DMI COLLEGE OF ENGINEERING

Mechanical Engineering

Part A : Institutional Information

1 Name and Address of the Institution

DMI COLLEGE OF ENGINEERING,
DMI COLLEGE OF ENGINEERING MEVALURKUPPAM B VILLAGE NAZARETHPET POST PALANCHOOR KANCHIPURAM DISTRICT

2 Name and Address of Affiliating University

3 Year of establishment of the Institution:

2001

4 Type of the Institution:

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

5 Ownership Status:

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

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

Name of Institutions	Year of Establishment	Programs of Study	Location
LOYOLA INSTITUTE OF TECHNOLOGY	2003	B.E/B.TECH/MBA	PALANCHUR
DMI COLLEGE OF EDUCATION	2007	BEd	PALANCHUR
ST. JESEPH RESIDENTIAL SCHOOL	1994	CBSE	SEIPERUMBUDUR
ST.JOSEPH INTERNATIONAL SCHOOL	2015	CBSE	KODIKOTTAI
LOYOLA ACADEMY M.H.S.S	2011	MATRIC	TAMBARAM
ST.JOSEPH INTERNATIONAL SCHOOL	2015	CBSE	ARALVOYMOZHI
ST.JOSEPH INTERNATIONAL SCHOOL	2015	CBSE	SALEM
DMI ST.JOSEPH GLOBAL SCHOOL	2016	CBSE	YAHAPURAM
DMI ST.JOSEPH GLOBAL SCHOOL	2016	CBSE	TENKASI
DMI ST.JOSEPH GLOBAL SCHOOL	2017	CBSE	POLIVAKKAM
DMI ST.JOSEPH GLOBAL SCHOOL	2017	CBSE	KEEZHITHANUR
DMI ST.JOSEPH GLOBAL SCHOOL	2020	CBSE	KARAIKAL
LOYOLA INTERNATIONAL SCHOOL	2021	CBSE	PALANCHUR

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
B.E.MECHANICAL ENGINEERING	UG	2009	2009	60	Yes	60	Granted accreditation for 3 years for the period (specify period)	2022	2025	Yes	4

Sanctioned Intake for Last Five Years for the B.E.MECHANICAL ENGINEERING	
Academic Year	**Sanctioned Intake**
2024-25	60
2023-24	60
2022-23	60
2021-22	60
2020-21	90
2019-20	150

M.E THERMAL ENGINEERING	PG	2022	2022	12	No	12	Not eligible for accreditation	--	--	No	2
BE Mechanical Engineering	UG	2009	2009	60	Yes	60	Granted accreditation for 3 years for the period (specify period)	2009	2025	No	4

Sanctioned Intake for Last Five Years for the BE Mechanical Engineering	
Academic Year	**Sanctioned Intake**
2017-18	180
2016-17	180
2015-16	180
2014-15	180
2013-14	120
2012-13	120

MECHANICAL ENGINEERING	UG	2009	2009	60	Yes	60	Granted accreditation for 3 years for the period (specify period)	2022	2025	0	4

Sanctioned Intake for Last Five Years for the MECHANICAL ENGINEERING	
Academic Year	**Sanctioned Intake**
2017-18	180
2016-17	180
2015-16	180
2014-15	180
2013-14	120
2012-13	120

Mechanical Engineering	UG	2009	2009	60	Yes	60	Granted accreditation for 3 years for the period (specify period)	2022	2025	No	4

Sanctioned Intake for Last Five Years for the Mechanical Engineering	
Academic Year	**Sanctioned Intake**
2017-18	180
2016-17	180
2015-16	180
2014-15	180
2013-14	120
2012-13	120

Electrical and Electronics Engineering	UG	2001	2001	60	No	60	Not eligible for accreditation	--	--	No	4

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Information Technology
2	Under Graduate	Engineering & Technology	Mechanical Engineering
3	Under Graduate	Engineering & Technology	Computer Science and Engineering
4	Under Graduate	Engineering & Technology	ELECTRONICS AND COMMUNICATION ENGINEERING

9 Total number of employees in the institution:

A. Regular* Employees (Faculty and Staff):

Items	2024-25		2023-24		2022-23	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	42	42	36	36	31	31
Faculty in Engineering (Female)	45	45	45	45	46	46
Faculty in Maths, Science & Humanities (Male)	9	9	10	10	12	12
Faculty in Maths, Science & Humanities (FeMale)	14	14	18	18	17	17
Non-teaching staff (Male)	12	12	13	13	13	13
Non-teaching staff (FeMale)	9	9	9	9	10	10

B. Contractual* Employees (Faculty and Staff):

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

10 Total number of Engineering Students:

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

Engineering and Technology- UG Shift-1

Items	2024-25	2023-24	2022-23
Total no. of Boys	895	850	823
Total no. of Girls	517	443	412
Total	**1412**	**1293**	**1235**

Engineering and Technology- PG Shift-1

Items	2024-25	2023-24	2022-23
Total no. of Boys	11	8	6
Total no. of Girls	6	3	13
Total	**17**	**11**	**19**

Engineering and Technology- MBA Shift-1

Items	2024-25	2023-24	2022-23
Total no. of Boys	39	50	61
Total no. of Girls	42	64	52
Total	**81**	**114**	**113**

11 Vision of the Institution:

To become an internationally reputed institution by producing competent professionals with exemplary skills and ethical values.

12 Mission of the Institution:

- IM 1: To achieve higher level technological and professional excellence.
- IM 2: To impart quality and holistic professional education.
- IM 3: To train professionals to be entrepreneurs and employment generators.

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

Head of the Institution	
Name	DR SUJATHA JAMUNA ANAND
Designation	PRINCIPAL
Mobile No.	9444405820
Email ID	principal@dmice.ac.in

☑ **NBA Coordinator, If Designated**

Name	DR R SENTHIL RAMA
Designation	ASSOCIATE PROFESSOR
Mobile No.	9042948009
Email ID	iqac@dmice.ac.in

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60	60.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	120	120.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120	120.00
4	STUDENTS' PERFORMANCE	150	98.53
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	177.26
6	FACILITIES AND TECHNICAL SUPPORT	80	80.00
7	CONTINUOUS IMPROVEMENT	50	50.00
8	FIRST YEAR ACADEMICS	50	40.83
9	STUDENT SUPPORT SYSTEMS	50	50.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	120.00
	Total	**1000**	**917**

Part B

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

Total Marks 60.00

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

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	To become an internationally reputed institution by producing competent professionals with exemplary skills and ethical values.
Mission of the institute	IM 1: To achieve higher level technological and professional excellence. IM 2: To impart quality and holistic professional education. IM 3: To train professionals to be entrepreneurs and employment generators.
Vision of the Department	To produce Mechanical Engineering graduates with high standards, and making them as committed professionals with ethical values.
Mission of the Department	

Mission No.	Mission Statements
M1	To impart quality technical education and to compete successfully in today's Industrial requirements.
M2	To develop the professional potential that leads to pursue research and higher studies.
M3	To improve and sustain the professional behaviour and ethical values.

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

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Employability Skills: To prepare the students with strong foundation in Science, Mathematics and Engineering according to industrial needs so as to enable them to have successful career in core and interdisciplinary industries.
PEO2	Research and Higher Studies: To provide the opportunities on research and development, promote higher education and zeal for life-long learning.
PEO3	Entrepreneurship: To develop awareness on entrepreneurship and start-ups in order to succeed in social, technical and business challenges.
PEO4	Ethical Values: To promote the graduates and inculcate with ethical values in professional practices.

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

Total Marks 10.00

Institute Marks : 10.00

The Vision, Mission and PEOs of Institute and Department are disseminated among both internal and external stake holders by various means which may include periodic meetings like Alumni meet, Parents meet, Advisory board meet etc.,

The Vision and Mission statements and PEOs of the Department are published at:

- Institute Website: www.dmice.ac.in (http://www.dmice.ac.in/)
- College Notice Board
- Department Notice Board
- Department Corridor
- Department Library
- HOD Office
- Staff Rooms
- Class Rooms
- Department Laboratories
- Department News Letter and Magazines
- Social Media
- College Brochures
- Department Web page
- Academic Calendar
- HOD Domain Mail: hod.mech@dmice.ac.in (mailto:hod.mech@dmice.ac.in)
- Curriculum Book
- Lab Manual
- Survey / Feedback Forms

The Vision, Mission statements and PEOs of the Department are disseminated at:

- Hands on Training and Workshops
- Seminars
- Guest Lectures
- Parents Teachers Meeting
- Alumni Association meeting
- Symposium and Conferences
- Faculty Development Programme (FDP)
- Placement & Training Programme for the students.
- Value Added Courses

The different stakeholders relevant to the mechanical engineering program include:

I. Internal Stakeholders:

- Students
- Faculty
- Institution management
- Governing Body Members

II. External Stakeholders:

- Alumni
- Employers
- Professional body Members
- Parents
- Industry Persons

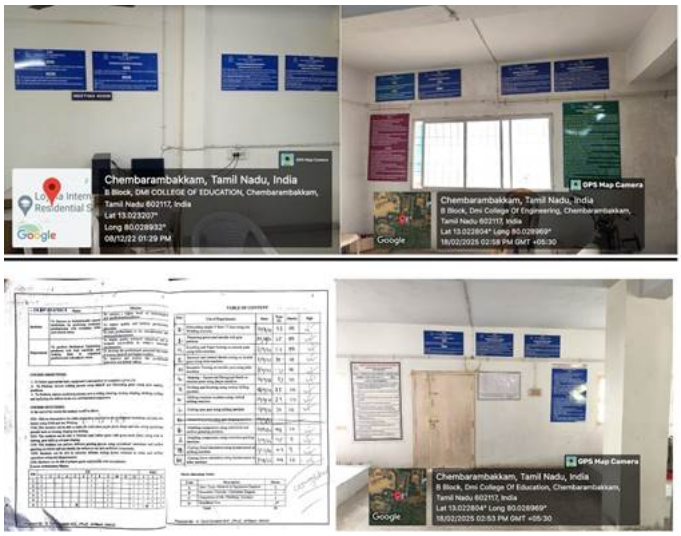
Extent of awareness of Vision, Mission, PEOs among stakeholders

Periodical awareness over Vision, Mission and PEOs are created by conducting of frequent meeting with internal and external stake holders in order to ensure the career growth of students and the Institute as well. The table 1.1 depicts the extent of awareness of Vision, Mission, PEOs statements and figure 1.1 shows publication and dissemination.

Table 1.1 Extent of awareness of Vision, Mission, PEOs among stakeholders

S. No	Awareness Method	Activities	Period
1	Alumni Feed back	Conducting Alumni Meet and receiving inputs through feedback form	Once in a year

2	Department Advisory Committee (DAC)	Getting feedbacks and suggestions from DAC Members and reviewing the Vision and Mission Statements if needed	Twice in a year
3	Parents Feedback	Disseminating the Vision, Mission and PEOs of the Department through Parents Teachers Meeting and feedback form	Once in a year
4	Employers Feedback	During on campus drive and HR meet	Once in a year
5	Students Feedback	Through class committee meeting and DAC meeting	Twice in a year
6	Industry Experts	Through DAC meeting	Once in a year



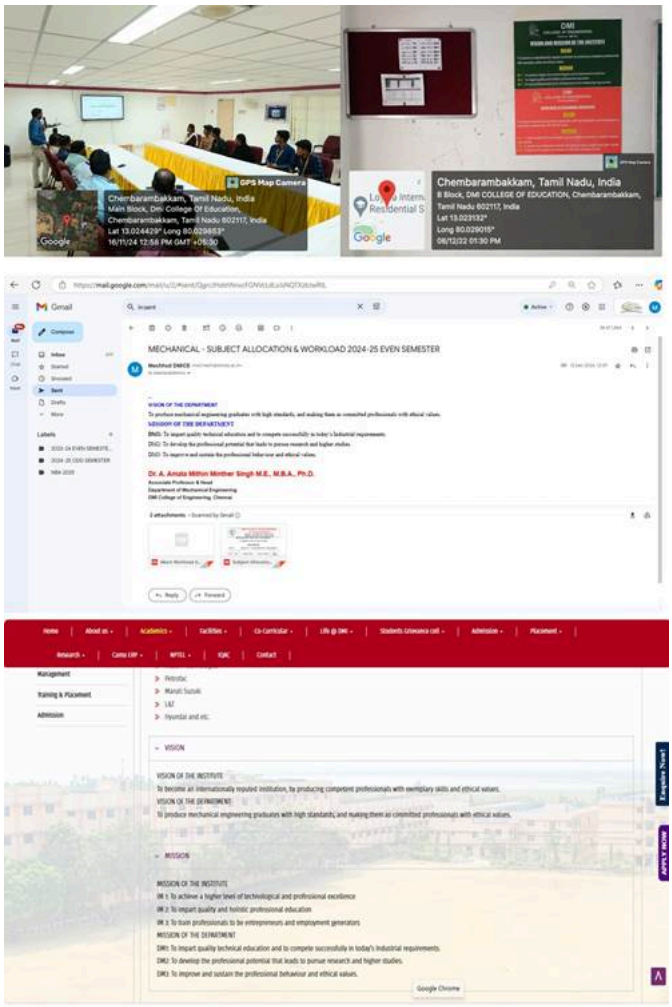


Figure 1.1 Publication and Dissemination of Department Vision, Mission and PEO Statements

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25) Total Marks 25.00

Institute Marks : 25.00

Process for defining the Vision and Mission of the Department, and PEOs

The procedure for articulating and reconstituting the Vision and Mission of the Department is depicted in the figure below. The vision and mission statements of the department, in conjunction with the Program Educational Objectives (PEOs), collaboratively formulated by the Principal, Department Head, Alumni, Industry experts and senior faculty members associated with the program. The Department Advisory Committee meeting is convened before the commencement of each semester with the aforementioned members. During the meeting, participants assess the strengths and weaknesses, the core principles of the program, and articulate the departments vision and mission statements to ensure alignment with those of the Institute. The process of articulating the Vision and Mission statements is shown in figure 1.2.

Moreover, the vision statement articulates the prospective attributes of the Program and serves as a valuable resource in resolving various inquiries regarding the objectives of undertaking a mechanical engineering program and the anticipated future condition of the program. This statement predominantly encompasses critical elements, including a fundamental principle, a vision for the future, and recognition of service to stakeholders. The final segment of the vision statement articulates the institutes commitment to serving its stakeholders, which include faculty members, students, employers, as well as the wider community and society. A vision statement possess stability and provide direction to decision-makers as they plan the future progression of the program.

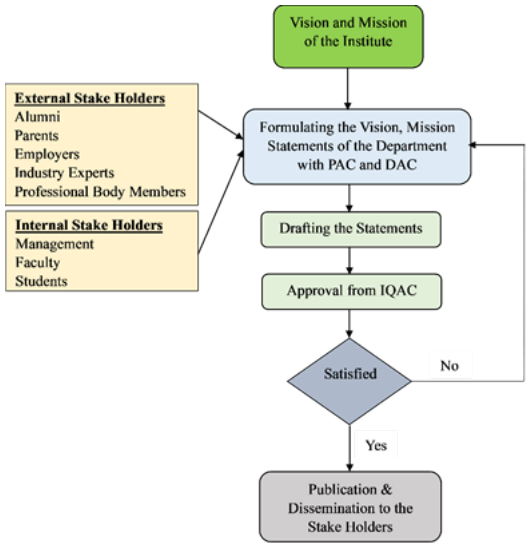


Figure 1.2 Framing and Redefining Process of Vision, Mission of the Department

The mission statement of the programme focuses on the path provided to achieve the vision. It provides a concise summary of facilities available to meet the vision.

The programmes mission statement emphasizes the pathway to execute the vision. It offers a brief overview of the facilities available to fulfil the vision.
The Department and Institute provide a comprehensive and diverse curriculum designed to meet the intellectual, cultural, and social needs of individuals from the diverse backgrounds globally. This is undertaken to equip students to navigate and contribute to a dynamic world while fostering active lifelong learning. The senior professors, department head and external stakeholders will address all the aforementioned concerns and establish the programs objectives. The Institutes objectives will be achieved through the vision and mission of the mechanical engineering program.

The articulated vision and mission have been evaluated according to the members recommendations, appropriate modifications have been made, finalized by the Department Advisory Committee (DAC) & Program Assessment Committee (PAC) and authorized by the Internal Quality Assurance Cell (IQAC). The Vision and Mission statements are disseminated to all stakeholders as outlined in section 1.3.

