2023	AC/2021/02/13
5	2021-2022	2	16th June 2022	AC/2021/02/12
			7th December 2021	AC/2021/02/12
6	2020-2021	2	14th May 2021	AC/2021/01/11
			9th December 2020	AC/2020/03/10

Constitution of Academic Council

Sl. NO.	NAMES	PROFILE	DESIGNATION
1.	Dr. Y. J. Bhalerao	Director, MIT Academy of Engineering	Chairman
2.	Dr. Aditya Abhyankar	Professor & Dean of the Department of Technology, Savitribai Phule Pune University (SPPU), Pune	University Nominees
3.	Dr. D. S. Bormane	Principal, AISSMS's College of Engineering, Kennedy Road, Pune	
4.	Dr. Anjali Kshirsagar	Professor, Department of Physics, Savitribai Phule Pune University (SPPU), Pune	

Sl. NO.	NAMES	PROFILE	DESIGNATION
5.	Mr Om Dhumal	Head- Operations, Knorr-Bremse AG, Pune	External Experts Industry/ Academics
6.	Dr. S. P . Mahajan	Head of Department, Electronics and Telecommunication Department, College of Engineering, Pune	
7.	Mr. J. P Shroff	Chairman, Shroff Group,	
8.	Mr. Pradeep Sakhadeo	Sr. Director at Colgate Palmolive,	
9.	Mr. Cladius Fernando	GenAI Architect, Persistent Systems, Pune	
10.	Dr. B. B. Waphare	Principal, MAEERs MIT Arts, Commerce and Science College, Pune	
11.	Dr. Mahesh D. Goudar	Officiating Director & Professor, MIT Academy of Engineering	Member Secretary
12.	Dr. Sunita S. Barve	Deputy Director Academics and Research, MIT Academy of Engineering	Member
13.	Dr. Shitalkumar Jain	Deputy Director of Corporate Relations, MIT Academy of Engineering	Member
14.	Dr. Sandeep Shewale	Head of Dept.- Chemical Engineering	Head of Department
15.	Dr. Pramod Ganjewar	Head of Dept.- Computer Engineering	
16.	Dr. Dipti Sakhare	Head of Dept.- Electronics and Telecommunication Engineering	
17.	Dr. Abhijeet Malge	Head of Dept.- Mechanical Engineering	
18.	Dr. Nilesh Mate	Head of Dept.- Civil Engineering	
19.	Dr. Vaishali Wangikar	Head of Department, CSE (Data Science)	
20.	Dr. Deepti Gusse	Head of Department, CSE (Artificial Intelligence & Machine Learning)	
21.	Dr. Manish Giri	Head of Department, CSE (Software Engineering)	
22.	Dr. Santosh Warpe	Head of Department, Information Technology	
23.	Dr. Puja Verma	Head of Department, Humanities and Engineering Sciences	
24.	Mr. Avinash Bhalerao	HOD, School of Design	

Sl. NO.	NAMES	PROFILE	DESIGNATION
25.	Mr. S. M. Bhagat	Registrar	Faculty Members
26.	Dr. Ranjana Badre	Controller of Examinations	
27.	Dr. Suyog Taralkar	IQAC Coordinator	
28.	Dr. Pritam Kalos	Research and Development Coordinator	
29.	Mr. Pramod Dharmadhikari	Assistant Professor, Dept. of Computer Engineering	
30.	Mr. Ashitosh D. Chavan	Assistant Professor, Dept. of Electronics and Telecommunication Engineering	

3. BOARD OF STUDIES

Each academic department of the institute has its own Board of Studies (BoS) to ensure effective curriculum design, review, and academic governance. However, the Civil Engineering Department has constituted its Board of Studies comprising internal faculty members, industry experts, academic professionals from reputed institutions, alumni, and other stakeholders. The Civil Engineering BoS plays a vital role in reviewing and updating the curriculum, incorporating industry requirements, emerging technologies, and feedback from stakeholders to ensure academic quality and relevance.

Constitution of Board of Studies – Department of Civil Engineering

Sr. No.	Name	Designation	Organization
1	Dr. Nilesh Mate	Head, Department of Civil Engineering	Chairman
2	Dr. Sushma Kulkarni	Vice Chancellor, NICMAR University, Pune	VC Nominee
3	Prof. Dasaka Murty	Professor, Department of Civil Engineering, IIT Bombay	Academic Expert
4	Dr. Avinash Garudkar	Professor & Head, Faculty of Engineering, WALMI, Aurangabad	Academic Expert
5	Mr. Mahesh Pathak	Founder Director, Unity Consultants, Pune	Industry Expert
6	The entire faculty of each specialization of Civil Engineering.		

4. COLLEGE DEVELOPMENT COMMITTEE

Constitution of College Development Committee

Sl. No.	Name of the Member	Profile	Designation
1	Dr. Sanjay Dhande	Padmashree Professor Sanjay Govind Dhande, former Director of IIT Kanpur.	Chairman
2	Prof. Anant Chakradeo	Pro-Vice Chancellor of MIT Art Design and Technology University	Management Nominee

Sl. No.	Name of the Member	Profile	Designation
3	Dr. Yogesh G. Bhalerao	Director of MIT Academy of Engineering, Pune	Member Secretary
4	Dr.Suyogkumar Taralkar	Associate Professor in the School of Chemical Engineering and Dean-Quality Assurance	IQAC Coordinator
5	Dr. Mahesh D. Goudar	Officiating Director of MITAOE, Pune	Member Secretary
6	Mr. Sunilkumar Bhagat	Faculty in School of Computer Engineering & Technology & Registrar	Teacher
7	Dr. Shitalkumar Jain	Group Director, Corporate Relations and Placement Cell	Teacher
8	Dr. Sunita Barve	Deputy Director, Academics & Research and Professor in School of Computer Engineering & Technology, MITAOE	Teacher
9	Dr. Maya Charde	Faculty in School of Mechanical Engineering, MITAOE	Women Teacher
10	Dr. Pritam Kalos	Faculty in School of Mechanical Engineering, MITAOE	Teacher
11	Mr. Hitesh Lodha	CloudThat, Banglore.	Local Member (Alumni)
12	Dr. B. B. Waphare	Principal, MIT ACSC Alandi Pune.	Local Member (Education)
13	Dr. Yashodhan Sakhare	Philosopher and Member - Alandi - Dehu Parisar Vikas Samiti	Local Member (Social)
14	Dr. Sanjay P Kambale	Principal scientist, Chemical Engineering & Process Development Dvision, CSIR_National Chemical Laboratory	Local Member (Research)
15	Mr. Pravin Pawar	Project Director, CloudMoyo	Local Member (Industry)
16	Mr. Sunil Dewalwar	System Administrator, School of Computer Engineering & Technology, MITAOE	Elected Non-Teaching Employee
17	Mr. Harshwardhan Patil*	Student Council, MITAOE	President, Student Council

Sl. No.	Name of the Member	Profile	Designation
18	Mr. Ajay Shinde*	Student Council, MITAOE	Organizing Secretary, Student Council
19	Ms. Samaruddhi Kakad*	Student Council, MITAOE	Ladies Representative

5. INSTITUTE DEVELOPMENT COMMITTEE

Constitution of Institute Development Committee

Sl. No.	Name of the Member	Profile	Designation
1	Dr. Yogesh J. Bhalerao	Director	Chairman
2	Dr. Shitalkumar. A. Jain	Group Director, Corporate Relations	Member
3	Dr. Sunita Barve	Deputy Director, Academics & Research	Member
4	Dr. Sandip Shewale	Head of Department- Chemical Engg	Member
5	Dr. Nilesh Mate	Head of Department- Civil Engineering	Member
6	Dr. Pramod Ganjewar	Head of Department- Computer Engg.	Member
7	Dr. Dipti Sakhare	Head of Department- E&TC Engg	Member
8	Dr. Abhijit Malge	Head of Department- Mechanical Engg	Member
9	Dr. Vaishali Wangikar	Head of Department, CSE (Data Science)	Member
10	Dr. Deepti Gusse	Head of Department, CSE (Artificial Intelligence & Machine Learning)	Member
11	Dr. Manish Giri	Head of Department, CSE (Software Engineering)	Member
12	Dr. Santosh Warpe	Head of Department, Information Technology	Member
13	Dr. Puja Verma	Head, Humanities & Engg. Sciences	Member
14	Prof. Avinash Bhalerao	Head, School of Engineering Design	Member
15	Dr. Pritam Kalos	Dean - R&D	Member
16	Prof. Sunilkumar Bhagat	Registrar	Member
17	Mrs. Ranjana Badre	Controller of Examination	Member
18	Dr. Suyogkumar Taralkar	IQAC Coordinator	Member
19	Mr. Shridhar Khandekar	Dean - Student Affairs	Member
20	Prof. Usha Verma	Head, CELT	Member
21	Dr. Janhavi Inamdar	Dean, External Relations	Member
22	Mrs. Sayalee Bidwai	Head, Entrepreneurship Development Cell	Member
23	Prof. Dilip Panchal*	E-Learning Officer	Member

Sl. No.	Name of the Member	Profile	Designation
24	Mrs. Shubhangi Kale*	ISO Coordinator	Member
25	Dr. Pramod Kothmire*	Alumni Head	Member
26	Dr. Maya Charde	Workshop Superintendent	Member
27	Mr. Peeyush Kumar Prasad	Head Marketing	Member
28	Mrs. Sunanda Fulari	Librarian	Member
29	Mr. Atul Waghmare	Director Sports	Member

6. FINANCE COMMITTEE

Constitution of Finance Committee

Sr. No.	Name of the Member	Profile	Designation
1.	Dr. Yogesh J. Bhalerao	Director, MIT Academy of Engineering	Chairman
2.	Dr. Magesh Goudar	Professor, MIT Academy of Engineering	Member
3.	CMA (Dr.) Charusheela R. Gayake	Finance and Accounts Officer, SPPU	Finance Officer of Affiliated University
4.	Dr. S. A. Jain	Group Director, Corporate Relation and Placement Cell	Nominated by Governing Body of the College
5.	Mr. S. M. Bhagat	Registrar	Nominated by Governing Body of the College
6	Mrs V.C. Kulkarni	Head Accounts	Member
7	Mrs Jyoti Poddar	CAFO, MIT Academy of Engineering	Member Secretary

7. EXAMINATION COMMITTEE

Constitution of Examination Committee

(Board of Examinations)

Sr. No.	Name of the Member	Profile	Designation
1.	Dr. Yogesh G. Bhalerao	Director, MITAOE	Chief Controller of Examinations
2.	Prof. Ranjana Badre	Controller of Examinations	Member Secretary
3.	Dr. Sunita S. Barve	Deputy Director - Academics & Research	Member
4.	Prof. Dilip Panchal	Deputy Controller of Examinations	Member
5.	Prof. Nikhil Bhalerao	Assistant Controller of Examinations	Member
6.	Prof. Rahul Patil	Assistant Controller of Examinations	Member
7.	University Representative	Director, Board of Examinations and Evaluation, Savitribai Phule Pune University	Member University Nominee
8.	Heads/Deans of MITAOE and MIT Instution of Design	Heads/ Deans of respective Department/ Schools	Member

8. INTERNAL QUALITY ASSURANCE CELL

Constitution of Internal Quality Assurance Cell

Sl. No.	Name of the Member	Profile	Designation
1	Dr. Yogesh J. Bhalerao	Director, MIT AOE	Chairman IQAC
2	Dr. Shitalkumar A. Jain	Deputy Director- CRPC	Senior Administrative Officers
3	Dr. Sunita S. Barve	Deputy Director- Academic & Research	
4	Dr. Mahesh D. Goudar	Officiating Director, MITAOE	

Sl. No.	Name of the Member	Profile	Designation
5	Prof. Sunilkumar Bhagat	Registrar	Teachers Representatives
6	Dr. Avinash Bhalerao	Head, School of Design	
7	Prof. Ranjana Badre	Controller of Examination	
8	Dr. Nilesh Mate	Head of Dept.- Civil Engineering	
9	Dr. Pramod Ganjewar	Head of Dept.- Computer Engineering & Technology	
10	Dr. Sandeep Shewale	Head of Dept.- Chemical Engineering	
11	Dr. Dipti Sakhare	Head of Dept.- E&TC Engineering	
12	Dr. Abhijeet M. Malge	Head of Dept.- Mechanical Engg.	
13	Dr. Vaishali Wangikar	Head of Dept.- CSE (Data Science)	
14	Dr. Deepti Gusse	Head of Dept.- CSE (Artificial Intelligence & Machine Learning)	
15	Dr. Manish Giri	Head of Dept.- CSE (Software Engineering)	
16	Dr. Santosh Warpe	Head of Dept.- Information Technology	
17	Dr. Puja Verma	Head of Dept. Humanities & Engineering Sciences	
18	Dr. Pritam Kalos	Dean, RnD	
19	Mr. Shridhar Khandekar	Dean, Student's Affairs	
20	Dr. Prachi Rajara[pollu	IQAC Representative	
21	Dr. Sunanda Fulari	Librarian	Staff Representatives
22	Dr. Balasaheb B. Waphare	Principal, MIT ACSC Alandi, Pune.	Local Society Representatives
23	Dr. Anant Chakradeo	Pro-Vice Chancellor of MIT Art Design and Technology University	Management Representative
24	Mr. Om Padmakar Shinkar	SY Student Representatives	Student Representatives
25	Mr/ Atharv Prakash Veerkar	TY Student Representatives	Student Representatives
26	Ms. Manjiri Nandeshwar	Girls Student Representatives	Student Representatives
27	Mr. Chinmay Pokharkar	BTech Student Representatives	Student Representatives
28	Mr. Manoj Kisan Pawar	Alumni Representatives	Student Representatives
29	Mr. Hrishikesh Dhande	Industry Representatives	Industry Representatives

Sl. No.	Name of the Member	Profile	Designation
30	Dr. Suyogkumar Taralkar	Dean QA	IQAC-Coordinator

9. DISCIPLINARY COMMITTEE (FOR FACULTY AND STAFF)

Constitution of Disciplinary Committee

Sl. No.	Name of the Member	Profile	Designation
1.	Dr. Yogesh J. Bhalerao	Director, MITAOE	Chairperson
2.	Dr. Abhijeet M. Malge	Head of Dept.- Mechanical Engg.	Member Secretary
3.	Dr. Mahesh D Goudar	Faculty Representative	Member
4.	Prof. Sunilkumar Bhagat	Registrar, Faculty Representative	Member
5.	Dr. Maya Charde	Faculty Representative	Member
6.	Mrs. Carmel Pillay	Staff Representative	Member
7.	Mrs. Yogini Kendre	Staff Representative	Member
8.	Mrs. Mayuri Pokharna	Staff Representative	Member
9.	Invited member(s) as per requirements, if any		

10. SC/ST COMMITTEE

Constitution of SC/ST Committee

(For Students, Faculty and Staff)

Sr. No.	Name of the Member	Profile	Designation
1	Dr. Yogesh G. Bhalerao	Director MIT Academy of Engineering.	Chairperson
2	Dr. Maya M. Charde	Associate Professor Dept. of Mech. Engineering.	Member Secretary
3	DTE Nominee	DTE Nominee	Member

Sr. No.	Name of the Member	Profile	Designation
4	Dr. Abhijeet M Malge	HOD, Dept. of Mech. Engineering.	Faculty Representatives
5	Prof. Sushil B Magade	Associate Professor Department of Civil Engineering.	
6	Mr. Namdeo S. Rashinkar	Technical Assistant School of Mech. and Civil Engineering.	
7	Mrs. Nandini S. Phulpagar	Sr. Assistant School of Engg. Science and Humanities.	

11. Grievance Redressal Committee

(FOR STUDENTS, FACULTY AND STAFF)

Constitution of Grievance Redressal Committee

(For Faculty & Staff)

Sl. No.	Name of the Member	Designation	Profile
1.	Dr. Abhijeet M. Malge	Head of Dept.- Mechanical Engg.	Chairperson
2.	Prof. Sunilkumar Bhagat	Registrar	Member Secretary
3.	Dr. Nilesh Mate	Faculty Representative	Member
4.	Dr. Maya Charde	Faculty Representative	Member
5.	Mrs. Carmel Pillay	Staff Representative	Member
6.	Mrs. Yogini Kendre	Staff Representative	Member
7.	Mrs. Mayuri Pokharna	Staff Representative	Member
8.	Invited member(s) as per requirements, if any		

12. INTERNAL COMPLAINT COMMITTEE

(Committee against Sexual Harassment)

Constitution of Internal Complaint Committee

Sr. No.	Name of the Member	Profile	Designation

1.	Mrs. Ranjana R. Badre	Senior Woman Employee	Presiding Officer
2.	Dr. Vaishali Wangikar	Employee of the Institute	Member
3.	Dr. Prafulla Hatte	Employee of the Institute	Member
4.	Mr. S. A. Khandekar	Employee of the Institute	Member
5.	Mrs. Carmel Pillay	Employee of the Institute	Member
6.	Dr. Sunanda Fulari	Employee of the Institute	Member
7.	Mr. Meghraj Suresh Tolnure	Student of the Institute	Member
8.	Ms. Sneha Gurav Sadanand	Student of the Institute	Member
9.	Ms. Mrunmayee Phadtare	Student of the Institute	Member
10.	Mrs. Swati Londhe	Advocate	External Member