Process involved in defining the PEOs of the Program:

The process for framing the PEO statements of the Department is depicted in the figure 1.3. The formulation of Program Educational Objectives (PEOs) begins with their alignment to the vision and mission of the Institute and Department. The Program Assessment Committee (PAC) develops the PEO statements in conjunction with stakeholders. The prepared remarks are subsequently presented to the Department Advisory Committee (DAC) for endorsement. Upon approval, they are published and distributed; otherwise, they are amended for re-evaluation.

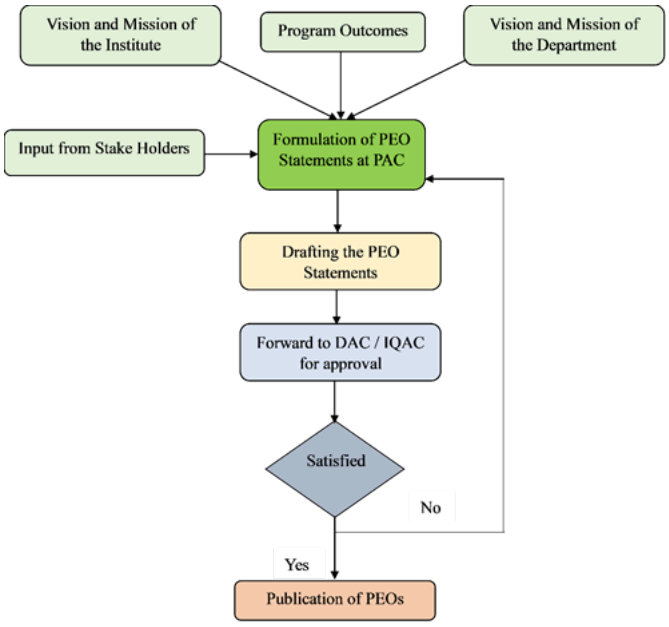


Figure 1.3 Process of framing PEOs of the Department

Key Steps Involved:

Step 1: The Institute and Department vision and mission serve as basis.

Step 2: In collaboration with stakeholders, PEO statements of the Department were formulated at PAC.

Step 3: A drafted statements of the PEO are framed and forwarded to DAC for approval.

1.5 Establish consistency of PEOs with Mission of the Department (15) Total Marks 15.00

Institute Marks : 15.00

Consistency Matrix of PEO and Elements of Mission statements:

The program educational objectives were crafted within the framework of the mission of the Mechanical Engineering Program. The table 1.2 explains that the correspondence existing between the program educational objectives to program mission of Mechanical engineering.

Table 1.2 Consistency Matrix of PEO and Elements of Mission statements

Mission/ PEOs	**DM1:** To impart quality technical education and to compete successfully in today's Industrial requirement.	**DM2:** To develop the professional potential that leads to pursue research and higher studies.	**DM3:** To improve and sustain the professional behaviour and ethical values.
PEO I: Employability Skills: To prepare the students with strong foundation in Science, Mathematics and Engineering according to industrial needs so as to enable them to have successful career in core and interdisciplinary industries.	3	2	2
PEO II: Research and Higher Studies: To provide the opportunities on research and development, promote higher education and zeal for life-long learning.	3	3	2
PEO III: Entrepreneurship: To develop awareness on entrepreneurship and start-ups in order to succeed in social, technical and business challenges.	2	2	3
PEO IV: Ethical Values: To promote the graduates and inculcate with ethical values in professional practices.	2	2	3

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

The Program Educational Objectives aim to cultivate graduates who possess a comprehensive understanding of fundamental mathematics and mechanical engineering principles, and who are also equipped to pursue lifelong professional development. The Mechanical Engineering Program equips graduates to operate responsibly in varied environments and to succeed in todays work market. The aforementioned mapping indicates that the established Program Educational Objectives are consistently aligned with all the mission statements produced by the department. The rationale is shown in figure 1.3.

Table 1.3 Consistency/Justification of correlation parameters of consistence matrix

CONSISTENCY	RELATIONSHIP	JUSTIFICATION
PEO- I VS DM1	Substantial	Sound fundamental knowledge in Mechanical Engineering substantially improves quality of technical education
PEO- I VS DM2	Moderate	The fundamental knowledge helps at some extent moderately in developing of professional potential in terms of sharing the knowledge and dissemination
PEO-I VS DM3	Moderate	Fundamental knowledge of analyzing the problems helps the graduate to compete in today's market and lifelong learning.
PEO- II VS DM1	Substantial	Quality technical education in the field of mechanical engineering provides the huge opportunities in multi-disciplinary projects.
PEO- II VS DM2	Substantial	Professional potential creates the more opportunities substantially to work as a part of teams of multi-disciplinary projects and discoveries
PEO- II VS DM3	Moderate	Competency level and lifelong learning emphasizes opportunities reasonably to work with multi-disciplinary projects and discoveries
PEO- III VS DM1	Moderate	Quality technical education in the field of mechanical engineering will influence moderately on promoting awareness of lifelong learning

PEO- III VS DM2	Moderate	Life-long learning and codes of professional practice relates with professional potential
PEO- III VS DM3	Substantial	awareness of life-long learning and codes of professional practice helps to compete strongly in today's market
PEO- IV VS DM1	Moderate	Quality of technical education shows somewhat greater improvement successful careers of the students
PEO- IV VS DM2	Moderate	Successful career of the student depends on the professional potential sensibly in terms of knowledge
PEO- IV VS DM3	Substantial	Competency skill of the students strongly relates with meeting the demands in the market

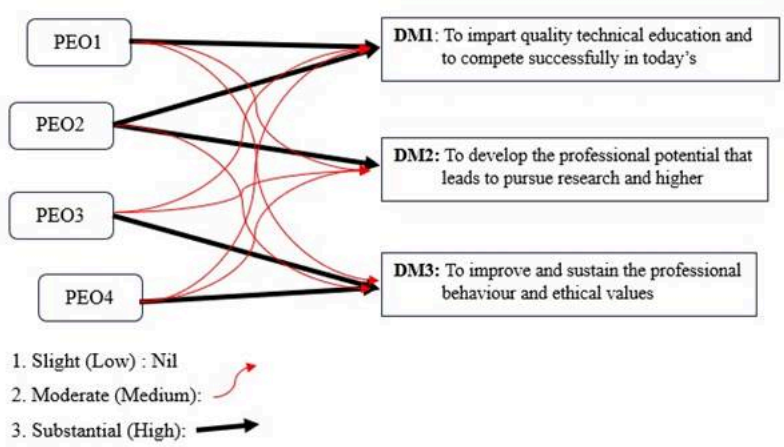


Figure 1.4 Rationale of PEO vs Department Mission

PEO Statements	M1	M2	M3
Employability Skills: To prepare the students with strong foundation in Science, Mathematics and Engineering according to industrial needs so as to enable them to have successful career in core and interdisciplinary industries.	3	2	2
Research and Higher Studies: To provide the opportunities on research and development, promote higher education and zeal for life-long learning.	3	3	2
Entrepreneurship: To develop awareness on entrepreneurship and start-ups in order to succeed in social, technical and business challenges.	2	2	3
Ethical Values: To promote the graduates and inculcate with ethical values in professional practices.	2	2	3

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120) Total Marks 120.00

2.1 Program Curriculum (20) Total Marks 20.00

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

Institute Marks : 10.00

DMI College of Engineering, affiliated with Anna University (AU) in Chennai, Tamil Nadu, adheres to the curriculum established by the university. The curriculum for each ourse is designed and evaluated by the Board of Studies committee at AU University. The AU curriculum comprises Core subjects, Humanities and Sciences, Basic ciences, and optional courses such as professional core, professional electives and open electives. Tables 2.1 present the curricular framework adhered to by the AU.

If some components necessary for achieving COs/POs are absent from the curriculum offered by the connected university, the institution endeavors to supplement this nowledge by addressing topics through "CONTENTS BEYOND SYLLABUS." We incorporate supplementary knowledge beyond the syllabus through a comprehensive GAP analysis" procedure.

2.1: Program Structure of Anna University

Table 2.1: Program Curriculum Structure for R-2017 Choice Based Credit System

R-2017 Scheme											
SL.NO	**SUBJECT AREA**	**CREDITS PER SEMESTER**								**CREDITS TOTAL**	**PERCENTAGE %**
		I	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**		
1	HS	4	7						3	14	**7.61%**
2	BS	12	7	4	4					27	**14.67%**
3	ES	9	11	9	5					33	**17.80%**
4	PC			11	14	19	18	13		74	**40.22%**
5	PE						3	6	3	15	**8.15%**
6	OE					3		3		6	**3.26%**
7	EEC			1	1		3	1	10	16	**7.6%**
	TOTAL	**25**	**25**	**25**	**24**	**22**	**24**	**23**	**16**	**184**	
8	**Non-credit/ Mandatory**										

A. Process used to identify the Compliance of University Curriculum for Attainment of PO and PSO

Gaps in POs and PSOs:

The courses and the course contents prescribed in the curriculum are mapped to the relevant POs and PSOs through the given Graduate Attributes notified in the niversity curriculum and inputs from respective course coordinators. If the number of courses mapped with POs and PSOs which is less than 40 will be considered as urricular gaps. Thus, the identified curricular gaps for POs and PSOs are listed below. The percentage of courses mapping to POs and gaps in PSOs identified is listed elow:

Table2.2: Percentage of Curriculum Mapping with POs and PSOs

Sl. No	Pos & PSOs	% of Mapping	Shortcoming identified in Program Curriculum
1	PO1: Engineering Knowledge	98	Maximum courses correlated to engineering knowledge
2	PO2: Problem Analysis	100	Substantial correlation to mathematical knowledge
3	PO3: Design/Development of Solutions	98	Sound correlation in applying engineering knowledge in design
4	PO4: Conduct investigation on complex problems	96	Strong correlation in applying engineering knowledge in solving complex problems
5	PO5: Modern tool usage	94	Maximum of modern tools used in curriculum
6	PO6: The Engineer and the Society	13	Limited integrated approach in curriculum towards integrated professional practices.
7	PO7: Environment and Sustainability	13	Limited integrated approach in curriculum towards environment and sustainability
8	PO8: Ethics	55	Moderate approach towards ethics in curriculum practice
9	PO9: Individual and Team work	32	Approach towards experiential learning is minimum and limited courses for team works
10	PO10: Communication	34	Lack of exposure due to limited hours allocated, poor communication skill
11	PO11: Project Management and Finance	38	Limitation of duration in executing project and less exposure to finance management skill
12	PO12: Life-Long learning	45	Course components moderately address life skills

13	PSO1: Design and Manufacturing	68	Reasonable practical exposure to modern manufacturing technologies; Need for industry-relevant projects.
14	PSO2: problem solving ability	57	Average real-world problem-solving exercises; Need for interdisciplinary projects.
15	PSO3: Managerial Skills	43	Insufficient management, leadership, and entrepreneurship courses; Limited emphasis on soft skills.

Table 2.3: Gaps Identified in PO's and PSO's for R-2017

PO	Description
PO6	The Engineer and the Society
PO7	Environment and Sustainability
PO9	Individual and Team Work
PO10	Communication
PO11	Project management and Finance

Table 2.4: List of Course Gap Identified in the AU Curriculum (R2017) for the attainment of POs and PSOs

Sl.No	Year	Course Code	Course Name	Corrective action for the Gap identified in the Course
1	II	ME8391	Engineering Thermodynamics	A Guest Lecture on "Design of energy-efficient building HVAC system"
2		CE8394	Fluid Mechanics and Machinery	A Guest Lecture on "Fluid mechanics in sustainable water management"
3		ME8351	Manufacturing Technology - I	A Guest Lecture on "Carbon footprint of different manufacturing processes."
4		EE8353	Electrical Drives and Controls	A Guests Lecture on "Renewable energy integration with electrical drives"
5		ME8492	Kinematics of Machinery	A Guests Lecture on "Failure modes in linkages, cams, and gears"
6		ME8451	Manufacturing Technology – II	A Seminar on "Advanced Software Solutions for Modern Manufacturing"
7		ME8491	Engineering Metallurgy	A Guest Lecture on "Advanced Engineering Materials & Metallurgy: Innovations for a Sustainable Future"
8		CE8395	Strength of Materials for Mechanical Engineers	A Guest Lecture on "Eco-friendly and recyclable materials"
9		ME8493	Thermal Engineering - I	Two-Day Hands-on Workshop on IC Engines, EV Technology & Advanced HVAC Systems

10	III	ME8595	Thermal Engineering- II	A Guest Lecture on "Thermal Engineering for a Greener Future: Engineering Solutions for Societal and Environmental Impact"
11		ME8593	Design of Machine Elements	A Guest Lecture on “Design & Product Development: Innovations for Efficiency and Sustainability”
12		ME8501	Metrology and Measurements	Workshop on "Building Excellence: Teamwork and Individual Contribution in Quality Engineering"
13		ME8594	Dynamics of Machines	A Guest Lecture on “Enhanced Safety Awareness in Dynamic Systems”
14		OR0551	Renewable Energy Sources	A Guest Lecture on “End-of-life strategies for renewable components”
15		ME8651	Design of Transmission System	A Guest lecture on "Engineering Solutions for Societal Infrastructure: Design of Transmission Systems"
16		ME8691	Computer Aided Design and Manufacturing	Workshop on "Collaborative Insights: Exploring Recent Trends and Opportunities in Core Industries"
17		ME8693	Heat and Mass Transfer	A Guest Lecture on "Integrating Energy Efficiency, Environmental Impact, and Collaborative Learning in Heat and Mass Transfer"
18		ME8692	Finite Element Analysis	A Guest Lecture on “A Holistic Approach to Finite Element Analysis for Sustainable Engineering"
19		ME8694	Hydraulics and Pneumatics	A Guest Lecture on "Smart Fluid Power: Advancing Safety, Sustainability, and Innovation in Hydraulics and Pneumatics"
20		ME8091	Automobile Engineering	A Guest Lecture on “Sustainable Tyre Technology: Basics, Construction & Environmental Impacts”
21	IV	ME8793	Process Planning and Cost Estimation	A Guest Lecture on “Effective Communication in Process Planning and Cost Estimation for Manufacturing”
22		ME8791	Mechatronics	A Guest Lecture on "Strategic Management in Mechatronics: Balancing Innovation, Design, and Project Execution"
23		OML751	Testing of Materials	A Guest Lecture on "Smart Material Testing: Enhancing Safety, Eco-Efficiency, and Team-Based Engineering"
24		ME8073	Unconventional Machining Processes	A Guest Lecture on "Eco-Friendly Innovation: Advancements in Non-Traditional Machining for Sustainable Manufacturing"
25		ME8099	Robotics	A Guest Lecture on “Introduction to Robotics & Automation: Shaping a Sustainable Future”

B. List of curricular gaps for the attainment of defined PO’s and PSO’s

Correlation between the CO-PO Mappings for the Academic Year 2019-22 (R-2017)

Consolidated of all CO PO mapping addressed to the 2017 scheme is mapped to total 235 Course Outcome’s. Total **235** Course Outcomes (COs) are collected from ll staff members based on the curriculum and mapping is done. The percentage compliance with POs is shown in table below.

able2.5: Compliance of Courses with POs and PSOs for the Academic Year 2019-22 (R-2017)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No of contribution to each PO	229	231	225	217	216	28	29	127	75	80	89	106	165	135	95
Total no of Cos for Curriculum	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235
% Of Curriculum	97.45	98.30	95.74	92.34	91.91	11.91	12.34	54.04	31.91	34.04	37.87	45.11	70.21	57.45	40.43

Articulation Average Value	2.92	2.95	2.87	2.77	2.76	0.36	0.37	1.62	0.96	1.02	1.14	1.35	2.11	1.72	1.21

Program Assessment Committee (PAC) has identified 40% of 235 number of Course Outcome (CO) contribution to each PO to total number of Course Outcome (COs) from each curriculum (40% of 235=94 Co's).

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10) Institute Marks : 10.00

A. Steps taken to get identified gaps included in the curriculum.

The curriculum gap to attain the PO's and PSO's is identified and then necessary steps to be taken are intimated to Dean/Academics and Principal, DMI College of Engineering, Chennai.

B. **Delivery details of the content beyond the syllabus for the attainment of PO's and PSO's**

The gaps identified has been fulfilled by organizing Webinars, Seminars, Workshops, inviting experts to give technical talks and interacting with students, industrial visits, etc.,

The curriculum of an academic program is designed to meet specific Program Outcomes (POs) and Program Specific Outcomes (PSOs). However, to ensure a holistic learning experience, it is essential to incorporate content beyond the syllabus. This report outlines the strategies and methodologies adopted to deliver such content and their contributions to the attainment of POs and PSOs.