13. ANTI RAGGING COMMITTEE & DISCIPLINARY COMMITTEE.

Constitution of Anti-ragging Committee & Disciplinary Committee

Sl. No	**Name of the Member**	**Profile**	**Designation**
1	Dr. Yogesh J. Bhalerao	Director	Chairman
2	Dr. Swapnil Patare	Chief Rector	Member
3	Dr. Mahesh Nagarkar	Dy. Registrar (Admin)	Department Representative
4	Dr. Sandip Shewale	HOD-Chemical Engg.	Department Representative
5	Dr. Nilesh Mate	HOD-Civil Engg.	Department Representative
6	Dr. Pramod Ganjewar	HOD-Computer Engg.	Department Representative
7	Dr. Dipti Sakhare	HOD-E&TC Engg.	Department Representative

Sl. No	Name of the Member	Profile	Designation
8	Dr. Abhijit Malge	HOD-Mech. Engg.	Department Representative
9	Dr. Vaishali Wangikar	HOD- CSE (Data Science)	Department Representative
10	Dr. Deepti Gusse	HOD- CSE (Artificial Intelligence & Machine Learning)	Department Representative
11	Dr. Manish Giri	HOD- CSE (Software Engineering)	Department Representative
12	Dr. Santosh Warpe	HOD- Information Technology	Department Representative
13	Dr. Puja Verma	Head Humanities and Engg. Sciences	Department Representative
14	Prof. Avinash Bhalerao	Dean School of Design	Department Representative
15	Mr. S A Khandekar	Dean SA	Representative Student Affairs
16	Dr. Sunanda Fulari	Librarian	Non-teaching staff
17	Mr.Tushar Kute	Civilian Representative	Civilian Representative
18	Mr. Sanjay Andhale	PSI, Dighi Police Station	Police Administration
19	Dr. Gauri Nadkarni	NGO Representative	NGO Representative
20	Adv. Bhushan Tapasvi	Legal Advisor	Legal Advisor (Special Invitee

Service Rules, Recruitment & Promotional Policies: Summary

Category	Policy/Area	Key Provisions Summary
Service Rules	**Code of Conduct**	• **Prayer:** Mandatory stillness at 8:20 AM. • **Dress Code:** Formal attire daily; uniform for Class IV staff. • **Equal Opportunity:** No discrimination on basis of religion, caste, gender, or disability. • **Sexual Harassment:** Strictly prohibited; action through Internal Complaints Committee (ICC). • **Outside Work:** No external employment, tuitions, or coaching classes. • **Confidentiality:** No disclosure of institute, student, or employee information. • **Gifts & Gratuities:** Prohibited from accepting gifts from vendors or external parties. • **Discipline:** Rules against insubordination, theft, negligence, falsifying records, and habitual absence.
Recruitment Procedures	**Recruitment & Selection**	• **Manpower Planning:** Vacancies approved by Director before hiring process begins. • **Advertising:** Minimum 10 days external advertisement (newspaper/portals). Internal employees given preference. • **Faculty Selection:** Based on API scores, UGC/AICTE norms, demo lecture, and research portfolio. Committee includes external experts. • **Staff Selection:** Based on domain knowledge, relevant experience, and personal interview. • **Documents:** Mandatory submission of educational certificates, experience letters, salary slips, and caste validity.
Promotional Policies	**Annual Promotion & Increment**	• **Increment:** Based on annual performance appraisal scores; recommended by Dean. • **Promotion:** Merit-based upward shift to higher position; approved by Executive Director. • **Grievance:** Any dispute must be raised within 15 days of increment.
Promotional Policies	**Internal Promotion (CAS)**	• **Eligibility:** Confirmed faculty meeting UGC/AICTE qualifications. • **Schedule:** Applications called in April and October. • **Selection Criteria (100 marks):** Teaching, Research (publications/patents), Funds fetched, Demo lecture, Leadership. • **Minimum Scores:** Associate Professor: 60; Professor: 70. • **Terms:** Initial 11-month promotion with KRAs; confirmed permanently after 5 years of satisfactory performance; can be rolled back for non-performance.

The institute functions through a well-defined committee structure to ensure effective governance, academic coordination, and stakeholder welfare. Various statutory and administrative committees meet periodically as per the prescribed frequencies to oversee key areas including academic planning, quality assurance, finance, examinations, research, and student affairs. The schedule of meetings for these committees is planned in advance to align with the academic calendar and institutional requirements. The following table provides the frequencies and scheduled meetings of the

various committees operating in the institute.

Sr. No.	Committee	Frequencies of the meeting
1	Governing Body	Twice a year
2	Academic Council	Twice a year
3	Board of Studies	Twice a year
4	Finance Committee	Thrice a year
5	College Development Committee	Twice in a semester
6	Examination Committee (BOE)	Twice a year
7	Internal Quality Assurance Cell (IQAC)	Twice a semester
8	MRM (ISO)	Twice a year
9	Institute Development Committee	Weekly
10	Internal Complaint Committee (Sexual Harassment)	Twice a year and as and when required
11	Anti-Ragging & Disciplinary Committee	Twice a year and as and when required
12	Disciplinary Committee (For Faculty and Staff)	Twice a year and as and when required
13	Grievance Redressal Committee (Faculty And Staff)	Twice a year and as and when required
14	Caste Grievance Committee	Twice a year and as and when required
15	Student Grievance Redressal Committee	Twice a year and as and when required
16	Research Committee	Twice a year
17	Peer Team (AAA)	Once a Year

9.6.3 Transparency (5)

Institute Marks : 5.00

In line with our commitment to institutional transparency and open communication, MIT Academy of Engineering provides comprehensive and easily accessible information on key policies, governance structures, and academic processes through its official website. The following table outlines the availability of essential documents, including detailed policies, faculty and student information, statutory committee compositions, and mandatory disclosures. This initiative ensures that all stakeholders including students, faculty, parents, and the public have clear and direct access to vital institutional data. By maintaining this open repository, we uphold our dedication to accountability, informed engagement, and trust within our academic community.

Information about the institute infrastructure, Institute policies, staff, students, major equipment's and facilities are being hosted on the institute website (www.mitaoe.ac.in) vide Mandatory disclosure along with the information on policies/procedures related to admission, academics, placement etc. Also, Mandatory disclosure as per AICTE guidelines displayed on the Institute website.

The school deans & Section Heads prepare and submit a budget for the financial year to the Director Office by considering their academic requirements. In discussion with the Director, the summary of the budget is prepared by the account section and this summary is presented in the finance committee meeting. The final approval of the budget is provided by the finance committee. The approved budget is allocated to the respective schools and departments. The School Dean and Section head is having the authority of expenditure within the budget. The midterm review is taken by the Finance committee.

The finance committee has delegated the financial powers to the Director, Heads of Departments and relevant in-charges. Director has an imprest amount of 50,000/- per month for the institute miscellaneous expenditure. Further, Heads of Department (School Deans) has an imprest amount of Rs. 25,000/- per month for the departmental (school) miscellaneous expenditure.

Table 9.6.3.1 Availability of Policies, Rules, and Information

Category	Availability Path	Link / Location on Website
Policies & Procedures	Available under Academics → Policies. Includes: Anti-Ragging, Grievance Redressal, Code of Conduct, Women's Cell, SC/ST Cell, etc.	https://mitaoe.ac.in/mitaoe-committees.php (https://mitaoe.ac.in/mitaoe-committees.php)
Faculty Information	Detailed faculty listings under Academics → Departments → Select Department → Faculty. Includes profiles, qualifications, experience, and contact.	https://www.mitaoe.ac.in/Faculty (https://www.mitaoe.ac.in/Faculty)
Student Information	Student-centric info under Student → Student Life, clubs, placements, etc. Student handbook and codes may be under Policies.	https://www.mitaoe.ac.in/Student/student-life.php (https://www.mitaoe.ac.in/Student/student-life.php)
Governing Body / BoG	Detailed information for governing body is available on website → about us → governing body	https://mitaoe.ac.in/mitaoe-governing-body.php (https://mitaoe.ac.in/mitaoe-governing-body.php)
Academic Council & Senate	Detailed information for academic council is available on website → about us → academic council	https://mitaoe.ac.in/mitaoe-academic-council.php (https://mitaoe.ac.in/mitaoe-academic-council.php)
Minutes & Agendas	Detailed information for minutes and agenda available on website→IQAC→MOM	https://mitaoe.ac.in/assets/images/pdf/MOM-2024-25-up.pdf (https://mitaoe.ac.in/assets/images/pdf/MOM-2024-25-up.pdf)
RTI Information	RTI details available under About → Mandatory Disclosure → RTI.	https://mitaoe.ac.in/assets/images/pdf/RTI-MIT_Academy_of_Engineering.pdf (https://mitaoe.ac.in/assets/images/pdf/RTI-MIT_Academy_of_Engineering.pdf)

Category	Availability Path	Link / Location on Website
Placement Reports	Available under Placement → Placement Report.	https://mitaoe.ac.in/placement.php (https://mitaoe.ac.in/placement.php)
NAAC & AICTE Documents	Available under Mandatory Disclosure. Includes accreditation reports, approvals, and affiliation details.	https://mitaoe.ac.in/Accreditation.php (https://mitaoe.ac.in/Accreditation.php)