Objectives of Delivering Content Beyond the Syllabus

- To bridge the gap between academia and industry expectations.
- To enhance students technical, analytical, and problem-solving skills.
- To foster innovation, creativity, and research aptitude.
- To ensure exposure to emerging trends and technologies.
- To provide hands-on experience through real-world case studies, workshops, and projects.

Methods of Delivery

Workshops and Seminars

- Organized expert talks by industry professionals on latest technologies such as AI, Additive Manufacturing, E-Vehicle, Python etc.
- Conducted hands-on training sessions on machine learning and blockchain applications.
- Facilitated guest lectures on entrepreneurship and startup culture related to Mechanical Engineering.
- Conducted mechanical engineering-specific training sessions on topics such as advanced manufacturing, CAD/CAM, automotive design, robotics, and thermal engineering applications.

Industry Collaborations

- Arranged internships and industrial visits to enhance practical exposure.
- Conducted joint certification courses with reputed organizations like MSME.
- Encouraged students to participate in live projects and consultancy services.

Technical Competitions and Hackathons

- Hosted coding competitions, robotics challenges, and app development contests.
- Encouraged participation in national and international level hackathons.
- Provided mentorship for students to develop innovative solutions to real-world problems.

Research and Publications

- Guided students in publishing research papers in indexed journals and conferences.
- Established student research groups to work on funded projects.
- Supported students in filing patents and product development.

Online Courses and MOOC (Massive Open Online Course) Platforms

- Integrated NPTEL, SWAYAM etc. into the academic curriculum.
- Conducted faculty-led discussions and assessments on MOOC (Massive Open Online Course) content.
- Encouraged students to complete certification programs on trending technologies.

Value-Added Courses

- Introduced short-term certificate programs on Python, Six Sigma, E-Vehicle, Additive Manufacturing etc..
- Provided training on soft skills, communication, and personality development.
- Conducted foreign language training for better global opportunities.

Community Engagement and Social Responsibility Initiatives

- Involved students in community-driven projects to apply their technical skills for social welfare.
- Conducted awareness programs on sustainability and environmental impact.
- Organized rural development programs integrating technology for social good.

2023-24

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	The Engineer and the Society	"Engineering Solutions for Societal Needs: Design of Transmission Systems"	04/04/2024	Mr. Sivarama Pandian AP/ SVCE	82	PO6, PO9, PO10
2	Individual and Team Work	Workshop on "Collaborative Insights: Exploring Recent Trends and Opportunities in Core Industries"	27/02/2024	Mr. Murugan C, Managing Director, CADEPT Techys Software Training Institute	86	PO6, PO9, PO10, PO11, PSO1, PSO3
3	Communication	Guest Lecture on "Effective Communication of AI and ML Innovations: Bridging Technology and Society"	13/02/2024	Dr. Priya I Prof &Head, REC	92	PO6, PO9, PO10, PSO1
4	Individual and Team Work	Workshop on "Building Excellence: Teamwork and Individual Contribution in Quality Engineering"	17/11/2023	Mr. Akash and Mr. Palanivel Unique Measurement Services, Chennai	90	PO6, PO9, PO10, PSO1
5	Environment and Sustainability	Guest Lecture on "Eco-Friendly Innovation: Advancements in Non-Traditional Machining for Sustainable Manufacturing"	06/11/2023	Dr. P. Arul Franco Asst. Prof/ UCE, Nagercoil	88	PO7, PO9, PO11, PSO1
6	Project Management and Finance	Guest Lecture on "Strategic Management in Mechatronics: Balancing Innovation, Design, and Project Execution"	06/11/2023	Dr. G.R. Jinu Asst. Prof/ UCE, Nagercoil	92	PO6, PO9, PO10, PO11, PSO1
7	The Engineer and the Society and Environment and Sustainability	Guest Lecture on "Thermal Engineering for a Greener Future: Engineering Solutions for Societal and Environmental Impact"	27/09/2023	Dr. G. Hariharan, Assistance professor, Department of mechanical engineering, UCE-Panruti	84	PO6, PO9, PO10, PO11, PSO1

2022-23

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Environment and Sustainability	Sustainable Tyre Technology: Basics, Construction & Environmental Impact	21/03/2023	Mr. Rajesh Raghavan (Group Manager – RSQ, Apollo Global R&D Centre Asia)	86	PO2, PO3, PO4, PO5, PO7, PSO1
2	Environment and Sustainability	Introduction to Robotics & Automation: Shaping a Sustainable Future	09/03/2023	Gayathri Manager (AICRA) & Ashwin District coordinator (AICRA)	82	Gayathri Manager (AICRA) & Ashwin District coordinator (AICRA)
3	The Engineer and the Society	Hands-on Workshop on IC Engines, EV Technology & Advanced HVAC Systems	09/03/2023	Mr. Xavier Jaganathan and Team M/S Goodwin Motors, Chennai.	90	PO2, PO3, PO5, PO6 PSO1, PSO3
4	Environment and Sustainability	Advanced Engineering Materials & Metallurgy: Innovations for a Sustainable Future	24/11/2022	Dr. S. Mohamed Abbas, Head –HOIST Industries Chennai	94	PO2, PO3, PO5, PO7, PSO1
5	Individual and Team work	Career Guidance Program: Engineering Pathways & Professional Growth	15/10/2022	Mr. Daniel Rabbi Institute of Skill set Empowerment, Chennai	90	PO2, PO3, PO5, PO9, PSO1
6	Communication	A Seminar on Advanced Software Solutions for Modern Manufacturing	12/10/2022	Mr. Gladwin Immanuel M.E, Tamil Nadu Centre of Excellence for Advanced Manufacturing, TIDCO,	96	PO2, PO4, PO5, PO10 PSO1, PSO3
7	Project Management and Finance	Fusion 360: An Introduction to Design, Simulation, and Collaboration	26/08/2022	Mr. Magesh, Manager, USAM Technology P Ltd	88	PO2, PO3, PO5, PO11, PSO1
8	Environment and Sustainability	Rheology in Plastics: Enhancing Material Processing and Product Design	17/08/2022	Mr. D. Inba Sudhakar, Deputy Manager, Rheology simulation –Valeo lighting system	82	PO2, PO3, PO4, PO5, PO7 PSO1
9	Individual and Team Work	Design & Product Development: Innovations for Efficiency and Sustainability	11/08/2022	Mr. Balasubramaniam, Diagonal CADD	86	PO2, PO3 PO4, PO5, PO9, PSO1

2021-22

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	The Engineer and the Society	Hands-on Training in Automotive Engine Fault Detection & Troubleshooting	10/05/2022	Mr. Xavier Jaganathan and Team	96	PO3, PO5, PO6, PSO1
2	Communication	Industry-Oriented Communication Skills for Thermal Engineers	08/04/2022	Dr. Hariharan, AP, Anna University, Kancheepuram	84	PO2, PO 3, PO5, PO10, PSO1
3	Individual and Team work	Effective Research Writing and Publishing for a Greener Future	07/04/2022	Dr. V. R Anitha ASP/BMS Institute of Technology & Management	90	PO2, PO3, PO5, PO7, PSO1
4	Environment and Sustainability	Industry 4.0 Tools for Design and Analysis for sustainable Manufacturing	05/04/2022	Mr. Poornam Viswanath, Application Engineer, Fusion 360	92	PO2, PO3, PO5, PO9, PSO1
5	Environment and Sustainability	Revolutionizing Engineering Graphics with 3D Tools for a Sustainable Future	30/03/2022	Dr. M. Senthil Kumar, Dean, Bharath University	86	PO2, PO3, PO5, PO7, PSO1
6	Project Management and Finance	Risk Management and Budgeting in Product Design and Development	22/03/2022	Mr. S. Balasubramanian, Manager-CADD	88	PO2, PO3, PO7, PO8, PO11, PSO1
7	The Engineer and the Society	Solving Real-World MEP Engineering Problems with BIM and Digital Twin Technologies	22/03/2022	Mr. Masthan Ali, MD, Confo Tech	82	PO2, PO3, PO 6, PO7, PO8, PSO1
8	Individual and Team Work	Real-World Applications of Robot Dynamics	14/12/2021	Mr. Santhanakrishnan AP, Rajalakshmi Engg College	92	PO2, PO3, PO5, PO9, PSO 1
9	Communication	Digital Communication and IoT in Mechatronics	22/10/2021	Dr. G.R Jinu, AP, University College, Nagercoil	94	PO3, PO5, PO10, PSO1
10	Project Management and Finance	Optimizing Inspection Costs with Non-Destructive Testing Techniques	21/10/2021	Dr. P. Arul Franco AP, University College, Nagercoil	94	PO2, PO3, PO5, PO11, PSO1
11	The Engineer and the Society	Challenges and Solutions in Sustainable Manufacturing	20/10/2021	Dr. N. Manikandan, ASP, Sree Vidyanikethan Engg College	82	PO2, PO3, PO5, PO6, PSO1
12	Environment and Sustainability	Exploring PG Education and Career Growth in Sustainable Engineering and Management	07/10/2021	Mr. Aldrich Ruel Raj, Alumni, Canada	86	PO2, PO3, PO 5, PO7, PSO1
13	Individual and Team work	Human-Robot Collaboration in Team-Based Manufacturing	07/10/2021	Mr. G. Yaswanth Bharathwaj, Alumni, TATA Electronics	90	PO2, PO3, PO7, PO8 , PO9, PSO1
14	Communication	Effective Communication in Process Planning and Cost Estimation for Manufacturing	20/09/2021	Dr. N. Senthilkumar, ASP, Mahendra College of Engg, Salem	92	PO2, PO3, PO 7, PO8, PO10, PSO1
15	Project Management and Finance	Career Paths in Core Industries: Managing Projects and Budgets Effectively	07/08/2021	Dr. Sairam, Placement Officer, DMICE	88	PO3, PO5, PO11, PSO1
16	The Engineer and the Society	Innovative Research Strategies for Engineers: Enhancing Problem-Solving Skills in Complex Challenges	16/06/2021	Dr. P. Arul Franco AP, University College, Nagercoil	90	PO2, PO3, PO5, PO6, PSO1
17	Environment and Sustainability	Exploring Future Career Paths in Mechanical Engineering.	14/06/2021	Dr. G. Hariharan, AP, Anna University, Kancheepuram	86	PO2, PO3, PO 5, PO7, PSO1

2.2 Teaching - Learning Processes (100) Total Marks 100.00

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

Institute Marks : 25.00

A. **Adherence to Academic calendar (Institute and Department calendar)**

DMI College of Engineering, Chennai, affiliated with **Anna University**, prepares an academic calendar in alignment with the universitys academic calendar. Based on this, the institution formulates a department-specific calendar, referred to as the **"Calendar of Events."** This calendar outlines the planned activities for the semester, including:

- Continuous Internal Evaluation (CIE) schedules
- Parent-teacher meetings
- Workshops and Faculty Development Programs (FDP)
- Industrial visits
- Laboratory sessions
- Semester-end examinations

B. Use of Various Instructional Methods and Pedagogical Initiatives

Faculty members employ a variety of instructional methods to enhance the learning experience, including:

Experiential Learning-Chalk and Talk, ICT Tools (PPT, You tube Videos, Flipped Class room, Animated Videos),

- **ICT Tools -** Enhance student engagement, and facilitate interactive learning experiences in the classroom
- **Chalk and Blackboard Teaching** – Traditional and effective for concept explanation.
- **PowerPoint Presentations** – Used for visual representation of concepts.
- **Demonstrations with Animated Videos/Models** – Helps in understanding complex topics

Experimental Learning- Internship, Industrial Visit, Peer Group Learning, Laboratory, Project Based Learning (Mini/Major Projects)

- **Peer Learning** – Enhances collaborative knowledge sharing.
- **Mini/Major Projects** – Provides hands-on experience and practical exposure.
- **Industrial/Internship Visits** – Exposure to real-world engineering applications.

Online Courses- NPTEL, Coursera, Karma etc.

NPTEL Videos – Online courses and lectures from IITs and other premier institutions.

Karma – Online courses and lectures from AICTE and other premier institutions.

Participatory Learning- Seminar, Symposium, Conferences etc.

- **Seminars, Workshops, Symposium & Conferences** – Encourages student engagement and peer learning.

The faculty use **chalk & board** and **audio-visual aids** in teaching. Students are encouraged to actively participate during lectures by **clarifying doubts on the spot**. Faculty members also use **models and charts** for interactive teaching.

For **final-year project work**, faculty members follow structured rubrics and guide students in selecting their project topics. Students are encouraged to undertake **industry and R&D lab projects**. The department assigns projects to final-year students based on their **area of interest** at the start of the semester.

The **seminars and projects** integrated into the curriculum encourage students to refer to relevant **research literature**. Additionally, **guest lectures** are delivered to **pre-final and final-year students** by **industry experts, scientists from R&D labs, and professors from reputed institutes/universities**.

Learning materials from **NPTEL** are available for **e-learning**, and **industrial tours** are organized as per the curriculum. **Pre-final and final-year students** are also encouraged to participate in **internships**, **technical competitions**, and **inter- and intra-college events** to enhance their knowledge and skills.

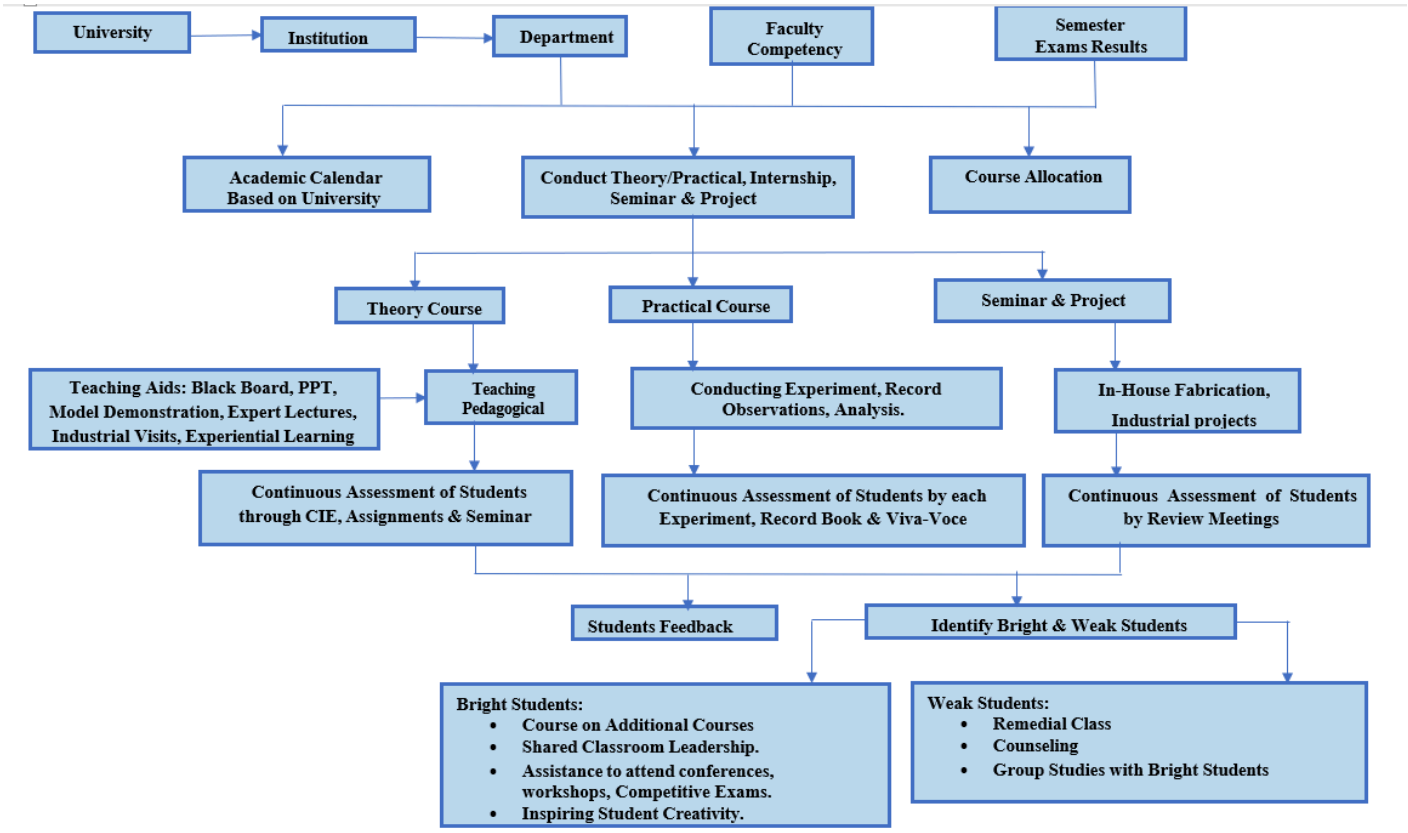


Fig. 2.15: Process Followed to Improve Quality of Teaching and Learning

C. Methodologies to Support Weak Students and Encourage Bright Students

Methodologies to Identify and Support Weak Students

Weak students are identified based on multiple parameters, including:

- Classroom discussions
- Performance in Continuous Internal Evaluation (CIE)
- University result analysis

To support weak students, the following measures are taken:

1. Remedial Classes – Conducted to strengthen concepts, knowledge, and skills in specific courses.
2. Tutorial Classes – Provided to improve problem-solving skills through direct interaction between students and faculty members.
3. Mentorship Program – Faculty mentors guide students, boost their confidence, and help remove psychological barriers to learning.

Methodologies to Encourage Bright Students

Bright students are identified based on their:

- Participation in classroom discussions
- Performance in assessment tests
- Engagement in seminars and questioning ability
- University result analysis

To encourage bright students, the following initiatives are implemented:

1. Industry-Based Projects **– Students are encouraged to take up** industry-based projects **in advanced topics under faculty guidance.**
2. Leadership in Student Associations **– Bright students are encouraged to lead the** Student Association Team**, organizing activities such as** paper presentations, poster presentations, and lecture series**.**
3. Best Academic Performance Awards **–** The top three students **with outstanding performance in university exams receive awards.**
4. Campus Recruitment Training (CRT) **– Special training sessions are conducted to help students** prepare for campus placements **and enhance their employability skills.**

D. Quality of Classroom Teaching

Each classroom is **spacious** and **equipped with blackboards and audio-visual aids** to create a conducive environment for effective teaching and learning.

- Each lecture session is scheduled for **50 mins**.
- Faculty members actively engage students by **reviewing previous lectures, asking questions, and encouraging interaction**.
- At the end of the lecture, students are encouraged to **summarize key points and ask doubts**.
- Faculty members leverage resources such as **NPTEL, online sources, and interactive tools** to enhance teaching effectiveness.

E. Conduct of Laboratory Experiments

1. The curriculum is designed to provide **hands-on experience** to strengthen theoretical concepts.
2. **Orientation programs** are conducted for teaching and non-teaching staff on **experiment procedures, data analysis, and evaluation methods**.
3. The department is **fully equipped** with the necessary **laboratories, software, and models** as per curriculum requirements.
4. **Printed laboratory manuals** are provided to each student, covering all **experiment details, observations, and discussions**.
5. Faculty members **regularly evaluate** laboratory records to ensure accuracy and thorough understanding.
6. Faculty members handling laboratory courses are encouraged to **introduce new experiments beyond the curriculum**, with a focus on **R&D-oriented learning**.

7. **Internal assessment** of students in laboratory sessions is based on:
    - **Performance in regular experiments**
    - **Quality of lab reports**
    - **Internal viva examinations**
8. **External examination** in the concerned lab is conducted by **two examiners**, including an **internal examiner from the college** and an **external examiner appointed by the university**.
9. Students are encouraged to undertake **development- and fabrication-oriented projects**, primarily using the **colleges facilities**.
10. The department has established a **Project Lab and Research Centre** to bridge the gap between curriculum requirements and real-world technical advancements.

F. Continuous Assessment in the Laboratory

A **continuous assessment system** is implemented for evaluating laboratory work. Students are assessed based on:

- Submission of laboratory records
- Understanding of the experiment through oral viva-voce questions
- Active participation in performing the experiment
- Neatness and organization of the laboratory record book

G. Student Feedback on Teaching-Learning Process and Actions Taken

Faculty feedback performance for every course is assessed from students based on various parameters, including:

1. Creating interest in the subject
2. Regularity in handling classes
3. Presentation of the subject matter
4. Audibility and clarity of speech
5. Interaction with students
6. Ability to clarify students doubts
7. Fairness in evaluating **Internal Assessments (IA) and assignments**
8. Designing quizzes, tests, assignments, and projects to evaluate students understanding
9. Encouraging student participation and inquiry
10. Achievement of course objectives and outcomes

Actions Taken Based on Feedback:

1. **Lecture classes are monitored** by senior professors and the Head of the Department, who provide constructive feedback to improve teaching quality.
2. **Faculty members with low feedback scores** are counseled by the **HOD**, and negative comments in the feedback are used to motivate them to **improve their skills and abilities**.
3. If required, **training/orientation programs** are conducted by **professional experts** to help faculty members **enhance their teaching methodologies**, thus improving the **efficiency of the teaching-learning process**.

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

The Internal Assessment marks, as defined by Anna University, are allocated as 20 marks for theoretical, laboratory, and project work pursuant to 2017 regulations. The internal assessment marks for theory are based on three assessments conducted according to the schedule. The department faculty, in conjunction with the Exam Cell, is responsible for the conducting the assessment. The schedule will be displayed one week prior the assessment commences. The Department has a Scrutinizing Committee, consisting of the Head of Department and two senior faculty members, to evaluate the quality of the question paper, Blooms Taxonomy levels, and compliance with Course Outcomes.

A. Process for internal semester question paper setting and evaluation and effective process implementation

Internal Semester Question Paper Setting

1. The course instructor sets the question paper for the internal assessment.
2. The question papers for internal assessments are set using Bloom's taxonomy (BT) levels and are mapped to the Course Outcomes to assess the students at various BT levels.

Process for conduction and evaluation of Internal Assessment

1. The timetable for the Internal Assessment Test will be published on the notice board one week prior the commencement of the Internal Assessment.
2. The department provides booklets for the three internal assessment examinations, which shall be evaluated and release of the results retained by the department and made accessible for university verification.
3. The students complete the examination in their designated seats according to their Class Roll Numbers in the examination hall, supervised by a faculty member.
4. The valuation method for the examination paper is devised by the faculty responsible for the course, providing an equitable distribution of marks for accurate assessment.
5. The faculty assesses the booklets according to the valuation procedure.
6. The faculties after every internal assessment test they explain the solution of the questions in the class which will enable them to perform well in the final examination.
7. For any genuine reasons, if a student was unable to perform well in the given three internal assessment tests, improvement test (Retest) is provided.
8. Students are allowed to check the evaluated answer scripts. After one week of each IA test, progress reports which consist of test marks and attendance status are informed to the students and parents.

B. Process to Ensure Questions from Outcomes/Learning Levels Perspective

1. The course instructor ensures that the internal assessment questions are framed based on various Blooms Taxonomy levels and are mapped to the CO's.
2. The course instructor decides the number of questions and marks allotted for each question as per the norms.
3. The course coordinator/instructor submits the question paper to the scrutinizing committee and the committee checks the quality, Blooms Taxonomy level and CO compliance and suggests any changes, if required.

C. Evidence of CO's Coverage in Internal Assessments

Individual student's booklet is evaluated and question answered by student is mapped with COs-POs. Sample is shown in CO -PO attainment

D. Quality of Assignment and its Relevance to COs

1. Assignments submission dates are announced by the respective course instructor.
2. Assignment questions are prepared using Bloom's Taxonomy process and mapped with CO's. So that students will be able to understand course outcomes of particular course.
3. Assignments are designed in such a way to promote self-learning from various sources.
4. Assignments are evaluated and feedback is given to the students to improve their learning and appreciate their efforts.

2.2.3 Quality of student projects (25) Institute Marks : 25.00

The students engage in project work and write a dissertation to fulfill course requirements. The project is executed under the supervision of a faculty member allotted by the HOD. The student utilizes the technical knowledge acquired during the course of study and applies various design and analysis, fabrication, experiments and software tools for the projects implementation and execution. The students performance is assessed by a committee constituted by the HOD. The project entails Introduction, literature review, design and analysis, data collecting, results consolidation, conclusion, report writing, and presentation of the work conducted at various stages before constituted committees. These activities satisfy all the programme outcomes. A committee is formed periodically to identify the exemplary initiatives. Upon project completion, students are urged to publish papers in journals and conferences and also encourage to apply for patents.

Formation of Project Group

1. Students are allowed to form a project batch consisting of minimum two or maximum of four members as per Anna University Regulations.
2. If the students are not able to form the project batch, then the project coordinator and mentor will help them to form the project batch based on their field of interest.

A. **Identification of Projects and Allocation Methodology to Faculty Members**

1. The project coordinator instructs the students to identify the project titles and submit the abstract and objectives, adhering to the timelines decided by the HOD.

2. Some of the areas identified by the HOD & project coordinator are:
   - Manufacturing and Advanced Techniques
   - Design & Analysis
   - Renewable Energy
   - Composites Materials
   - Thermal
   - Automobile
   - Surface Engineering
   - Welding
3. Based on the student's area of interest, faculty competency and relevant area of interest is allotted as a supervisor.
4. Students can choose or come out with problem identification/objectives for the execution of the project; else the faculty member will give a problem for execution of the project work.
5. If the students are doing project at industry, they need to consult with internal guide as well as external guide from the industry towards implementation of project.

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

1. The Supervisor categorizes the project into application, product development, design and analysis, research-oriented, and review, while mapping the POs and PSOs with regard to aspects such as environment, safety, ethics, cost, and standards.
2. Each project is assessed using internal marks and is scored based on its quality and contribution to the achievement of Program Outcomes (POs).

C. **Process for Monitoring and Evaluation**

1. The project guide will provide recommendations to improve the abstract.
2. Students must commence their project work based on the inputs provided by the guide.
3. All students are required to provide weekly reports to their internal guides concerning the development of their project work.
4. Students are required to provide PowerPoint presentations to the Project Review Committee according to the predetermined timeline. The committee provides recommendations at the conclusion of the presentation to enhance the quality of the work and assesses the projects according to the project rubrics.
5. The project assessment is conducted by a committee comprising the Head of Department, internal guide, project coordinator, and senior faculty members of the department. During the evaluations, instructions are given to compile the Project in accordance with the stipulations set forth by Anna University.

Anna University Rubrics for Project Evaluation

Table 2.6 Mark Allocation for Project Work

Review I	Review II	Review III	End Semester Examinations				
			Thesis Submission (30)		Viva-voce (50)		
			Internal	External	Internal	External	Supervisor
5	7.5	7.5	15	15	15	20	15

Rubrics for Project Evaluation

Table 2.7 Rubrics for Project Evaluation

Sl. No.	Particulars	Max. Marks	Exceptionally Well Executed [M>90%]	Good with room for improvement [70%	Meets minimum requirement [M<70%]	Course Outcome Mapping	BTL Mapping
1	Relevance of the subject in the present context	10	The topic is highly relevant in the present-day context and innovative	The topic is moderately relevant and new	The selected topic is satisfactory	CO1, CO5	K2, K6
2	Literature Survey	10	Literature survey is extensive and all related information is available	Literature survey is quite satisfactory	Literature survey is Sufficient	CO2	K3

3	Problem Formulation / Objectives	10	Problem is well defined based on the literature survey and topic covering all the aspects	Problem formulation is satisfactory	Problem formulation needs to cover the objectives	CO3	K6
4	Experimental Work / Theoretical modelling	10	Data collection/design/ fabrication work obtains correct solution to model developed for the project	Data collection/design/ fabrication work obtains proper solution to model developed for the project	Sufficient and partially collection of data needs improvement in preparing model	CO5	K6
5	Results Interpretation and Discussion	10	Team members were very well balanced and had clear articulation and work presentation was excellent	Coordinated team members and presentation was good	Presentation needs improvement	CO4, CO5	K3
6	Conclusion and scope of future work	10	Proper conclusions are drawn with validation and scope for future work is also well articulated	Conclusion drawn are satisfactory and future scope listing is satisfactory	Minimum conclusion articulation and future scope listing needs to be revised	CO5	K4, K3
7	Overall presentation of the thesis/ Oral Presentation	40	Information in project report is in logical sequence with diagrams, tables, results and discussion. The report is complete and in proper format, oral presentation was excellent.	Information in project report is in logical sequence with diagrams, tables, results and discussion. The report is partially complete and in proper format, oral presentation was satisfactory	Information in project report is in logical sequence with diagrams, tables, results and discussion. The report is complete but in not proper format, oral presentation was not up to the mark.	CO4, CO5	K3, K4, K6

D. **Process to assess individual and team performance**

1. Project progress review is conducted once in every month by the team with respective guide and domain experts constituted by the HOD.
2. The project seminar should be given by all the project team members according to the division of project.
3. Each student in the project team is assessed to their skill set to deliver the seminar, explain the concept and way to make project assess team to understand their work.
4. Each individual and team performance is purely based on this project seminar presentation and the viva voce and progress work they show to their guide.

E. **Quality of Completed Projects/Working Prototypes**

a. Final project demo for the working prototype and the report are evaluated by respective guide with domain experts constituted by the HOD.
b. The projects are evaluated and are awarded the internal assessment marks for maximum of 100 and are graded according to the project contribution towards attainment of PO's and PSO's.

Best Project Evaluation Scheme:

Quality of the project is measured in terms of type (application/ Product development/ research/ review), and the focused areas being literature survey, problem definition, fabrication or software code, environment safety and society, ethical responsibility, project presentation, cost and project management, research publications & Innovation/ IPR. The quality of the Project is assessed through Project quality assessment sheet. A sample copy of Project Quality Assessment sheet is provided below. Based on the scores thus obtained, best student projects are selected.

Table 2.8 Best Project for the Academic Year: 2023-24

Sl. No	Register Number	Name of the Student	Project Title	Project Supervisor	POs & PSOs
1	210520114003	Ajay N	Experimental Investigation on Recyclability and Lifespan of Al-Zn Alloy for Naval & Aircraft Applications	Mr. TamilKumaran G	PO: 1 to 12 & PSO: 1to 3
	210520114018	Mano David D			
	2105201140307	Hariharan M			

2	210520114016	Kishorekumar K	Experimental analysis of nano coated mild steel marine hull structure using plasma spray technique	Mr. Krishnamoorthy N	PO: 1 to 12 & PSO: 1to 3
	210520114017	Logesh K			
	210520114020	Narayanaswamy G			
3	210520114027	Sunil B	Experimental investigation of performance of wood apple blended epoxy resin reinforced by Delonix regia seed pod	Mr. Senthil Kumaran M	PO: 1 to 12 & PSO: 1to 3
	210520114028	Thomas Alva Edison V			
	210520114306	Gowtham R			

Table 2.9 Best Project for the Academic Year: 2022-23

Sl. No	Register Number	Name of the Student	Project Title	Project Supervisor	
1	210519114026	Jeevadhas M	Influence of Groundnut incorporates with mg filler in physico mechanical properties of epoxy composites	Dr. Amala Mithin Minther Singh A	PO: 1 to 12 & PSO: 1to 3
	210519114029	Karthick K			
	210519114701	Ajay S			
2	210519114052	Sridhar G	Experimental investigation of micro structure & mechanical properties of GTAW & Al- Mg welding	Mr. TamilKumaran G	PO: 1 to 12 & PSO: 1to 3
	210519114302	Ezavalavan			
	210519114303	Mathivanan			
3	210519114056	Rajiv Prasath R	Experimental Analysis of fan Blade Using Bagasse Composite	Dr. Senthil Kumar T	PO: 1 to 12 & PSO: 1to 3
	210519114047	Sathish B			

Table 2.10 Best Project for the Academic Year: 2021-22

Sl.No	Register Number	Name of the Student	Project Title	Project Supervisor	POs & PSOs
1	210518114001	Aashick Prince S	Optimization and Analysis of Surface Texture on Coated Mild Steel in Marine Environment	Dr. Amala Mithin Minther Singh A	PO: 1 to 12 & PSO: 1to 3
	210518114034	Manojkumar A			
	210518114036	Mohan Raj A			
2	210518114006	Antony Hrithik W	Influences of welding parameters mechanical and microstructural properties of GTAW welded Aluminium alloy	G. Tamil Kumaran	PO: 1 to 12 & PSO: 1to 3
	210518114009	Balasuryan M M			
	210518114021	Henry Marshal M			
	210518114052	Yuvaraj L			
3	210518114008	Ayyappan D	Characterization and Mechanical behavior of sisal and pineapple fibre incorporated with egg shell filler for marine application	M. Senthil Kumaran	PO: 1 to 12 & PSO: 1to 3
	210518114027	Karthik Raja P			
	210518114031	Loydson. P. A			

2.2.4 Initiative related to industry interaction (15)

Institute Marks : 15.00

A. **Industry Supported Laboratories**

The Mechanical Engineering Department at DMICE has established a state-of-the-art Centre of Excellence through a Memorandum of Understanding. These competency centers will familiarize our students with innovative industry-adapted technologies, offer practical experience, improve employability skills, and prepare them for the workforce. The Mechanical Engineering department has executed Memoranda of Understanding with several sectors. These sectors provide our students with opportunities for internships, industry visits, guest lectures, and final year projects. Workshops are organized for our students in collaboration with the industry.