9.7 Budget Allocation, Utilization, and Public Accounting at Institute Level (12) Total Marks 12.00

:

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY : (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 - CFY

Total Income 8715.00				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
8700.00	0	0	15.00	5183.19	5093	1.02

Table 2 - CFYm1

Total Income 7017.30				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
7002.07	0	0	15.23	6784.21	3989	1.70

Table 3 - CFYm2

Total Income 5819.65				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
5798.94	0	0	20.71	5921.35	3373	1.76

Table 4 - CFYm3

Total Income 5261.77				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
5248.81	0	0	12.96	4988.63	3187	1.57

Items	Budgeted in	Actual Expenses in till	Budgeted in	Actual Expenses in till	Budgeted in	Actual Expenses in till	Budgeted in	Actual Expenses in till
Infrastructure Built-Up	50	0	50	223	250	563.62	0	0
Library	40	0	50	0	45	4.02	47	2.13
Laboratory equipment	237.05	96.34	339.84	162.25	418.92	259.61	207	304.45
Teaching and non-teaching stat	4259.63	3463.37	3801.86	4357.57	3256.84	3289.47	2727	3580.94
Outreach Programs	0.69	0.36	0.70	0.3	0.7	0.3	0.7	0.33
R&D	45	15.38	42	40.75	19.68	12.08	14	3.27
Training, Placement and Indust	69.17	53.27	55.28	158.19	27.6	39.8	25	24.29
SDGs	46.78	22.61	47.35	26.45	27.06	34.69	30	30.14
Entrepreneurship	5.6	1.65	7.6	2.86	7.6	1.62	6.6	3.6
Others, specify	2349.73	1530.21	1610.65	1812.84	1051.31	1716.48	886.7	1039.48
Total	**7103.65**	**5183.19**	**6005.28**	**6784.21**	**5104.71**	**5921.69**	**3944.0**	**4988.63**

9.8 Program Specific Budget Allocation, Utilization (8) Total Marks 8.00

:

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY: (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 :: CFY

Total Budget 18		Actual expenditure (till…): 8.745		Total No. Of Students 198
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
18	18	8.745	49	0.04

Table 2 :: CFYm1

Total Budget 19		Actual expenditure (till…): 8.465		Total No. Of Students 198
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
19	19	8.465	45	0.04

Table 3 :: CFYm2

Total Budget 30.03		Actual expenditure (till…): 17.58		Total No. Of Students 198
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
30.03	30.03	17.58	59	0.09

Table 4 :: CFYm3

Total Budget 21.83		Actual expenditure (till…): 32.504		Total No. Of Students 198
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
21.83	21.83	32.504	149	0.16

Items	**Budgeted in**	**Actual Expenses in till**	**Budgeted in**	**Actual Expenses in till**	**Budgeted in**	**Actual Expenses in till**	**Budgeted in**	**Actual Expenses in till**
Laboratory equipment	9	0.51	11	1.596	15.64	9.95	8.15	28.6
Software	3	2.55	3	1.76	5.17	3.73	5.91	3.28
SDGs	0	0	0	0	0	0	00	0
Support for faculty developmen	1	0.42	1	1.2	0.43	0.44	0.45	0.162

R & D	2	0.81	2	2.7	1.6	1.09	1.23	0.062
Industrial Training, Industry exp	1.5	0.8	1	0.6	3.6	1.185	3.05	0.2
Miscellaneous Expenses*	1.5	0.8	1	0.6	3.5	1.18	3.04	0.2
Total	**18.0**	**5.89**	**19**	**8.456**	**29.94**	**17.575**	**21.83**	**32.504**

9.9 Quality of Learning Resources (Hard/Soft) (5) Total Marks 5.00

Institute Marks : 5.00

The Central Library of MIT Academy of Engineering provides extensive print and digital learning resources to support academic, research, and self-learning needs. The library is fully automated using SLIM 21 Library Management Software with barcode-based circulation, OPAC access, and digital resource integration. It provides access to books, journals, e-resources, digital databases, and self-learning platforms such as IEEE, ScienceDirect, DELNET, and SWAYAM-NPTEL. The library remains open for extended hours to ensure accessibility and has dedicated digital infrastructure, reading space, and expert staff. The institute also supports self-learning through digital library facilities, remote access to resources, book bank services, orientation programs, and email alerts.

Table 9.9.1: Number of books Title and Volume added

Year	Number of new titles added	Number of new Editions added	Number of volumes added
2021-22	15	04	164
2022-23	35	21	217
2023-24	240	0	242
2024-25	9	0	19

Table 9.9.2: Scholarly journal

Details		2021-22	2022-23	2023-24	2024-25	2025-26
Engg. and Tech.	As soft copy	495	566	495	18470	18440
	As hard copy	123 Journal	118 Journal	113 Journal	136 Journal	84 Journal
	Books	164	217	242	19	0
	E-books	-	262	27	27	27

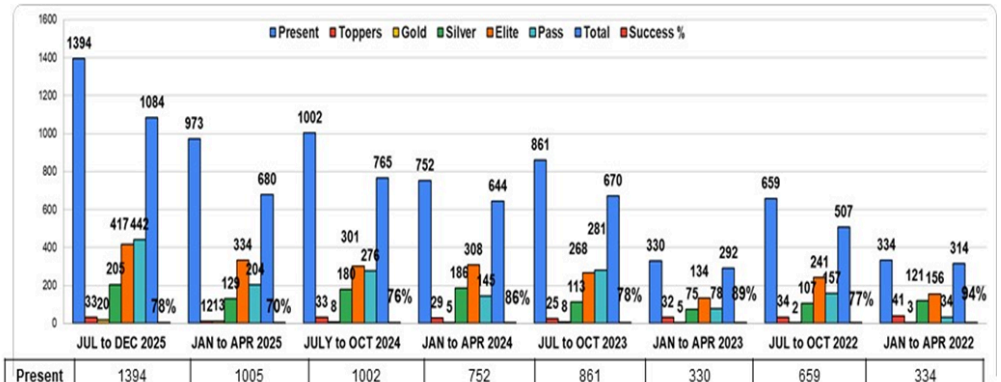
Accessibility and Membership

The library is a member of:

- National Digital Library of India
- Developing Library Network
- Automotive Research Association of India
- Savitribai Phule Pune University

SWAYAM-NPTEL Local Chapter

The Central Library established a SWAYAM-NPTEL Local Chapter in 2015 to promote e-learning and actively encourages faculty and students to enroll in SWAYAM-NPTEL courses. Our colleges NPTEL Local Chapter has been awarded an "A" Grade five times and an "AA" Grade three times by IIT Madras.



Present	1394	1005	1002	752	861	330	659	334
Toppers	33	12	33	29	25	32	34	41
Gold	20	14	8	5	8	5	2	3
Silver	205	144	180	186	113	75	107	121
Elite	417	345	301	308	268	134	241	156
Pass	442	208	276	145	281	78	157	34
Total	1084	711	765	644	670	292	507	314
Success %	78%	71%	76%	86%	78%	89%	77%	94%
Grade	A	A	A	AA	NIL	NIL	A	A

Usage of e-resources:

Table 9.9. 3Usage Statistics of Science Direct Computer Science & Chemical Engineering Users for 2022 to 2025

Account Name	Grand Total	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
MIT Academy of Engineering, Alandi Pune - 412 105	8301	292	346	671	1257	575	456	357	543	983	1153	1070	598
	10653	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
		610	561	1099	413	686	311	345	1528	1315	1682	1310	793
	17968	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
		655	1283	2119	1587	777	652	593	2459	2346	2445	1841	1211
	14446	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
		1225	1147	1346	2345	892	470	588	1172	2275	1227	1759	-

Usage Statistics of IEEE for 2022 to 2025

IEEE Usage Statistics Report

2025

MIT Academy Of Engineering

Title_Type	Metric_Type	YTD Total	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Total for All Types	Total_Item_Requests	16,381	869	1,217	1,771	1,375	1,282	2,420	348	1,249	1,952	2,348	787	763
IEEE Conferences	Total_Item_Requests	9,009	625	951	1,241	1,064	716	360	205	993	673	1,145	602	434
IEEE Journals	Total_Item_Requests	7,206	238	265	518	299	552	2,032	140	249	1,242	1,174	180	317
Partner Journals	Total_Item_Requests	161	6	0	10	12	14	28	3	7	36	28	5	12
Partner Conferences	Total_Item_Requests	5	0	1	2	0	0	0	0	0	1	1	0	0

User_Activity	Total_Reporting_Period	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Page_Views	66,677	5,556	6,660	6,963	6,005	5,316	4,865	1,971	5,927	7,156	8,867	4,226	3,165
Visits	5,190	619	638	481	582	361	295	281	476	426	377	337	317
Searches_Run (Non-COUNTER)	3,709	375	365	341	372	363	180	94	394	336	415	311	163
Total_Item_Investigations (Non-COUNTER)	24,478	1,299	1,956	2,728	2,150	1,894	2,822	628	1,926	2,990	3,645	1,242	1,198
Total_Item_Requests (Non-COUNTER)	17,070	887	1,265	1,825	1,437	1,320	2,506	372	1,303	1,986	2,502	844	823

Total Item Investigations - The total number of times a content item or information related to a content item was accessed.
Total Item Requests - The total number of times the full text of a content item was downloaded or viewed.
Article Request (NON-Counter) - The number of documents requested from the server.
Page Views - The number of pages viewed on a Web site.
Searches Run - Reports the number of keyword searches performed.
Visits - Represents the number of individual durations of times visitors were on the site accessing a series of pages without 30 minutes of inactivity. A single visitor can account for multiple visits in a single day.