Table 2.8 Industry Supported Laboratories

Sl.No	Laboratory	Industry Collaboration
1	Additive Manufacturing	Wipro
2	Drone Technology	AI-ROBO Company
3	Renewable Energy	Lan Tabbor Solar

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

Table 2.9 Details of program design and full delivery of course

Sl.No	Course Code	Course Name	Resource Person/Organization
1	SB8065	Drone Technology	Naan Mudhalvan - TNSDC
2	SB8058	Manufacturing of Components using CNC Lathe and Milling	Naan Mudhalvan - TNSDC
3	NM1023	Employability Skills	Naan Mudhalvan - TNSDC

Table 2.10 Details of partial delivery

Sl.No	Course Code	Course Name	Resource Person with Designation	Organization	Delivered content
1	CME372	CAD & CAE	Mr. Balasubramaniyam S Manager	Diagonal CADD	Product Design & Developments
2	ME3592	Metrology & Measurement	Mr. Akash & Mr. Palanivel	Unique Measurement Services	Quality Engineering

A. **Impact Analysis of industry interaction and actions taken**

Collaboration with industry plays a crucial role in shaping engineering education by bridging the gap between academia and real-world applications. The Program Outcomes (POs) and Program-Specific Outcomes (PSOs) mapped to industry-focused criteria help students develop skills that make them industry-ready. Industry collaboration through electives, visits, internships, and workshops enhances students' practical knowledge, employability, and industry readiness. By aligning **POs and PSOs with industry expectations**, students develop a **balanced skill set**, preparing them for successful careers in engineering and technology.

Table 2.11 Relevance of POs & PSOs in collaboration with industry

Sl.No	Criterion	Relevance to POs & PSOs
1	Electives	PO1, PO2, PO3, PO5, PO12, PSO1, PSO2
2	Industrial Visits	PO6, PO7, PO8, PO9, PO10, PSO1, PSO3
3	Industry Internships	PO4, PO5, PO9, PO10, PO11, PSO2, PSO3
4	Workshops	PO1, PO5, PO9, PO12, PSO2, PSO3

Table 2.12 List of MoU's

Sl. No	MoU's Name	Type of Organization
1	Goodwin Industries, Chennai	Manufacturing Organization
2	Tamil Nadu Advanced Technical Training Institute (Tatti), Chennai	Training Sector
3	Hoist Industries, Chennai	Manufacturing Organization
4	Altair-Campus Connection	Design and Analysis
5	BIM CADD Technologies	Design and Analysis

Table 2.13 Impact Analysis MoU's

Sl. No	Activity	Dates	MoU Partner	Impact Analysis
1	2 Days Hands on Training in “IC Engines & EV technology” and “Refrigeration and Air Conditioning”	09.03.23 & 10.03.23	Goodwin Industries, Chennai	Imparting training activities in assembly & disassembly of IC Engines and Refrigeration & A/C Units. Troubleshooting minor problems
2	Global Academic Internship Programme at Singapore.	06.02.23 to 12.02.23	Tamil Nadu Advanced Technical Training Institute (TATTI), Chennai	Imparting global exposure to students with respect to academics and industry.
3	Industrial Visits for IInd Year Students	02.11.23	Hoist Industries, Chennai	Facilitates students for Project Fabrication Work
4	BIM Scope & Integration in Industry	16.04.24	BIM CADD Technologies	Imparting the importance of BIM technology Scope & recent trends in Industry

2.2.5 Initiative related to industry internship/summer training (15) Institute Marks : 15.00

A. **Industrial Training/Tours for Students**

Industrial visit is a tactical teaching strategy. Student learning through interaction, working methods, and employment practices was the main goal of this industrial visit. Additionally, it provides technical exposure. Industrial visits expose students to real-world work. It also help students understand industrial procedures.

Table 2.14: Industrial Visit Details

Sl. No	Date of visit	Organization visited	No. of students visited	Relevance of PO's
1	13.11.24	Schwing Stetter India Pvt Ltd, G12&G12 A, Sipcot Industrial Park, Irungattukottai, Sriperumbudur, Kancheepuram Dt, Tamil Nadu - 6021117	30	PO1, PO6, PO7, PO8, PO11, PO12
2	21.06.24	SriMayuram Industries, K-2, Mambakkam, Sriperumbudur, Tamil Nadu – 602 105	30	PO1, PO6, PO7, PO8, PO11, PO12
3	24.04.24	SK Engineering Pvt Ltd, Pattaravakkam road, Varadaraja Puram, Ambattur, Chennai - 600 053	24	PO1, PO6, PO7, PO8, PO11, PO12
4	24.04.24	Micromax, No:2, North Phase, SIDCO Industrial Estate, Ambattur, Chennai, Tamil Nadu- 600 098	24	PO1, PO6, PO7, PO8, PO11, PO12
5	22.09.23 to 23.09.23	Visvesvaraya Museum & National Aerospace Limited-Bengaluru	54	PO1, PO6, PO7, PO8, PO11, PO12
6	11.04.24 to 13.04.24	Laser Craft Technologies, GD Naidu Car Museum, Mills Tech CNC Applications and Tea and Coffee Making Factory, Ooty	45	PO1, PO6, PO7, PO8, PO11, PO12
7	02.11.23	Hoist Industry, Chennai	30	PO1, PO6, PO7, PO8, PO11, PO12

B. **Industrial /Internship /Summer Training of More Than Two Weeks and Post Training Assessment**

The students are encouraged to take internship program during their semester break. Faculty members give their guidelines, suggestions and scope and contact details of an internship. They also help the students by interacting with the industrial experts, provide the students recommendation letters and other necessary supports.

Table 2.15: Internship Training Details for the Year 2023-24

Sl. No.	Organization	Name of the Student	Dates	Duration
1	Lan Tabbor Solar, Ayyapanthangal, Kanchipuram	Abishek Dyous I	10.07.2024 to 28.07.2024	15 Days
2	Jeong-In Enterprise Private Limited, Sriperumbudur, Kanchipuram	Anto Nehis Bredlin I	26.07.2024 to 13.08.2024	15 Days
3	JBM-Neel Industries Private Limited, Kuthambakkam, Thiruvallur	Arun Anandh M	20.07.2024 to 06.08.2024	15 Days
4	Lan Tabbor Solar, Ayyapanthangal, Kanchipuram	Dhanush I	10.07.2024 to 28.07.2024	15 Days
5	JBM-Neel Industries Private Limited, Kuthambakkam, Thiruvallur	Dhanush Kumar R	20.07.2024 to 06.08.2024	15 Days
6	Jeong-In Enterprise Private Limited, Sriperumbudur, Kanchipuram	Jerlin Prabhu G	26.07.2024 to 13.08.2024	15 Days
7	Lan Tabbor Solar, Ayyapanthangal, Kanchipuram	Karthikeyan K	10.07.2024 to 28.07.2024	15 Days

8	Ubitech Pvt Limited, Mappedu, Thiruvallur	Manoj P	22.07.2024 to 05.08.2024	15 Days
9	STL Auto Components India Private Limited, Kakkalur, Thiruvallur	Manoj kumaran G	22.07.2024 to 06.08.2024	15 Days
10	Jeong-In Enterprise Private Limited, Sriperumbudur, Kanchipuram	Melbin Jeso T	26.07.2024 to 13.08.2024	15 Days
11	JBM-Neel Industries Private Limited, Kuthambakkam, Thiruvallur	Mohammed Rizwan R	20.07.2024 to 06.08.2024	15 Days
12	Ubitech Pvt Limited, Mappedu, Thiruvallur	Nandhakumar R	22.07.2024 to 05.08.2024	15 Days
13	STL Auto Components India Private Limited, Kakkalur, Thiruvallur	Narayana Moorthy R	22.07.2024 to 06.08.2024	15 Days
14	Jeong-In Enterprise Private Limited, Sriperumbudur, Kanchipuram	Nayagan S	26.07.2024 to 13.08.2024	15 Days
15	JBM-Neel Industries Private Limited, Kuthambakkam, Thiruvallur	Prem Kumar S	20.07.2024 to 06.08.2024	15 Days
16	Lan Tabbor Solar, Ayyapanthangal, Kanchipuram	Rithish Kumar M	10.07.2024 to 28.07.2024	15 Days
17	JBM-Neel Industries Private Limited, Kuthambakkam, Thiruvallur	Sathishkumar	20.07.2024 to 06.08.2024	15 Days
18	Lan Tabbor Solar, Ayyapanthangal, Kanchipuram	Sharonraj E	10.07.2024 to 28.07.2024	15 Days
19	STL Auto Components India Private Limited, Kakkalur, Thiruvallur	Singaravel R	22.07.2024 to 06.08.2024	15 Days
20	Lan Tabbor Solar, Ayyapanthangal, Kanchipuram	Srinivasan V	10.07.2024 to 28.07.2024	15 Days
21	Ubitech Pvt Limited, Mappedu, Thiruvallur	Raj Singh	22.07.2024 to 05.08.2024	15 Days
22	Dhanalakshmi Industries, Korattur	Sabarivasan S	24.07.2024 to 31.07.2024	15 Days

Table 2.16: Internship Training Details for the Year 2022-23

Sl. No.	Organization	Name of the Student	Dates	Duration
1	Perambur carriage & wagons works	Agash T	12.07.2023 to 26.07.2023	15 Days

2	Caparo	Ajay N	06.07.2023 to 10.08.2023	26 Days
3	JS Metal Craft Industry	Dhayanithi S	28.07.2023 to 06.08.2023	10 Days
4	Simpson Company	Dinesh T	17.07.2023 to 28.07.2023	12 Days
5	Nice projects Pvt ltd	Harish Bala B	10.07.2023 to 16.07.2023	7 Days
6	Lucas TVS pvt Ltd	Jacob D	14.07.2023 to 28.07.2023	20 Days
7	United Industries Plastics Pvt Ltd	Joel John J	01.07.2023 to 15.07.2023	15 Days
8	United Industries Plastics Pvt Ltd	Kishore Kumar K	01.07.2023 to 15.07.2023	15 Days
9	United Industries Plastics Pvt Ltd	Lokesh S	01.07.2023 to 15.07.2023	15 Days
10	Lucas TVS Pvt Ltd	Mano David D	14.07.2023 to 28.07.2023	20 Days
11	Kone Elevators	Narayanaswamy G	10.07.2023 to 14.07.2023	5 Days
12	AAA Plus trading Co Pvt Ltd	Pavithiran M	05.07.2023 to 20.07.2023	15 Days
13	JS Metal Craft Industry	Sathish C	28.07.2023 to 06.08.2023	10 Days
14	Kone Elevators	Srijith V	10.07.2023 to 14.07.2023	5 Days
15	Kone Elevators	Sunil B	10.07.2023 to 14.07.2023	5 Days
16	Perambur carriage & wagons works	Thomas Alva Edison V	12.07.2023 to 26.07.2023	15 Days
17	Harita Techs Pvt Ltd	Abishek P	13.07.2023 to 28.07.2023	15 Days
18	Machine Works Pvt Ltd	Antony john Jefferson D	10.07.2023 to 26.07.2023	15 Days

19	United Industries Plastics Pvt Ltd	Gowtham R	01.07.2023 to 15.07.2023	15 Days
20	Simpson Company	Hariharan M	07.07.2023 to 28.07.2023	21 Days
21	Perambur carriage & wagons works	Mohan D	12.07.2023 to 26.07.2023	15 Days
22	Perambur carriage & wagons works	Samuel N	12.07.2023 to 26.07.2023	15 Days
23	Snider Electric	Suriya V	20.07.2023 to 05.08.2023	15 Days
24	Perambur carriage & wagons works	Varun D	12.07.2023 to 26.07.2023	15 Days
25	Perambur carriage & wagons works	Dinesh S	12.07.2023 to 26.07.2023	15 Days

Table 2.17: Internship Training details for the year 2021-22

Sl. No.	Organization	Name of the Student	Date of Start of Training	Duration
1	Dynamic Engineering Solutions	Aljin Brabhu G	20.12.2021 to 06.01.2022	15 Days
2	Dynamic Engineering Solutions	Abishek A	20.12.2021 to 06.01.2022	15 Days
3	Dynamic Engineering Solutions	Abishek Samuel M	20.12.2021 to 06.01.2022	15 Days
4	Dynamic Engineering Solutions	Abimanyu S	20.12.2021 to 06.01.2022	15 Days
5	KK precision Components	Mohan babu	20.12.2021 to 06.01.2022	15 Days
6	KK precision Components	Mohammed Rafiq	20.12.2021 to 06.01.2022	15 Days
7	KK precision Components	Giritharan R	20.12.2021 to 06.01.2022	15 Days
8	KK precision Components	Antony Hemiben J	20.12.2021 to 06.01.2022	15 Days

9	Mercury Fittings (P) Ltd	Dinsan K	20.12.2021 to 06.01.2022	15 Days
10	Mercury Fittings (P) Ltd	Balaji M	20.12.2021 to 06.01.2022	15 Days
11	Mercury Fittings (P) Ltd	Antony Joseph Praveen D	20.12.2021 to 06.01.2022	15 Days
12	Mercury Fittings (P) Ltd	Subash Anand S	20.12.2021 to 06.01.2022	15 Days
13	Newtech Precision Product (P) Ltd	Santhosh Kumar S	20.12.2021 to 06.01.2022	15 Days
14	Newtech Precision Product (P) Ltd	Gowtham J	20.12.2021 to 06.01.2022	15 Days
15	Newtech Precision Product (P) Ltd	Ezhavalavan V	20.12.2021 to 06.01.2022	15 Days
16	Newtech Precision Product (P) Ltd	Sagaya Kavi M	20.12.2021 to 06.01.2022	15 Days
17	Dynamic Engineering Solutions	Tamilarasan S	20.12.2021 to 06.01.2022	15 Days
18	Dynamic Engineering Solutions	Sibin B V	20.12.2021 to 06.01.2022	15 Days
19	KK precision Components	Srikanth	20.12.2021 to 06.01.2022	15 Days
20	KK precision Components	Manikandan V	20.12.2021 to 06.01.2022	15 Days
21	Mercury Fittings (P) Ltd	Jeevadhas M	20.12.2021 to 06.01.2022	15 Days
22	Mercury Fittings (P) Ltd	Ajai S	20.12.2021 to 06.01.2022	15 Days

Table 2.18: Rubrics for Internship Evaluation

Sl.No	Particulars	Marks	PO mapping
1	Technical skills	10	1,2,3,4,5
2	Hands on Skills	10	1,2,3,4,5
3	Presentation and interaction on developed components	5	7,8,9,10,11,12
4	Internship Report	25	10

Initiation

1. Students and department together identify domain industry and discuss with Industry officials for the Internship
2. The requisition letter by the students to Principal through Internship coordinator and Head to undergo internship for the stipulated period.

3. The Internship coordinator allocates a faculty to guide for each student.

Implementation

1. The faculty and the mentor for the internship in the industry will communicate the progress of the internship training periodically.
2. After completion of the internship training, a detailed report is submitted to the department.

Evaluation

1. Student will present a power point presentation about the internship training in front of a panel of professors along with the guide.
2. Based on the performance the evaluation process is carried out by a panel of professors along with the guide and marks are awarded as per the rubrics shown in table below.

c. **Impact Analysis of Industrial Training/Internship**

- Students are exposed to real time practical experience of the subjects studied in the classrooms and realized the practical importance of the subjects.
- Industrial training inculcated more interest in the subjects.
- Students are inspired to do hard work and get placed in such industries.
- Communication skills of the students improved.
- Students were exposed to the industry standards, importance of the safety measures,
- Workplace culture & discipline and meeting the deadlines.

D. **Student Feedback on Initiative**

- The student feedback on program /industrial visit is collected. Feedback is considered for further improvement.
- Industry internships and summer training programs offer students practical experience, connecting theoretical knowledge with real-world applications. These activities augment technical competencies, analytical capabilities, and preparedness for the sector. Students have practical experience with contemporary technologies, engage in real projects, and interact with industry experts, enhancing their employability and career opportunities.