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IEEE Usage Statistics Report

2024

MIT Academy Of Engineering

User_Activity	Total_Reporting_Period	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Page_Views	48,814	3,286	5,007	5,953	3,073	1,935	1,193	2,081	10,376	6,799	3,574	2,860	2,677
Visits	5,054	415	414	588	356	343	137	260	761	704	436	345	295
Searches_Run (Non-COUNTER)	2,596	170	245	295	81	96	72	97	715	339	201	157	128
Total_Item_ Investigations (Non-COUNTER)	9,610	517	1,191	1,081	851	291	148	350	1,892	1,397	611	474	807
Total_Item_Requests (Non-COUNTER)	5,136	216	694	536	507	107	63	177	1,035	763	322	213	503

Title_Type	Metric_Type	YTD Total	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Total for All Types	Total_Item_Requests	**4,450**	**209**	**604**	**495**	**369**	**103**	**61**	**169**	**932**	**686**	**292**	**195**	**482**
IEEE Conferences	Total_Item_Requests	**1,032**	29	77	129	27	19	16	22	147	165	62	59	280
IEEE Journals	Total_Item_Requests	**3,402**	180	417	355	341	82	45	136	774	510	228	134	200
IEEE Standards	Total_Item_Requests	**4**	0	0	4	0	0	0	0	0	0	0	0	0
IET Conferences	Total_Item_Requests	**4**	0	0	0	0	0	0	4	0	0	0	0	0
IET Journals	Total_Item_Requests	**8**	0	0	0	0	0	0	7	0	0	0	1	0
Partner Conferences	Total_Item_Requests	**2**	0	0	0	0	0	0	0	2	0	0	0	0
Partner Journals	Total_Item_Requests	**145**	0	110	7	1	2	0	0	9	11	2	1	2

Total Item Investigations - The total number of times a content item or information related to a content item was accessed.
Total Item Requests - The total number of times the full text of a content item was downloaded or viewed.
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IEEE Usage Statistics Report

2023

MIT Academy Of Engineering

IEEE Advancing Technology for Humanity

User_Activity	Total_Reporting_Period	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Page_Views	50,151	3,074	3,314	3,568	3,359	2,811	2,682	1,652	6,810	4,513	8,190	6,981	3,197
Visits	4,909	348	334	373	345	339	315	197	518	413	732	612	383
Searches_Run (Non-COUNTER)	2,848	145	164	174	198	143	168	54	304	289	513	490	206
Total_Item_ Investigations (Non-COUNTER)	8,531	435	635	546	511	469	432	615	1,133	886	1,278	1,073	518
Total_Item_Requests (Non-COUNTER)	4,301	221	382	296	216	241	213	521	423	473	620	460	235

Title_Type	Metric_Type	YTD Total	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Total for All Types	Total_Item_Requests	**3,993**	**213**	**363**	**293**	**209**	**235**	**199**	**474**	**411**	**434**	**600**	**437**	**228**
IEEE Conferences	Total_Item_Requests	**1,054**	25	84	54	54	33	26	176	95	77	188	168	74
IEEE Journals	Total_Item_Requests	**2,924**	188	274	238	152	202	172	229	303	355	397	262	152
IEEE Standards	Total_Item_Requests	**1**	0	0	1	0	0	0	0	0	0	0	0	0
IET Conferences	Total_Item_Requests	**1**	0	0	0	0	0	0	0	0	0	1	0	0
Partner Conferences	Total_Item_Requests	**13**	0	0	0	0	0	0	0	8	0	1	3	1
Partner Journals	Total_Item_Requests	**103**	0	5	0	3	0	1	69	5	2	13	4	1

Total Item Investigations - The total number of times a content item or information related to a content item was accessed.
Total Item Requests - The total number of times the full text of a content item was downloaded or viewed.
Article Request (NON-Counter) - The number of documents requested from the server.
Page Views - The number of pages viewed on a Web site.
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COUNTER RELEASE 5 COMPLIANT

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IEEE Usage Statistics Report

2022

MIT Academy Of Engineering

IEEE Advancing Technology for Humanity

User_Activity	Total_Reporting_Period	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Page_Views	41,685	2,522	3,741	5,189	2,966	1,914	1,479	1,333	2,854	4645	6,595	6250	2197
Visits	4,176	226	246	368	377	234	194	202	339	472	580	668	270
Searches_Run (Non-COUNTER)	2,121	164	257	266	117	111	49	42	137	161	366	359	92
Total_Item_Investigations (Non-COUNTER)	5,737	187	377	981	416	309	242	222	375	567	877	939	245
Total_Item_Requests (Non-COUNTER)	2,623	76	192	539	200	176	122	86	145	243	342	404	98

Title_Type	Metric_Type	YTD Total	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Total for All Types	Total_Item_Reques	2,505	74	188	508	190	169	112	81	145	224	330	390	94
IEEE Conferences	Total_Item_Reques	559	28	40	95	51	15	44	19	30	46	79	92	20
IEEE Journals	Total_Item_Reques	1,912	46	148	399	135	154	67	62	112	174	248	293	74
IET Conferences	Total_Item_Reques	2	0	0	0	1	0	1	0	0	0	0	0	0
Partner Conferences	Total_Item_Reques	3	0	0	0	0	0	0	0	0	1	2	0	0
Partner Journals	Total_Item_Reques	29	0	0	14	3	0	0	0	3	3	1	5	0

Total Item Investigations - The total number of times a content item or information related to a content item was accessed.
Total Item Requests - The total number of times the full text of a content item was downloaded or viewed.
Article Request (NON-Counter) - The number of documents requested from the server.
Page Views - The number of pages viewed on a Web site.
Searches Run - Reports the number of keyword searches performed.
Visits - Represents the number of individual durations of times visitors were on the site accessing a series of pages without 30 minutes of inactivity. A single visitor can account for multiple visits in a single day.

COUNTER RELEASE 5 COMPLIANT

Download the IEEE Usage Statistics of your organization at https://c5ieee.mpsinsight.com/ieee/login
Do not have an IEEE MPS Usage Statistics account? Click here https://tinyurl.com/getieeeusageaccount

9.10 E-Governance (5) Total Marks 5.00

Institute Marks : 5.00

MITAOE has established a robust and comprehensive digital infrastructure to streamline academic, administrative, and financial operations, ensuring efficiency, transparency, and seamless service delivery across the institute. At the core of this ecosystem is an integrated SAP-based ERP system that unifies student, faculty, and administration portals, enabling online course registration, attendance tracking, examination processing, and grade management alongside automated financial transactions and human resource functions. This digital foundation is complemented by a suite of dedicated service portals that empower students with access to course materials, assignment submissions, and library resources, while faculty benefit from tools for content management, research reporting, and performance analytics. The institute further enhances connectivity and engagement through official email systems, an intranet portal, a mobile application, and digital notice boards, ensuring real-time information dissemination. Completing this ecosystem are structured online feedback mechanisms and a grievance redressal portal, supported by an AI-based response system, which together foster a responsive, accountable, and student-centric institutional environment.