Common Student Feedback

1. **Positive Aspects:**
   - Valuable practical experience and industry exposure.
   - Improved technical and soft skills.
   - Networking opportunities with industry professionals.
   - Better understanding of workplace culture and expectations.
2. **Challenges Identified:**
   - Limited availability of quality internships.
   - Mismatch between academic curriculum and industry requirements.
   - Inadequate stipend or unpaid internships.
   - Lack of structured mentorship and guidance.
   - Difficulty in securing relevant internships due to competition.

Improvement Strategies

1. **Strengthen Industry Collaboration**
   - Partner with reputed companies to ensure more quality internship opportunities.
   - Establish Memorandums of Understanding (MoUs) with industries for regular internship programs.
   - Organize industry visits and expert lectures to familiarize students with expectations.
2. **Enhance Curriculum Alignment**
   - Modify course content to include industry-relevant skills and technologies.
   - Introduce elective courses or certification programs related to internship domains.
   - Include real-world projects and case studies in coursework.
3. **Improve Internship Accessibility**
   - Create a dedicated internship portal to list available opportunities.
   - Encourage faculty mentorship to help students secure relevant positions.
4. **Financial and Logistical Support**
   - Provide stipends or financial aid for unpaid internships.
   - Facilitate accommodation and travel support for students interning in different locations.
   - Collaborate with industries to offer paid internship programs.
5. **Feedback and Continuous Improvement**
   - Conduct post-internship feedback sessions to assess effectiveness.
   - Encourage students to share experiences and suggestions for improvement.
   - Use feedback to refine industry partnerships and training modules.

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120) Total Marks 120.00

Define the Program specific outcomes

3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20) Total Marks 20.00

:

PSO1	DESIGN AND MANUFACTURING SKILLS: Apply the knowledge of design and analysis, manufacturing and quality assurance in the field of automotive manufacturing, mechatronics and robotics.
PSO2	PROBLEM SOLVING ABILITIES: Apply the knowledge acquired in the domains of thermal, fluid and solid mechanics to solve the problem related to their equipment and evaluating the performance.
PSO3	MANAGERIAL SKILLS: Apply the managerial skills to work effectively in a team and in a society of following ethical and environmental practices.

3.1.1 Course Outcomes(COs)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (5) Institute Marks : 5.00

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

Course Name :	C2 04	Course Year :	2021-2022

Course Name	Statements
C2 04.1	Able to explain different metal casting processes, associated defects, merits and demerits
C2 04.2	Able to compare different metal joining processes.
C2 04.3	Able to summarize various hot working and cold working methods of metals.
C2 04.4	Able to explain various sheet metal making processes.
C2 04.5	Able to distinguish various methods of manufacturing plastic components

Course Name :	C2 11	Course Year :	2021-2022

Course Name	Statements
C2 11.1	Able to discuss the basics of mechanism
C2 11.2	Able to calculate velocity and acceleration in simple mechanisms
C2 11.3	Able to develop CAM profiles
C2 11.4	Able to solve problems on gears and gear trains
C2 11.5	Able to examine friction in machine elements

Course Name :	C3 01	Course Year :	2022-2023

Course Name	Statements
C3 01.1	Able to solve problems in Steam Nozzle
C3 01.2	Able to explain the functioning and features of different types of Boilers and auxiliaries and calculate performance parameters.
C3 01.3	Able to explain the flow in steam turbines, draw velocity diagrams for steam turbines and solve problems.
C3 01.4	Able to summarize the concept of Cogeneration, Working features of Heat pumps and Heat exchangers
C3 01.5	Able to analyze case studies using refrigerant table / charts and psychrometric charts

Course Name :	C3 09	Course Year :	2022-2023

Course Name	Statements
C3 09.1	Able to design to belts, chains and rope drives.
C3 09.2	Able to apply the concepts in designing to spur, helical gears.
C3 09.3	Able to plan the design steps for gear boxes used in automobiles and machines
C3 09.4	Able to plan the design steps for gear boxes used in automobiles and machines
C3 09.5	Able to design cams, brakes and clutches used in automobile engines

Course Name :	C4 01	Course Year :	2023-2024

Course Name	Statements
C4 01.1	Able to demonstrate the layout, construction and working of the components inside a thermal power plant.
C4 01.2	Able to acquire the knowledge of Diesel, Gas and Combined cycle power plants, construction and working.
C4 01.3	Able to explain the features and working of the components inside nuclear power plants.
C4 01.4	Able to use the concepts of Renewable energy power plants in power production
C4 01.5	Able to explain the applications of power plants while extend their knowledge to power plant economics and environmental hazards and estimate the costs of electrical energy production.

Course Name :	C4 10	Course Year :	2023-2024

Course Name	Statements

C4 10.1	Able to understand different human values and stress management
C4 10.2	Able to summarize the engineering ethics and its related theories
C4 10.3	Able to identify professional responsibilities and understand codes of ethics
C4 10.4	Able to analyze risk benefits and summarize rights for engineers and Intellectual Property Rights
C4 10.5	Able to explain the concepts of ethics in the global context like engineers as expert witness and advisors

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

1 . course name : C204

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C204.1	2	-	1	-	1	1	-	1	1	-	-	2
C204.2	3	-	1	-	1	1	-	1	1	-	-	2
C204.3	3	-	1	-	1	1	-	1	1	-	-	2
C204.4	3	-	1	-	1	1	-	1	1	-	-	2
C204.5	3	-	1	-	1	1	-	1	1	-	-	2
Average	**3.00**	**0.00**	**1.00**	**0.00**	**1.00**	**1.00**	**0.00**	**1.00**	**1.00**	**0.00**	**0.00**	**2.00**

2 . course name : C211

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C211.1	2	1	1	1	1	-	-	-	-	-	-	1
C211.2	3	3	2	2	2	-	-	-	-	-	-	1
C211.3	3	3	3	3	3	-	-	-	-	-	-	1
C211.4	3	3	2	2	2	-	-	-	-	-	-	1
C211.5	3	3	3	2	2	-	-	-	-	-	-	1
Average	**3.00**	**3.00**	**2.00**	**2.00**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**

3 . course name : C301

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C301.1	3	3	3	2	-	-	1	-	-	-	-	1
C301.2	3	3	3	2	-	-	1	-	-	-	-	1
C301.3	3	3	3	2	-	-	1	-	-	-	-	1
C301.4	3	3	3	2	-	-	1	-	-	-	-	1
C301.5	3	3	3	2	-	-	1	-	-	-	-	1
Average	**3.00**	**3.00**	**3.00**	**2.00**	**0.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**

4 . course name : C309

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C309.1	3	3	3	2	2	-	-	1	1	-	-	2
C309.2	3	3	3	3	3	-	-	1	1	-	-	2
C309.3	2	2	1	1	1	-	-	1	1	-	-	2
C309.4	3	3	3	3	3	-	-	1	1	-	-	2
C309.5	3	3	3	2	2	-	-	1	1	-	-	2
Average	**3.00**	**3.00**	**3.00**	**2.00**	**2.00**	**0.00**	**0.00**	**1.00**	**1.00**	**0.00**	**0.00**	**2.00**

5 . course name : C401

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

6 . course name : C410

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C410.1	-	-	-	-	-	1	-	3	1	1	2	-
C410.2	-	-	-	-	-	1	-	3	1	1	2	-
C410.3	-	-	-	-	-	1	-	3	1	1	2	-
C410.4	-	-	-	-	-	1	-	3	1	1	2	-
C410.5	-	-	-	-	-	1	-	3	1	1	2	-
Average	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**	**0.00**	**3.00**	**1.00**	**1.00**	**2.00**	**0.00**

1 . Course Name : C204

Course	PSO1	PSO2	PSO3
C204.1	3	-	-
C204.2	3	-	-
C204.3	3	-	-
C204.4	3	-	-
C204.5	3	-	-
Average	**3.00**	**0.00**	**0.00**

2 . Course Name : C211

Course	PSO1	PSO2	PSO3
C211.1	1	3	-
C211.2	2	3	-
C211.3	2	3	-
C211.4	2	3	-
C211.5	2	3	-
Average	**2.00**	**3.00**	**0.00**

3 . Course Name : C301

Course	PSO1	PSO2	PSO3
C301.1	1	2	-
C301.2	1	2	-
C301.3	1	2	-
C301.4	1	2	-
C301.5	1	2	-
Average	**1.00**	**2.00**	**0.00**

4 . Course Name : C309

Course	PSO1	PSO2	PSO3
C309.1	2	3	-
C309.2	2	3	-
C309.3	2	3	-
C309.4	2	3	-
C309.5	2	3	-
Average	**2.00**	**3.00**	**0.00**

5 . Course Name : C401

Course	PSO1	PSO2	PSO3
C401.1	1	1	-
C401.2	1	1	-
C401.3	1	1	-
C401.4	1	1	-
C401.5	1	1	-
Average	**1.00**	**1.00**	**0.00**

6 . Course Name : C410

Course	PSO1	PSO2	PSO3

C410.1	-	-	3
C410.2	-	-	3
C410.3	-	-	3
C410.4	-	-	3
C410.5	-	-	3
Average	**0.00**	**0.00**	**3.00**

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

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	3	2	2	2	3	0	0	0	0	0	1	1
C102	3	2	2	2	1	0	0	0	0	0	2	1
C103	3	2	2	3	3	0	0	0	0	0	0	1
C104	3	3	3	2	3	0	0	0	2	0	3	3
C105	3	2	1	1	2	1	0	0	0	0	0	1
C106	3	3	3	3	3	0	0	1	0	0	0	0
C107	3	2	2	2	3	3	0	0	0	0	0	1
C108	3	2	1	1	2	1	0	0	0	0	0	1
C109	2	2	2	2	2	0	0	0	0	3	1	1
C110	3	2	2	2	1	0	0	0	0	0	1	1
C111	3	2	1	1	0	2	3	1	0	0	1	2
C112	3	2	2	3	3	0	0	0	0	0	0	1
C113	3	3	3	2	2	0	0	1	0	0	0	0
C114	2	2	1	3	0	0	0	2	2	2	2	1
C115	3	3	2	2	2	0	0	0	3	2	3	3
C116	3	3	3	3	3	0	0	1	3	2	0	1
C201	3	3	1	2	1	0	1	1	1	1	2	1
C202	3	3	1	2	0	0	1	0	0	1	1	2
C203	3	3	1	2	0	1	2	1	0	1	2	3
C204	3	0	2	0	1	1	0	1	0	0	0	2
C205	3	2	2	2	2	1	0	1	1	0	1	3
C206	2	1	0	3	0	1	1	2	2	2	0	2
C207	3	2	2	2	2	0	2	2	2	2	0	2
C208	3	3	1	3	3	0	2	0	2	2	2	3
C209	0	0	0	0	2	0	0	2	2	3	0	1
C210	2	3	2	2	2	0	2	0	3	0	2	2
C211	3	3	2	2	2	0	2	0	0	0	0	2
C212	3	1	2	1	2	1	0	1	1	1	2	2
C213	3	2	2	2	0	0	1	1	0	0	0	3
C214	3	3	3	1	2	0	1	0	0	0	0	1
C215	3	3	2	1	0	2	1	1	0	0	0	1
C216	3	2	3	0	2	1	0	0	2	0	0	2
C217	3	3	1	1	2	2	2	2	2	1	0	1
C218	0	0	0	0	2	0	0	2	2	3	0	1
C301	3	3	2	2	0	0	1	0	0	0	0	1
C302	3	3	3	2	1	2	0	0	0	1	3	2
C303	3	3	3	2	0	2	0	0	0	2	2	2
C304	3	3	3	2	2	1	0	0	0	0	1	3

C305	2	2	2	0	0	1	1	2	2	0	1	2
C306	3	2	2	1	2	2	2	3	2	3	2	2
C307	3	3	3	0	0	1	1	2	2	2	0	1
C308	3	2	2	0	2	0	0	2	2	1	0	2
C309	3	3	3	3	2	0	0	1	1	0	0	2
C310	3	1	1	0	2	0	0	2	0	1	1	2
C311	3	3	3	2	3	1	1	0	1	2	2	3
C312	3	3	2	3	2	1	0	1	1	2	2	2
C313	3	3	2	2	2	2	2	2	0	1	0	2
C314	3	3	1	0	3	2	2	2	0	0	1	2
C315	3	3	3	2	3	0	0	0	2	2	2	3
C316	3	3	3	3	3	2	2	2	2	3	3	2
C317	0	1	0	0	2	3	0	3	2	3	3	3
C401	2	2	1	1	0	0	1	0	0	0	0	1
C402	2	2	2	1	2	2	2	3	2	0	3	2
C403	3	1	2	2	3	0	0	0	1	2	3	2
C404	3	2	2	1	2	2	0	0	0	1	2	2
C405	3	1	2	0	2	1	2	0	2	2	3	3
C406	3	3	1	2	3	2	2	2	0	1	0	2
C407	3	3	2	1	3	1	0	2	2	3	0	2
C408	3	3	2	2	3	0	0	3	3	3	2	3
C409	3	3	2	1	2	1	0	1	2	2	0	2
C410	0	0	0	0	0	1	0	3	1	1	2	0
C411	0	1	0	0	0	3	1	3	0	0	3	3
C412	3	3	3	2	3	2	2	3	3	3	3	3

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

Course	PSO1	PSO2	PSO3
C101	0	0	1
C102	1	0	0
C103	0	0	0
C104	0	0	0
C105	3	2	1
C106	0	0	0
C107	0	0	0
C108	2	2	2
C109	0	0	1
C110	1	2	0
C111	2	1	1
C112	1	1	0
C113	2	0	0
C114	1	1	0
C115	1	1	0
C116	2	1	1
C201	0	3	0
C202	1	3	0
C203	2	3	0
C204	3	0	0

C205	1	1	0
C206	3	0	1
C207	3	0	0
C208	1	0	1
C209	0	0	2
C210	0	3	0
C211	2	3	0
C212	3	0	0
C213	2	0	0
C214	2	2	0
C215	0	2	0
C216	3	0	1
C217	1	2	1
C218	0	0	2
C301	1	2	0
C302	3	2	0
C303	2	0	0
C304	2	0	0
C305	0	1	0
C306	1	0	1
C307	0	2	0
C308	2	0	1
C309	2	3	0
C310	3	0	0
C311	0	2	0
C312	1	2	0
C313	0	2	0
C314	0	1	0
C315	3	0	1
C316	3	0	2
C317	0	0	2
C401	1	2	0
C402	2	0	1
C403	2	0	0
C404	2	0	0
C405	2	0	0
C406	1	0	0
C407	2	0	1
C408	2	0	1
C409	0	0	1
C410	0	0	3
C411	0	0	2
C412	3	3	2

3.2 Attainment of Course Outcomes (50) Total Marks 50.00

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10) Institute Marks : 10.00

Assessment processes

Designing the COs for the individual subject is the foremost process. These COs are mapped with POs and PSOs. At the end of the course, attainment levels are calculated for the COs, POs and PSOs and need to be evaluated whether it is attained or not.

Direct Assessment Tools

- **Internal Assessment Test**

The Internal Assessment marks (IAT 1 and IAT 2) in a theory paper shall be based on two tests generally conducted as per schedule. It is a metric to continuously assess the attainment of course outcomes with respect to course objectives. Two internal assessment tests are conducted for each course for 100 marks each and the duration of 3 hours. It covers first two units for internal assessment I and third and fourth unit for internal assessment II. The marks scored by the student are used to assess the course outcomes CO1 and CO2 from internal assessment I, CO3, and CO4 from internal assessment II.

- **Model Exam**

The third Internal Assessment mark in a theory paper shall be based on Model test conducted as per schedule. The Model examination carries 100 marks and for 3 hours duration. The marks scored by the students are used to assess all the course outcomes.

- **Lab Model Exam**

In case of Practical, the Internal Assessment marks shall be based on the laboratory records and a model practical test.

- **Assignment and tutorials**

  Assignment and tutorials are given as a part of given direct attainment

- **University theory and Practical Examination**

Semester examination (theory or practical) is the metric to assess whether all the course outcomes are attained or not framed by the course owner. Semester Examination is more focused on attainment of course outcomes and uses a descriptive examination.

- **Project Work Viva-voce**

  Viva-voce examination of project work shall be conducted for each Student.