Digital Infrastructure & Automation at MITAOE

Area of Automation	Software / Platform / Tool Used	Purpose / Function	Key Features & Accessibility
Institute ERP (Enterprise Resource Planning)	CollPoll (Butterfly Innovations Pvt Ltd), Ion CUDOS, Mastersoft ERP Solutions	Comprehensive management of Admission, Student Academics, HR, Examination, and Administration.	Centralized database; modules for academic management, exam systems, service desks, and student/faculty master data.
Examination Management System (EMS)	In-house developed ERP, AMCAT Aspiring Mind Platform	Automation of exam lifecycle: registration, admit cards, mark entry, grade cards, result declaration.	Conduct of online exams (MSE/ESE); complete transparency with "paper-showing" activity and online re-evaluation requests.
Learning Management System (LMS)	Moodle (Cloud-based, hosted by eBayas Info Solutions)	Sharing unit-wise learning material, pre-recorded sessions, assignments, quizzes, and course communication.	Supports 1000 concurrent users; accessible via web intranet/internet.
Online Teaching & Collaboration	G Suite for Education (Google Meet, Classroom), Microsoft Teams, GoTo Webinar, Zoom	Conducting synchronous online lectures, virtual meetings, webinars, and collaborative classroom sessions.	Integrated with institute email IDs; supports breakout rooms, polling, and chat for student engagement.
Library Automation	SLIM 21 (Integrated Library Management Software)	Complete automation of in-house library operations (acquisition, cataloguing, circulation, serial control).	Barcode-based circulation; **Web-OPAC** for online searching of resources; database integration for digital library access.
Digital Library & E-Resources	IEEE, ScienceDirect, DELNET, SWAYAM-NPTEL, National Digital Library of India	Providing access to scholarly journals, e-books, databases, and video lectures.	Remote access via VPN; dedicated digital library section with 10 PCs.
IT & Network Security	Dell Sonicwall Firewall, Symantec Endpoint Protection	Securing internet access, preventing cyber threats, and managing user authentication.	User authentication via Radius Server; Wi-Fi access control via MAC address registration; 500 Mbps (upgraded to 750 MBPS) leased line.
Employability & Assessment	AMCAT (Aspiring Minds), B Tech Guru Platform	Conducting employability diagnostic tests, practice sessions, and counseling for students.	Used for internal assessments (MSE/ESE) and tracking student progress for placement readiness.
E-Content Development	Screencast-o-matic, OBS Studio, PowerPoint Screen Recorder, YouTube, Personal Websites	Recording lectures, creating virtual labs, and developing digital course content.	Teachers create YouTube channels and course websites; virtual labs created for specific departments (e.g., Chemical Engineering).
Student Support & Counseling	YourDOST Platform	Providing 24/7 online emotional well-being and counseling support to students and staff.	Confidential platform with professional counselors; supplements physical counselor availability on campus.

Area of Automation	Software / Platform / Tool Used	Purpose / Function	Key Features & Accessibility
Student Engagement & Coding	Hacker Rank (as a Technical Club)	Programming practice and skill development for students.	Part of the technical club ecosystem to enhance coding and problem-solving abilities.
Alumni Engagement	Dedicated Alumni Portal	Enhancing communication between alumni, current students, and the institute.	Platform for career opportunities, networking, and alumni contributions to institute development.

9.11 Initiatives and Implementation of Sustainable Development Goals (SDGs) (10) Total Marks 10.00

Institute Marks : 10.00

MITAOE has systematically integrated all 17 UN Sustainable Development Goals into its institutional framework through:

- Vision & Mission Alignment: Explicit commitment to societal development
- Strategic Plan 2024-27: Dedicated sustainability focus area with measurable targets
- Curriculum Integration: SDG themes embedded across disciplines
- Research Prioritization: Focus on sustainable technology solutions
- Campus Operations: Green campus initiatives aligned with SDGs.
- Sustainability Committee: Cross-functional team overseeing SDG implementation
- Departmental Champions: SDG coordinators in each academic department
- Student Green Clubs: Active student participation in sustainability initiatives
- Monitoring Framework: Regular tracking of SDG-related metrics

IMPLEMENTATION

SDG No. & Goal	Key Initiatives & Practices
SDG 1: No Poverty	• Scholarship schemes for economically disadvantaged students
	• Village adoption programs
	• Skill development & rural technology solutions
	• Affordable technologies for underserved communities
SDG 2: Zero Hunger	• Vermicomposting unit
	• Organic waste management
	• Community agricultural technology support
	• Drip irrigation for landscaping
SDG 3: Good Health & Well-being	• Plastic-free campus
	• Clean water initiatives
	• Health camps in villages
	• Environmental monitoring (air quality sensors)
	• Green campus drives
SDG 4: Quality Education	• 100% Wi-Fi enabled campus
	• Digital library (49,000+ e-books)
	• SWAYAM-NPTEL Local Chapter (AA Grade)
	• Virtual labs & LMS
	• Inclusive education & bridge courses
SDG 5: Gender Equality	• Women in Engineering programs
	• Women leadership development
	• Anti-sexual harassment committee
	• Women entrepreneurship support
SDG 6: Clean Water & Sanitation	• 80–90% rainwater harvesting
	• Water recycling plant
	• Water-efficient fixtures
	• Water quality monitoring research
SDG 7: Affordable & Clean Energy	• Rooftop solar installations
	• 100% LED campus
	• Smart energy monitoring
	• Renewable energy research
SDG 8: Decent Work & Economic Growth	• Incubation center (30–40 startups)
	• ₹2 Crore Startup India Seed Fund
	• Industry MoUs (100+)
	• Placement & certification programs

SDG 9: Industry, Innovation & Infrastructure	• MITAoE Entrepreneurship Development Foundation (EDF)
	• 100+ patents
	• Advanced laboratories & HPC center
	• Smart campus infrastructure
SDG 10: Reduced Inequalities	• Scholarships for disadvantaged students
	• Bridge courses for rural students
	• Assistive technologies for differently-abled
	• Role-based digital access
SDG 11: Sustainable Cities & Communities	• Smart campus (IoT-enabled)
	• Unnat Bharat Abhiyan
SDG 12: Responsible Consumption & Production	• Segregation at source
	• Plastic elimination
	• Paperless administration
	• Green procurement policy
SDG 13: Climate Action	• Carbon audit system
	• 5–15% carbon footprint reduction target
	• Tree plantation drives
SDG 14: Life Below Water	• Wastewater treatment & recycling
	• Pollution control research
SDG 15: Life on Land	• Green campus development
	• Tree plantation drives
	• Biodiversity awareness programs
	• Composting & soil enrichment
SDG 16: Peace, Justice & Strong Institutions	• Transparent governance
	• Anti-sexual harassment committee
	• Digital documentation & ERP
	• Policy participation in sustainability
SDG 17: Partnerships for the Goals	• 15+ sustainability MoUs
	• Government & NGO collaborations
	• International academic collaborations
	• Sustainability conferences

9.12 Innovative Educational Initiatives and Implementation (5) Total Marks 5.00

Institute Marks : 5.00

The MITAOE has adopted innovative educational intiatives through Academic Bank of Credit transfer, Multidisciplinary curriculum, Innovatives Pedagogies. These innovative educational inititaives supports the slow learner to improve their academic performance.

1. ABC (Academic Bank of Credits) Implementation

MITAOE has actively adopted and implemented the Academic Bank of Credits (ABC) framework in alignment with the National Education Policy (NEP) 2020. The ABC system allows students to accumulate, transfer, and redeem academic credits across institutions, promoting flexibility, mobility, and personalized learning pathways.

Key Features of ABC at MITAOE:

- **Credit Accumulation & Portability:** Students can earn credits through regular courses, online courses (SWAYAM/NPTEL), internships, research projects, and extracurricular activities, which are stored in their ABC digital locker.
- **Multiple Entry-Exit Options:** The system supports lateral entry, re-entry, and early exit with appropriate certification (Certificate/Diploma/Degree).
- **Inter-Disciplinary Credit Transfer:** Students can take courses from other departments/schools within MITAOE or from partner institutions, with seamless credit transfer.
- **Digital Integration:** ABC is integrated with the institution's **ERP/LMS**, enabling real-time credit tracking and verification.

Implementation Highlights:

- **Awareness Workshops:** Conducted for students and faculty on ABC guidelines and benefits.
- **Partnerships:** Collaboration with SWAYAM, NPTEL.

2. Multidisciplinary Curriculum

MITAOE has redesigned its academic programs to foster interdisciplinary learning and holistic development**,** in line with NEP 2020.

a) **Curriculum Structure:**

- **Flexible Choice-Based Credit System (CBCS):** Students can choose electives, minors, and open electives from other engineering streams, design, humanities, management, and languages.
- **Minor Specializations:** Options such as Innovation, Entrepreneurship, Data Science, Robotics, Sustainability, and Digital Humanities.
- **Integration of Liberal Arts:** Courses in **c**ommunication, ethics, psychology, economics, and environmental studies are part of the core curriculum.
- **Project-Based Learning (PBL):** Multidisciplinary projects that require collaboration across departments (e.g., Mechanical + Electronics for robotics projects).