- **Lab Evaluation test the practical Knowledge:**

  Student's practical knowledge and skills are evaluated by doing various experiments

Indirect Assessment Tools:

Course End Survey

- Exit Survey Alumni Survey Employer survey
- Professional Society Member/ Academic Peers Survey
- Faculty Survey

- **Lab Evaluation test the practical Knowledge:**

Student's practical knowledge and skills are evaluated by doing various experiments

Indirect Assessment Tools:

Course End Survey

- Exit Survey Alumni Survey Employer survey
- Professional Society Member/ Academic Peers Survey
- Faculty Survey

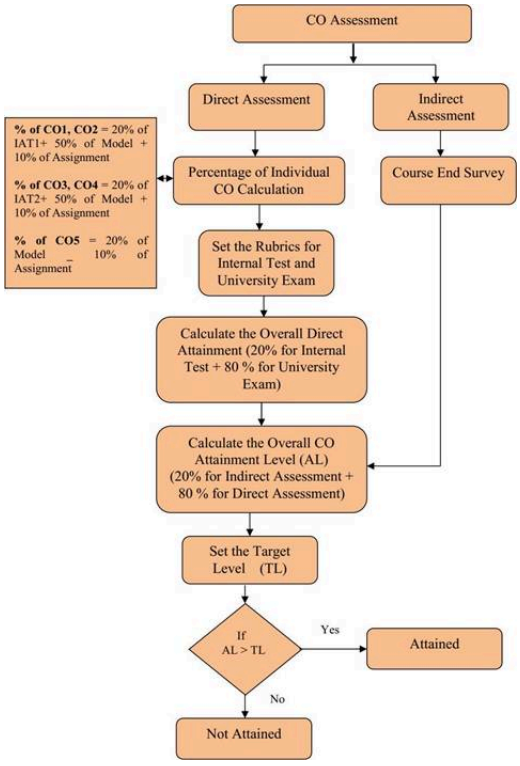


Figure 3.1 Process of CO Attainment

The quality of assessment process and tools used:

All Internal Assessment marks are uploaded to the Anna University web portal and are strictly based on students performance in internal tests and assignments. Therefore, students are advised to take these assessments seriously and strive for good results. Parents are encouraged to monitor their ward's progress closely.

Table 3.2.1 - Assessment process – Tools used

The quality of assessment process and tools used:

All Internal Assessment marks are uploaded to the Anna University web portal and are strictly based on students performance in internal tests and assignments. Therefore, students are advised to take these assessments seriously and strive for good results. Parents are encouraged to monitor their ward's progress closely.

Table 3.2.1 - Assessment process – Tools used

Test	Portion/Unit	Information sent to the parent about the results
Internal Assessment Test – I	40% / 1&2	Within 3-5 days after the last exam
Internal Assessment Test – II	40% / 3&4	
Model Exam	100% (All Units)	
Model Practical Exam	As per Syllabus	

Table 3.2.2 - Assessment process - Review

Assessment Tool	Assessment Frequency	Assessment Person	Assessment Review
Internal Assessment Test	Every Month	Faculty	IQAC
Assignment	Once Per Semester	Faculty	IQAC
Course End Survey	End of the Semester	Faculty and Student	IQAC
Projects	As per need	Faculty	IQAC
Semester End Performance	End of the Semester	Faculty	IQAC

Assment through Internal ExaminationsFormulas used for Calculation

CO1= [(CO1(IAT1) + CO1(Model) + CO1(Assignment)) / 78] *100

CO2= [(CO2(IAT2) + CO2(Model) + CO2(Assignment)) / 83] *100

CO3= [(CO3(IAT2) + CO3(Model) + CO3(Assignment)) / 71] *100

CO4= [(CO3(IAT2) + CO4(Model) + CO4(Assignment)) / 91] *100

CO5= [(CO5(Model) + CO5(Assignment)) / 27] *100

Assessment of CO 1: (For S.No. 1 student)

CO1 = [(CO1(IAT1) + CO1(Model) + CO1(Assignment)) / 78] *100 CO1 = [(40 + 23 + 9) / 78] * 100

= 92%

Similarly, the CO 1 attainment for all the students in a class for a particular course has to be calculated.

For calculating the attainment of other COs same procedure has to be followed. The equations for calculating attainment of other COs with their value are given below.

Assessment of CO 2:

CO2 = [(CO2(IAT2) + CO2(Model) + CO2(Assignment)) / 83] *100 CO2 = [(39 + 15 + 7) / 83*100

= 73%

Assessment of CO 3:

CO3 = [(CO3(IAT2) + CO3(Model) + CO3(Assignment)) / 71] *100 CO3 = [(30 + 15 + 9) / 71*100

= 76%

Assessment of CO 4:

CO4 = [(CO3(IAT2) + CO4(Model) + CO4(Assignment)) / 91] *100 CO4 = [(34 + 21 + 8) / 91*100

= 69%

Assessment of CO 5:

CO5 = [(CO5(Model) + CO5(Assignment)) / 27] *100 CO5 = [(12 + 9) / 27*100

= 78%

Assessment through University Examinations and Assessment through Course End Survey

Attainment level:

ıment level 1: 60% of students scoring more than 60 marks.

ıment level 2: 70% of students scoring more than 60 marks.

ıment level 3: 80% of students scoring more than 60 marks.

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

Institute Marks : 40.00

Attainment of Course Outcome of all courses:

Target : 1.5

Course code	Course Name	Attained Value					Attainment (Y / N)				
		CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
C101	Communicative English	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C102	Engineering Mathematics - I	2.36	2.36	2.36	2.20	2.36	Y	Y	Y	Y	Y
C103	Engineering Physics	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C104	Engineering Chemistry	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C105	Problem Solving and Python Programming	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C106	Engineering Graphics	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C107	Problem Solving and Python Programming Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C108	Physics and Chemistry Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C109	Technical English	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C110	Engineering Mathematics - II	1.72	1.72	1.72	1.72	1.72	Y	Y	Y	Y	Y
C111	Materials Science	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C112	Basic Electrical, Electronics and Instrumentation Engineering	1.72	1.72	1.72	1.72	1.72	Y	Y	Y	Y	Y
C113	Environmental Science and Engineering	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C114	Engineering Mechanics	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C115	Engineering Practices Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C116	Basic Electrical, Electronics and Instrumentation Engineering Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
C201	Transforms & Partial Differential Equations	2.87	2.82	2.87	2.60	2.87	Y	Y	Y	Y	Y
C202	Engineering Thermodynamics	2.87	2.82	2.87	2.60	2.87	Y	Y	Y	Y	Y
C203	Fluid Mechanics and Machinery	2.87	2.82	2.87	2.60	2.87	Y	Y	Y	Y	Y
C204	Manufacturing Technology - I	2.87	2.82	2.87	2.44	2.87	Y	Y	Y	Y	Y
C205	Electrical Drives And Controls	2.87	2.82	2.87	2.44	2.87	Y	Y	Y	Y	Y
C206	Manufacturing Technology Laboratory – I	2.75	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y
C207	Computer Aided Machine Drawing	2.59	2.91	2.91	2.91	2.91	Y	Y	Y	Y	Y
C208	Electrical Engineering Laboratory	2.75	2.59	2.59	2.59	2.59	Y	Y	Y	Y	Y
C209	Interpersonal SkillsListening & Speaking	2.75	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y
C210	Statistics and Numerical Methods	0.95	0.90	0.95	0.68	0.95	N	N	N	N	N
C211	Kinematics of Machinery	0.95	0.90	0.95	0.68	0.95	N	N	N	N	N
C212	Manufacturing Technology – II	0.95	0.90	0.95	0.84	0.95	N	N	N	N	N
C213	Engineering Metallurgy	0.95	0.90	0.95	0.68	0.95	N	N	N	N	N
C214	Strength of Materials for Mechanical Engineers	0.95	0.90	0.95	0.68	0.95	N	N	N	N	N
C215	Thermal Engineering - I	0.95	0.90	0.95	0.68	0.95	N	N	N	N	N
C216	Manufacturing Technology Lab – II	2.91	2.59	2.59	2.59	2.59	Y	Y	Y	Y	Y
C217	Strength of Materials and Fluid Mechanics and Machinery Laboratory	2.59	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y
C218	Advanced Reading and Writing	2.75	2.59	2.59	2.59	2.59	Y	Y	Y	Y	Y
C301	Thermal Engineering- II	1.59	1.38	1.61	1.45	1.60	Y	N	Y	N	Y
C302	Design of Machine Elements	0.94	0.73	0.78	0.82	0.96	N	N	N	N	N
C303	Metrology and Measurements	1.58	1.54	1.57	1.29	1.59	Y	Y	Y	N	Y
C304	Dynamics of Machines	0.94	0.93	0.94	0.61	0.94	N	N	N	N	N

C306	Kinematics and Dynamics Laboratory	2.75	2.59	2.59	2.59	2.59	Y	Y	Y	Y	Y
C307	Thermal Engineering Laboratory	2.59	2.59	2.59	2.59	2.59	Y	Y	Y	Y	Y
C308	Metrology and Measurements Laboratory	2.43	2.43	2.43	2.43	2.43	Y	Y	Y	Y	Y
C309	Design of Transmission	0.94	0.90	0.93	0.65	0.95	N	N	N	N	N
C310	Computer Aided Design and Manufacturing	0.94	0.90	0.93	0.81	0.95	N	N	N	N	N
C311	Heat and Mass Transfer	0.93	0.94	0.94	0.65	0.95	N	N	N	N	N
C312	Finite Element Analysis	0.90	0.90	0.90	0.60	0.90	N	N	N	N	N
C313	Hydraulics and Pneumatics	2.21	2.22	2.22	1.93	2.23	Y	Y	Y	Y	Y
C315	CAD CAM Laboratory	2.75	2.59	2.59	2.59	2.59	Y	Y	Y	Y	Y
C316	Design and Fabrication Project	2.75	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y
C317	Professional Communication	2.75	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y
C401	Power Plant Engineering	1.57	1.56	1.56	1.29	1.56	Y	Y	Y	N	Y
C402	Process Planning and Cost Estimation	1.60	1.56	1.57	1.30	1.59	Y	Y	Y	N	Y
C403	Mechatronics	2.21	2.20	2.20	1.93	2.20	Y	Y	Y	Y	Y
C405	Unconventional Machining Processes	2.85	2.86	2.86	2.57	2.87	Y	Y	Y	Y	Y
C406	Testing of Materials	1.57	1.57	1.59	1.28	1.56	Y	Y	Y	N	Y
C407	Simulation and Analysis Laboratory	2.59	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y
C408	Mechatronics Laboratory	2.75	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y
C409	Technical Seminar	2.75	2.91	2.91	2.91	2.91	Y	Y	Y	Y	Y
C410	Principles of Management	2.85	2.86	2.87	2.55	2.84	Y	Y	Y	Y	Y
C411	Entrepreneurship Development	2.85	2.86	2.87	2.55	2.84	Y	Y	Y	Y	Y
C412	Project Work	2.75	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y

3.3 Attainment of Program Outcomes and Program Specific Outcomes (50) Total Marks 50.00

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

Institute Marks : 10.00

PO Assessment Methodology and Tools

Assessment Tools	Description	Assessment Frequency	Documentation of Maintenance
Direct Assessment Tools			
Course Evaluation			
Internal Test	IAT1, IAT2-100 marks Model-100 marks	3 Internal Assessment Test	Test papers are systematically recorded, and marks are duly noted. Internal test question papers and their corresponding answer keys are meticulously preserved
Assignment	1	1 per semester	Sample assignment is documented
End Semester Exam	University Question Paper	1 per semester	Result copy is documented
Lab Evaluation			
Internal Evaluation for Lab	Experiments. (Record/ Model Lab Exam)	1 – Model Exam	Record note for each student is maintained & sample record is documented.
End Semester Lab	University examination	1 per semester	Result copy is documented
Indirect Assessment Tools			
Exit Survey	Immediately after the course concludes, student feedback is methodically collected to assess the achievement of program outcomes.	Every Year	Documented
Alumni Survey	To evaluate the achievement of program outcomes (POs), surveys are administered to alumni, irrespective of their graduation year.	Every Year	Documented
Employers survey	Employers provide feedback on the extent to which program outcomes are achieved by evaluating the performance and progress of the departments graduates.	Every Year	Documented
Professional Society Member/ Academic Peers Survey	Surveys are administered to professional body members and academic peers who frequently visit the institution and contribute to its development, enabling them to assess students alignment with program outcomes.	Every Year	Documented

Quality of Assessment Processes Used

A maximum of 5 Course outcomes are developed for each course. Program Outcomes and Program specific outcome assessment is done using the course outcome attainment, a sample calculation is shown below

The CO attainment is calculated for each course in every academic year

- Individual PO & PSO values for each CO is calculated. This individual PO & PSO values are taken here as the CL for the corresponding COs.
- Referring table above, if the attainment value is “Y”, then the same CL value is copied into ACL (Achieved Correlation Value) , otherwise the ACL becomes 0.
- Based on the CO attainment the percentage of correlation level is calculated as follows.

ASSESSMENT PROCESS

PO & PSO attainment process has been done by taking, direct and indirect assessment tools. In direct attainment marks obtained in IAT1, IAT2, Model, Assignment and University examination are taken into account. For indirect attainment surveys were taken from all the stakeholders.

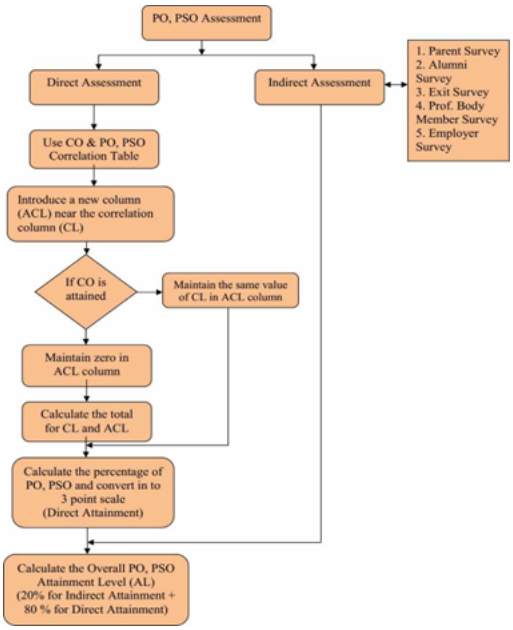


Figure 3.2 Process of PO Attainment

A maximum of 5 Course outcomes are developed for each course. Program Outcomes and Program specific outcome assessment is done using the course outcome attainment, a sample calculation is shown below

Semester VII

Course Code: C401 **Course Name: ME8792- Power Plant Engineering**

CO	PO 1	PO 2	PO 3	PO4	PO 5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C401.1	2	2	1	1	-	-	1	-	-	-	-	1	1	1	-
C401.2	2	2	1	1	-	-	1	-	-	-	-	1	1	1	-
C401.3	2	2	1	1	-	-	1	-	-	-	-	1	1	1	-
C401.4	2	2	1	1	-	-	1	-	-	-	-	1	1	1	-
C401.5	2	2	1	1	-	-	1	-	-	-	-	1	1	1	-

The CO attainment is calculated for each course in every academic year

- Individual PO & PSO values for each CO is calculated. This individual PO & PSO values are taken here as the CL for the corresponding Cos.
- Referring table above, if the attainment value is “Y”, then the same CL value is copied into ACL (Achieved Correlation Value) , otherwise the ACL becomes 0.
- Based on the CO attainment the percentage of correlation level is calculated as follows.