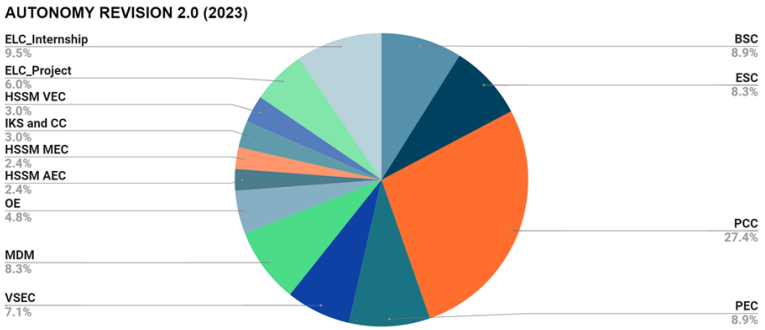


Fig 9.12.1 Curriculum Design Philosophy: (13 disciplines)

3. **Institutional Framework for Teaching Excellence**

- **Center for Excellence in Learning and Teaching (CELT):** A dedicated centralized body that drives all pedagogical innovations, faculty development, and quality initiatives across the institute.
- **Alignment with NBA Criteria:** All programs are structured to meet the rigorous standards of the National Board of Accreditation (NBA), ensuring Outcome-Based Education (OBE) is embedded in the academic culture.
- **Academic Autonomy:** As an autonomous institute affiliated with SPPU, MITAOE has the flexibility to design a skill-based, innovative curriculum that fosters interdisciplinary approaches.

A. **Faculty Orientation and on boarding (OBE Foundation)**

To ensure every faculty member is aligned with quality benchmarks from day one, structured orientation programs are conducted for new recruits.

- **Frequency & Reach:**

    - **2025 (Jan):** 14 participants.
    - **2024 (Mar & Aug):** 39 total participants.
    - **2023 (July):** 40 participants.
- **Core Training Modules:**
    - Basic Pedagogical Practices.
    - **Question Paper framing and Table of Specifications (TOS).**
    - **Basic OBE process** (essential for NBA).
    - Learning Management System (Moodle) and ERP.
    - **Awareness about Accreditation and ranking (NAAC, NIRF, and NBA)**

B. **Faculty Conclaves: Showcasing and Rewarding Innovation**

Annual conclaves serve as a platform to identify, recognize, and disseminate best teaching practices across the institute, directly contributing to the requirement for continuous improvement.

Faculty Conclave 2024

- **Theme:** "Pedagogical Innovations for 21st-Century Skills" .
- **Participation:** 19 faculty teams presented across 6 tracks.
- **Awarded Tracks & Winners:**
    - **Instruction Design and Student Engagement:** Mrs. Bhagyashree Alhat, Dr. Sunita Barve, et al.
    - **Assessment and Evaluation:** Mr. Nilesh Baglekar.
    - **Problem and Project-based learning (P2BL):** Mrs. Diptee Ghusse, Dr. Sunita Barve.
    - **Technology-Driven Teaching-Learning:** Mrs. Pranali Lokhande, et al.
    - **Outcome-based Education:** Mrs. Aswathy M A, Dr. Vipin P Yadav, et al. .

Faculty Conclave 2023

- **Theme:** "Encompassing NEP2020 in Teaching-Learning" .
- **Participation:** 19 case studies presented.
- **Awarded Tracks:**
    - Instruction Design, Students engagement and OBE.
    - Problem and Project-based learning.
    - Assessment and Evaluation.
    - Technology Driven Teaching-Learning

C. **Targeted Faculty Development Programs (FDPs)**

FDP Title	Duration	Key Focus	Resource Person / Objective
Effective Techniques for Online/ Blended Learning & E-content Development	22 June - 5 July 2024	Synchronous/Asynchronous delivery, E-content creation for blended learning.	Dr. Yogendra Pal (IIT Bombay, NIIT Univ.)
Outcome Based Education (OBE) and Project Based Learning (PBL)	5 Days (Dec 2023)	Defining objectives/Outcomes, **CO-PO mapping**, Teaching styles, Assessment, **Question Paper analysis**, Attainment calculations.	Dr. Vikas Shinde (PBL Expert) & Dr. Shaila Subbaraman (Former NBA Evaluator)

FDP Title	Duration	Key Focus	Resource Person / Objective
Synergizing Problem & Project based learning and Design Thinking	2-3 March 2023	International FDP on PBL models and Design Thinking integration.	Deepak L. Waikar (EduEnergy, Singapore)
Best Pedagogical Practices for Effective Teaching Learning Process	3 Days (Jan 2023)	General best practices in pedagogy for effective delivery.	Dr. Urmila Kar (NITTTR, Kolkata)

D. **Curriculum and Pedagogical Innovations**

- **Skill-Based Courses:** Introduction of unique courses like "Engineering Tools & Techniques" (developing motor skills) and "Engineering Informatics" (IT tools) in the first year to bridge theory with practice.
- **Entrepreneurship Focus:** Dedicated courses at the Entrepreneurship Centre to groom students for innovation and startup culture.
- **Problem & Project-Based Learning (P2BL):** A core pedagogical strategy emphasized through FDPs and Conclaves to enhance student engagement and practical problem-solving skills.

E. **Technology Integration and Infrastructure**

- **Learning Management System (LMS):** Mandatory use of Moodle for course delivery, assessments, and tracking student progress, ensuring transparency and data availability for CO-PO attainment.
- **Digital Resources:** Access to central library facilities, digital databases, and R&D infrastructure to support both teaching and research.

F. **Assessment and Evaluation Strategies**

- **Outcome-Based Assessment:** Training programs emphasize the creation of **Table of Specifications (TOS)** and proper question paper framing aligned with Blooms Taxonomy to measure course outcomes effectively.
- **Attainment Calculation:** Faculty are trained on the processes for calculating CO-PO attainment, a critical component of the NBA accreditation process

4. Innovative Pedagogies:

- **Blended Learning:** Mix of online and offline modules, including MOOCs, virtual labs, and simulation tools.
- **Design Thinking & Innovation Labs:** Hands-on labs where students from different disciplines solve real-world problems.
- **Industry-Integrated Modules:** Courses co-taught by industry experts focusing on emerging technologies like AI, IoT, Cyber-Physical Systems.

9.13 Faculty Performance Appraisal and Development System (FPADS (10) Total Marks 10.00

Institute Marks : 10.00

MITAOE is committed to fostering a culture of academic excellence and continuous professional growth through a robust and transparent Faculty Appraisal System, complemented by comprehensive development programs and research incentives. The institute employs a quantitative Annual Performance Indicator (API) framework to holistically evaluate faculty contributions across teaching, research, and institutional service, with outcomes directly linked to career advancement under the Career Advancement Scheme (CAS) and performance-based recognition. This structured accountability is balanced by a strong support ecosystem for faculty development, driven by the Center for Excellence in Learning and Teaching (CELT), which offers regular training in innovative pedagogies and ICT tools, alongside financial backing for external certifications and industry immersions. Furthermore, MITAOE stimulates a vibrant research culture by providing seed funding, publication incentives, conference support, and access to advanced infrastructure, ensuring that faculty are empowered to excel as educators, researchers, and lifelong learners.

1. Annual Appraisal System

Framework & Process:

- **Academic Performance Indicators (API):** Faculty appraisal is based on a **quantifiable API system** covering:
- **Teaching & Learning** (40%)
    1. Use of ICT in teaching
    2. Course development & innovation
    3. Student feedback
    4. Classroom teaching
- **Research & Publications** (30%)
    - Papers in indexed journals
    - Books/chapters
    - Patents filed/granted
    - Research projects & funding
- **Professional Development & Service** (30%)
    - FDPs/Workshops attended
    - Administrative roles
    - Industry/community engagement
    - Contribution to academic bodies
- **Review by Departmental Committee:** The **HoD** evaluate submissions, verify data, and assign scores.
- **Approval by Appraisal Committee:** Final review by the **Faculty Appraisal Committee** chaired by the **HOD** and **Director**.
- **Feedback & Counseling:** Post-appraisal feedback sessions are conducted to discuss strengths, areas for improvement, and career development plans.

Linkage to Career Growth:

- **Promotions:** API scores are directly linked to **CAS (Career Advancement Scheme)** promotions under UGC guidelines.
- **Increments & Incentives:** Performance-linked increments, awards, and recognitions (e.g., Best Teacher Award).
- **KRAs for Accountability:** Individual **Key Result Areas (KRAs)** are aligned with departmental and institutional goals.

2. Faculty Development Programs (FDPs) & Research Incentives

MITAOE has institutionalized a **comprehensive faculty development ecosystem** to enhance pedagogical, research, and professional competencies.

Faculty Development Programs (FDPs):

- **Annual FDP Calendar:** A structured schedule of **internal and external FDPs, workshops, seminars, and conferences.**
- **In-House Training by CELT:** The **Center for Excellence in Learning and Teaching (CELT)** organizes programs on:
    - Innovative pedagogies (Blended Learning, Project-Based Learning)
    - Assessment & Evaluation techniques
    - Outcome-Based Education (OBE)
    - ICT tools & digital teaching platforms
- **External Training Support:** Financial support and leave provisions for faculty to attend **national/international FDPs, refresher courses, and online certifications** (SWAYAM, NPTEL).
- **Industry Immersion Programs:** Faculty internships and collaborative projects with industry to update practical knowledge.

Research Incentives & Support:

- **Seed Funding for Research:** Grants for initiating new research projects, especially interdisciplinary and socially relevant themes.
- **Publication Incentives:** Monetary rewards for **SCI/SCOPUS publications, patents, and books**.
- **Conference Support:** Full/partial funding for presenting papers at **national and international conferences.**
- **Research Infrastructure:** Access to advanced labs, high-performance computing, digital libraries (IEEE, Springer, etc.), and research clusters.

- **Reduced Teaching Load:** For faculty involved in major research projects or guiding PhD scholars.

Recognition & Awards:

- **Best Researcher Award:** Annual award for outstanding research contributions.
- **Innovation & Patent Awards:** Recognition for filed/granted patents and technology transfers.
- **Professional Development Grants:** Support for pursuing higher qualifications (Ph.D., Post-Doc) or specialized certifications.

9.14 Outreach Activities (5) Total Marks 5.00

Institute Marks : 5.00

MITAOE demonstrates a deep-seated commitment to social responsibility and rural development through its structured engagement with the Unnat Bharat Abhiyan (UBA) and its integrated Community Service and Social Internship Programs. As an active participant in this national mission, the institute has established a dedicated UBA cell to drive sustainable interventions in over five adopted villages, focusing on critical areas like water conservation, renewable energy, agriculture, and digital literacy. This institutional commitment is further strengthened by making community service a core academic component, wherein students undertake mandatory, credit-based social internships. Through these programs, multidisciplinary teams of faculty and students work on need-based projects from installing solar lighting to conducting health camps ensuring that academic learning translates into tangible community impact while fostering a profound sense of civic consciousness and ethical leadership in its students.

1. Unnat Bharat Abhiyan (UBA)

MITAOE is an active participant in the Unnat Bharat Abhiyan (UBA), a flagship national program initiated by the Government of India to enable higher education institutions to work with rural communities for sustainable development.

Institutional Involvement & Structure:

- **UBA Cell/Committee:** A dedicated UBA Institutional Coordinator and committee oversee planning, implementation, and monitoring of UBA activities.
- **Faculty & Student Participation:** Multidisciplinary teams of faculty and students engage in **c**ommunity need assessment, project formulation, and execution.
- **Adopted Villages:** MITAOE has adopted nearby rural communities under UBA for focused developmental interventions.

Key Focus Areas & Activities:

- **Water & Sanitation:** Initiatives such as rainwater harvesting structures, check dams, and sanitation awareness drives.
- **Renewable Energy:** Installation of solar street lights, biogas plants, and solar water pumps in villages.
- **Agricultural Support:** Soil testing, organic farming workshops, and drip irrigation demonstrations.
- **Digital Literacy & Education:** Computer literacy camps, career guidance sessions, and smart classroom setups in village schools.
- **Health & Hygiene:** Health camps, sanitation workshops, and awareness programs on maternal and child health.

1. Introduction

Unnat Bharat Abhiyan aims to create model villages that serve as examples of sustainable and inclusive development, showcasing the transformative power of collaborative efforts between educational institutions and rural communities.

2. Background

MITAoE unnat bharat abhiyan team has identified some villages near by MITAoE college.

Adopted Village Details

Village	Tahsil	District	Population	Distance from MITAoE
Dhanore	Khed	Pune, MH	2540	4.1 KM
Markal	Khed	Pune, MH	1530	7 KM
Golegaon	Shirur	Pune, MH	2244	10
Nirgudi	Haveli	Pune, MH	724	4.6
Pimpalegaon	Daund	Pune, MH	5126	8.2 kM

3. Objectives

1) UBA has played a pivotal role in bridging the longstanding gap between urban and rural development.
2) The initiative has facilitated the exchange of knowledge, technology, and best practices, contributing to the skill development of rural youth and empowering them to actively participate in the development process.
3) The major purpose is to include students and the institute staff (teaching and non-teaching) to participate.

4) This will give the students and the institute staff good motivation enhancing the overall performance.

5) The faculty members can apply for UBA funding for various research proposals. The institute will get good benefits in terms of accreditation.

Impact & Outcomes:

- **Villages Impacted:** 5+ villages in the vicinity of MITAOE.
- **Student Projects:** UBA-linked final year projects, mini-projects, and social internships.
- **Community Feedback:** Regular feedback mechanisms ensure alignment with community needs.
- **Recognition:** MITAOE's UBA activities are highlighted in annual reports and AQAR.

2. Community Service & Social Internships

MITAOE has institutionalized community service and social internship programs as integral components of the curriculum and student development.

2.1 Community Service Framework:

- **NSS (National Service Scheme):** Active NSS unit with regular volunteering activities:
  - Cleanliness Drives (Swachh Bharat)
  - Tree Plantation & Environmental Camps
  - Blood Donation Camps
  - Awareness Campaigns (e.g., voter education, road safety, anti-drug)
- **Social Outreach Clubs:** Student-run clubs such as Rotaract, Eco Club, and Social Service Club organize weekly/monthly community initiatives.
- **Faculty-Led Initiatives:** Faculty members lead **CSR (Corporate Social Responsibility) projects and community workshops.**

2.2 Social Internship Program (SIP):

- **Mandatory Component:** Social internship is a credit-based requirement for undergraduate students (typically after 2nd year and third year).
- **Duration & Structure: 4–6 weeks** during summer/winter breaks, involving:
  - **Project-Based Engagement:** Students work on specific community-identified projects (e.g., digital literacy, water testing, waste management).
- **Documentation & Assessment:** Students submit internship reports, presentations, and reflective journals**.** Assessment is based on community impact, learning outcomes, and supervisor feedback.

2.3 Institutional Support & Recognition:

- **Training & Orientation:** Pre-internship workshops on community ethics, cultural sensitivity, and project management.
- **Logistical Support:** Travel, accommodation, and safety arrangements for rural internships.
- **Awards & Recognition:** Best Social Intern Award, Community Service Certificate, and annual convocation**.**

3. Community Engagements;

The institute has signed a Memorandum of Understanding (MoU) with Jagriti School for Blind Girls to promote inclusive education and community engagement. This collaboration enables engineering students to develop scientific models for visually impaired learners while fostering social responsibility and empathy. The details of the MoU, including objectives, activities, and relevance to NBA outcomes, are presented in the table below.

Table no 9.14.1 Details of Memorandum of Understanding (MoU) for Industry-Institute Interaction and Community Engagement

Particulars	Details
MoU Title	Collaborative Educational Engagement for Inclusive Learning
Partner Organization	Jagriti School for Blind Girls, Markal Road, Alandi
Academic Institute	MIT Academy of Engineering (MITAOE), Alandi, Pune
Date of Signing	15th July 2024
Validity Period	Two academic years (2024 – 2026)
Objectives	1. To provide individualized exposure to scientific concepts for visually impaired students through tactile and demonstrative methods. 2. To offer hands-on learning experiences for MITAOE students through model-making and interactive teaching. 3. To promote inclusive education, community engagement, and social responsibility among engineering students.
Nature of Collaboration	• MITAOE students study the Jagriti School science curriculum and design scientific models tailored for visually impaired learners. • Models are used to conduct interactive sessions, making abstract concepts accessible. • Students also conduct personality development activities including Communicative English, storytelling, art and craft workshops, and group discussions.
Weekly Engagement	One day per week is dedicated for MITAOE students to visit Jagriti School. Time slots are incorporated into the academic timetable, and visits are mentored by faculty members.
Relevance to NBA	• Addresses Program Outcome (PO6): The Engineer and Society • Addresses Program Outcome (PO7): Environment and Sustainability (inclusive education) • Promotes experiential learning and community engagement • Strengthens industry-institute-community linkage
Key Outcomes	• Inclusive education and accessibility in science learning. • Real-world problem-solving and empathy development for engineering students. • Contribution to holistic development of students.
General Terms	Both institutions agree to uphold the spirit of cooperation and respect for each others vision and values. The MoU may be reviewed, modified, or renewed upon mutual agreement.

Annexure I

(A) PROGRAM OUTCOME (POs)

Engineering Graduates will be able to:

PO1: Engineering Knowledge: Apply knowledge of mathematics, natural science,computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

PO3: Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

PO4: Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

PO5: Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

PO6: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

PO7: Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

PO8: Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9: Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

PO10: Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11: Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

Program should specify 2-4 program specific outcomes.

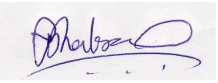
PSO1	Apply advanced surveying, mapping, and structural design techniques using modern tools for planning, analysis, and execution of civil engineering projects.
PSO2	Design sustainable civil engineering solutions considering environmental and societal considerations ensuring long-term resilience and ecological balance.

Declaration

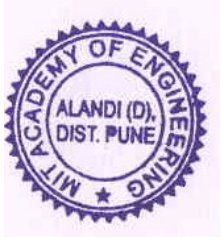
The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines inforce as on date and the institutes hall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute willbe initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute
Name : Dr. Yogesh J. Bhalerao
Designation : Director
Signature :



Seal of The Institution :



Place : Alandi, Pune
Date : 26-02-2026 16:59:33