CO	Description	CO Attainment Level	Attained/Not Attained
CO 1	Able to explain the layout, construction and working of the components inside a thermal power plant.	2.58	Attained
CO 2	Able to explain the layout, construction and working of the components inside a Diesel, Gas and Combined cycle power plants.	2.42	Attained
CO 3	Able to explain the layout, construction and working of the components inside nuclear power plants.	2.58	Attained
CO 4	Able to explain the layout, construction and working of the components inside Renewable energy power plants.	2.58	Attained
CO 5	Able to explain the applications of power plants while extend their knowledge to power plant economics and environmental hazards and estimate the costs of electrical energy production.	2.58	Attained

3.3.2 Provide results of evaluation of PO&PSO (40) Institute Marks : 40.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	3	3	3	3	3	0	0	0	0	0	3	3
C102	3	3	3	3	3	0	0	0	0	0	3	3
C103	3	3	3	3	3	0	0	0	0	0	0	3
C104	3	3	3	3	3	0	0	0	3	0	3	3
C105	3	3	3	3	3	3	0	0	0	0	0	3
C106	3	3	3	3	3	0	0	3	0	0	0	0
C107	3	3	3	3	3	0	0	0	0	0	0	3
C108	3	3	3	3	3	3	0	0	0	0	0	3
C109	3	3	3	3	3	0	0	0	0	3	3	3
C110	3	3	3	0	3	0	0	0	3	3	3	3
C111	3	3	3	3	0	3	3	3	0	0	3	3
C112	3	3	3	3	3	0	0	0	0	0	0	0
C113	3	3	0	0	0	3	3	3	0	3	0	3
C114	3	3	3	3	0	0	0	0	3	0	3	3
C115	3	3	3	3	3	0	0	0	3	0	0	3
C116	3	3	3	3	3	0	0	0	3	0	0	3
C201	2.25	2.23	2.25	1.32	1.49	0	1.32	1.32	2.25	0.95	0.95	0.95
C202	2.44	1.87	1.51	0.93	0	0	0.93	0	0	1.87	1.87	1.51
C203	3	3	3	3	0	3	3	3	0	3	3	3
C204	2.47	0	2.77	0	2.5	1.49	0	2.5	0	0	0	0
C205	2.23	2.04	1.30	1.12	0.92	1.12	0	1.30	1.30	0	0.92	0.92
C206	3	3	0	3	0	0	0	3	3	3	3	0
C207	3	3	3	3	3	0	3	3	3	3	0	3
C208	3	3	3	3	3	0	3	0	3	3	3	3
C209	3	3	3	3	3	0	0	3	3	3	3	3
C210	0.76	0.59	0.72	0.54	0.76	0	0.54	0	0.76	0	0.31	0.31
C211	0.76	0.59	0.72	0.54	0.76	0	0.72	0	0	0	0	0.31
C212	0.67	0.56	0.42	0.31	0.36	0.36	0	0.31	0.42	0.56	0.51	0.42
C213	0.76	0.70	0.53	0.47	0	0	0.47	0.32	0	0	0	0.53
C214	.84	.65	.61	.42	.36	0	.42	0	0	0	0	.42
C215	.76	.63	.51	.31	0	.34	.88	.51	0	0	0	.88
C216	3	3	3	0	3	3	0	3	0	0	0	3
C217	3	3	3	3	3	3	3	3	3	3	0	3
C218	0	0	0	0	3	0	0	3	3	3	0	3
C301	1.42	1.42	1.12	1.02	0	0	1.42	0	0	0	0	1.12
C302	.78	.78	.62	.55	.55	.55	0	0	0	.62	.78	.84
C303	1.31	1.2	.99	.70	0	0	0	0	0	.70	.99	.51
C304	.75	.58	.46	.29	.29	.29	0	0	0	0	.46	.29
C306	3	3	3	3	3	3	3	3	3	3	3	3
C307	3	3	3	0	0	3	3	3	3	3	0	3
C308	3	3	3	3	3	0	0	3	3	0	0	3
C309	.81	.81	.75	.62	.62	0	0	.29	.62	0	0	.62
C310	.66	.66	.36	0	.36	0	0	.36	0	.60	.36	.60
C311	.82	.82	.76	.63	.63	.63	.63	0	.88	.82	.88	.88
C312	.81	.71	.58	.47	.47	.58	0	.29	.51	.58	.63	.47
C313	1.44	1.44	.72	.72	.72	.72	.72	.72	0	.72	0	.72

C315	3	3	3	3	3	0	0	0	3	3	3	3
C316	3	0	3	3	3	3	3	3	3	3	3	3
C317	0	3	0	0	3	3	0	3	3	3	3	3
C401	1.01	1.01	.5	.5	0	0	1.04	0	0	0	0	.5
C402	1.42	1.42	1.22	.91	.91	1.22	1.22	.51	.91	0	.51	1.22
C403	1.43	1.43	.72	.72	.72	0	0	0	1.43	0	.72	1.43
C405	3	3	3	0	3	3	3	0	3	3	3	3
C406	3	3	3	3	3	3	3	3	0	3	0	3
C407	3	3	3	3	3	3	0	3	3	0	3	3
C408	3	3	3	3	3	0	0	3	3	3	3	3
C409	3	3	3	3	3	3	0	3	3	3	0	3
C410	0	0	0	0	0	2.8	0	2.8	2.22	2.25	2.25	0
C411	0	2.07	0	0	0	2.8	2.8	2.2	0	0	2.67	2.80
C412	3	3	3	3	3	3	3	3	3	3	3	3
PO Attainment	2.35	2.31	2.23	2.14	2.29	2.25	2.07	2.29	2.44	2.36	2.19	2.21

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.30	2.25	2.15	2.04	2.23	2.18	1.96	2.23	2.42	2.32	2.11	2.13
InDirect Attainment	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53

PSO Attainment

Course	PSO1	PSO2	PSO3
C101	0	0	3
C102	3	0	0
C103	0	0	0
C104	0	0	0
C105	3	3	3
C106	0	0	0
C107	0	0	0
C108	3	3	3
C109	0	0	3
C111	3	3	3
C112	3	3	3
C113	0	0	0
C114	3	3	0
C115	3	3	0
C116	3	3	3
C11O	0	0	0
C201	0	2.8	0
C202	0.93	2.80	0
C203	3	3	0
C204	2.77	2.77	0
C205	0.92	0	0
C206	3	0	3
C207	3	0	0
C208	0	3	3
C209	0	0	3
C210	0	0.88	0
C211	0.88	0.88	0
C212	0.92	0	0

C213	0.29	0	0
C214	0.59	0.88	0
C215	0	0.88	0
C216	3	0	0
C217	3	3	3
C218	0	0	3
PSO Attainment	2.36	2.47	2.91

PSO Attainment Level

Course	PSO1	PSO2	PSO3
Direct Attainment	2.32	2.46	3
InDirect Attainment	2.53	2.53	2.53

4 STUDENTS' PERFORMANCE (150) Total Marks 98.53

:

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23(CAYm2)	2021-22(CAYm3)	2020-21(CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
Sanctioned intake of the program(N)	60	60	60	60	90	150	150
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	21	38	36	34	29	65	52
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	5	0	2	12	7	3
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	21	43	36	36	41	72	55

Table 4.2

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study)			
		I year	II year	III year	IV year
2024-25 (CAY)	21	0	0	0	0
2023-24 (CAYm1)	43	3	0	0	0
2022-23 (CAYm2)	36	3	2	0	0
2021-22 (CAYm3)	36	2	0	0	0
2020-21 (LYG)	41	27	21	11	6
2019-20 (LYGm1)	72	46	37	29	12
2018-19 (LYGm2)	55	41	32	19	16

Table 4.3

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2024-25 (CAY)	21	0	0	0	0
2023-24 (CAYm1)	43	33	0	0	0
2022-23 (CAYm2)	36	32	29	0	0
2021-22 (CAYm3)	36	32	28	24	0
2020-21 (LYG)	41	29	41	36	30
2019-20 (LYGm1)	72	65	72	69	68
2018-19 (LYGm2)	55	52	46	46	46

4.1 Enrolment Ratio (20) Total Marks 12.00

Institute Marks : 12.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	60	21	35.00
2023-24 (CAYm1)	60	38	63.33
2022-23 (CAYm2)	60	36	60.00

Average [(ER1 + ER2 + ER3) / 3] : 52.78

Assessment : 12.00

4.2 Success Rate in the stipulated period of the program (40) Total Marks 17.55

4.2.1 Success rate without backlogs in any semester / year of study (25) Institute Marks : 5.00

Item	Latest Year of Graduation, LYG (2020-21)	Latest Year of Graduation minus 1, LYGm1 (2019-20)	Latest Year of Graduation minus 2 LYGm2 (2018-19)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	41.00	72.00	55.00
Y Number of students who have graduated without backlogs in the stipulated period	6.00	12.00	16.00
Success Index [SI = Y / X]	0.15	0.17	0.29

Average SI [(SI1 + SI2 + SI3) / 3] : 0.20

Assessment [25 * Average SI] : 5.00

4.2.2 Sucess rate in stipulated period (15) Institute Marks : 12.55

Item	Latest Year of Graduation, LYG (2020-21)	Latest Year of Graduation minus 1, LYGm1 (2019-20)	Latest Year of Graduation minus 2 LYGm2 (2018-19)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	41.00	72.00	55.00
Y Number of students who have graduated in the stipulated period	30.00	68.00	46.00
Success Index [SI = Y / X]	0.73	0.94	0.84

Average SI[(SI1 + SI2 + SI3) / 3]: 0.84

Assessment [15 * Average SI] : 12.55

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

4.3 Academic Performance in Third Year (15) Total Marks 7.41

Institute Marks : 7.41

Academic Performance	CAYm3 (2021-22)	LYG (2020-21)	LYGm1 (2019-20)
Mean of CGPA or mean percentage of all successful students(X)	6.35	4.58	5.59
Total number of successful students(Y)	24.00	36.00	69.00
Totalnumber of students appeared in the examination(Z)	28.00	41.00	72.00
API [X*(Y/Z)]:	5.44	4.02	5.36

Average API [(AP1 + AP2 + AP3)/3] : 4.94

Assessment [1.5 * AverageAPI] : 7.41

4.4 Academic Performance in Second Year (15) Total Marks 5.70

Institute Marks : 5.70

Academic Performance	CAYm2 (2022-23)	CAYm3 (2021-22)	LYG (2020-21)
Mean of CGPA or mean percentage of all successful students(X)	4.66	4.22	3.69
Total number of successful students (Y)	29.00	28.00	41.00
Total number of students appeared in the examination (Z)	32.00	34.00	41.00
API [X * (Y/Z)]	4.22	3.48	3.69

Average API [(AP1 + AP2 + AP3)/3] : 3.80

Assessment [1.5 * AverageAPI] : 5.70

4.5 Placement, Higher Studies and Entrepreneurship (40) Total Marks 35.87

Institute Marks : 35.87

Item	LYG (2020-21)	LYGm1 (2019-20)	LYGm2 (2018-19)
Total No of Final Year Students(N)	36.00	69.00	46.00
No of students placed in the companies or government sector(X)	20.00	64.00	39.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	6.00	2.00	5.00
No of students turned entrepreneur in engineering/technology (Z)	1.00	0.00	1.00
x + y + z =	27.00	66.00	45.00
Placement Index [(X+Y+Z)/N] :	0.75	0.96	0.98

Average Placement [(P1 + P2 + P3)/3] : 0.90

Assessment [40 * Average Placement] : 35.87

Program Name :

Assessment Year Name : CAYm1

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Jacob D	210520114011	Milekal	ME/HR/1920
2	Mano David D	210520114018	FOXCONN	YTIPL/CH/DR/GET/2024/129
3	Kishore Kumar K	210520114016	FOXCONN	YTIPL/CH/DR/GET/2024/131
4	Narayanaswamy G	210520114020	FOXCONN	YTIPL/CH/DR/GET/2024/130
5	Subhash Chandra Bose B	210520114026	SUPER AUTO FORGE	DMICE/23-24/MECH/OL-005
6	Suriya V	210520114312	SUPER AUTO FORGE	DMICE/23-24/MECH/OL-006
7	Srijith V	210520114025	SUPER AUTO FORGE	DMICE/23-24/MECH/OL-008
8	Abishek P	210520114301	SUPER AUTO FORGE	DMICE/23-24/MECH/OL-010
9	Pavithiran M	210520114022	ONE GENE	DMICE/23-24/MECH/OL-013
10	Harish Bala B	210520114010	ONE GENE	DMICE/23-24/MECH/OL-015
11	Dhayanithi S	210520114007	ONE GENE	DMICE/23-24/MECH/OL-017
12	Samuel N	210520114310	ONE GENE	DMICE/23-24/MECH/OL-019
13	Dinesh T	210520114008	SUPER AUTO FORGE	DMICE/23-24/MECH/OL-020
14	Lokesh S	210520114017	ZF WABCO	DMICE/23-24/MECH/OL-022
15	Sunil B	210520114027	ZF WABCO	DMICE/23-24/MECH/OL-024
16	Joel John J	210520114013	ONE GENE	DMICE/23-24/MECH/OL-025
17	Gowtham R	210520114306	ONE GENE	DMICE/23-24/MECH/OL-027
18	Sathish C	210520114024	ONE GENE	DMICE/23-24/MECH/OL-027
19	Hariharan.M	210520114307	ONE GENE	DMICE/23-24/MECH/OL-028
20	Kevin K	210520114015	MILEKAL	ME/HR/1919

Assessment Year Name : CAYm2

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Dennis Benedict Alwin A	210519114015	MILEKAL	ME/HR/1692
2	Aljin Brabhu G	210519114005	MILEKAL	ME/HR/1693
3	Naveen Kumar K	210519114305	MILEKAL	ME/HR/1694
4	Santhosh Kumar S	210519114045	SUTHERLAND	DMICE/22-23/MECH/OL-001
5	Feslino D Christian	210519114018	SUTHERLAND	DMICE/22-23/MECH/OL-005
6	Stephen Raj	210519114056	SUTHERLAND	DMICE/22-23/MECH/OL-003
7	Subash Anand S	210519114057	SUTHERLAND	DMICE/22-23/MECH/OL-004
8	Mahem Vaz	210519114033	SUTHERLAND	DMICE/22-23/MECH/OL-005
9	Abishek A	210519114001	SUTHERLAND	DMICE/22-23/MECH/OL-006
10	Abishek Samuel	210519114003	SUTHERLAND	DMICE/22-23/MECH/OL-007
11	Gowtham J	210519114022	SUTHERLAND	DMICE/22-23/MECH/OL-008
12	Abimanyu	210519114002	SUTHERLAND	DMICE/22-23/MECH/OL-009
13	Mohan Babu	210519114034	H & R STEEL DETAILING	DMICE/22-23/MECH/OL-010
14	Parthiban	210519114036	H & R STEEL DETAILING	DMICE/22-23/MECH/OL-011
15	Ahamed Rafiq	210519114004	H & R STEEL DETAILING	DMICE/22-23/MECH/OL-012
16	Giritharan	210519114019	BIM CAD TECHNOLOGY	DMICE/22-23/MECH/OL-013
17	Vijin R	210519114063	BIM CAD TECHNOLOGY	DMICE/22-23/MECH/OL-014
18	Sasi Kumar G	210519114046	LEADPRO	DMICE/22-23/MECH/OL-015
19	Tamilarasan S	210519114059	LEADPRO	DMICE/22-23/MECH/OL-016
20	Antoney Hemiben	210519114008	LEADPRO	DMICE/22-23/MECH/OL-017
21	Sagaya Kavi	210519114306	KRR ENGINEERING PVT,LTD	DMICE/22-23/MECH/OL-019
22	Elavalavan	210519114302	CK MOTHERSON	DMICE/22-23/MECH/OL-021
23	Anith R	210519114006	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-022
24	Dinsan.K	210519114017	ZF WABCO	DMICE/22-23/MECH/OL-023
25	Sanchan.J	210519114043	INDIA JAPAN LIGHTINGS	DMICE/22-23/MECH/OL-024
26	Balaji.M	210519114011	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-025
27	Antony Joseph Praveen	210519114009	ZF WABCO	DMICE/22-23/MECH/OL-026
28	Kathiravan.C	210519114031	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-027
29	Gokul	210519114020	ZF WABCO	DMICE/22-23/MECH/OL-028
30	Karthick.K	210519114029	ZF WABCO	DMICE/22-23/MECH/OL-029
31	Kanish.C	210519114028	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-030
32	Shibin.B.V	210519114049	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-031
33	Jenith Akash.J	210519114027	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-032
34	Sivabalan.K	210519114051	CK MOTHERSON	DMICE/22-23/MECH/OL-033
35	Karthick.M	210519114030	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-034
36	Antony Joy.J	210519114010	CK MOTHERSON	DMICE/22-23/MECH/OL-035
37	Christal Selvin	210519114014	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-036
38	Anto Clanston C T	210519114007	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-037
39	Perumal V	210519114038	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-038
40	Persin C	210519114037	CK MOTHERSON	DMICE/22-23/MECH/OL-039
41	Sathish B	210519114047	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-040
42	Sathish D	210519114048	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-041
43	Sridhar G	210519114052	ZF WABCO	DMICE/22-23/MECH/OL-042
44	Srikanth S	210519114053	ZF WABCO	DMICE/22-23/MECH/OL-043
45	Yosuva Mikavel J	210519114065	INDIA JAPAN LIGHTINGS	DMICE/22-23/MECH/OL-044
46	Gowtham.K	210519114501	INDIA JAPAN LIGHTINGS	DMICE/22-23/MECH/OL-045
47	Ajai S	210519114701	INDIA JAPAN LIGHTINGS	DMICE/22-23/MECH/OL-046
48	Manikandan V	210519114702	INDIA JAPAN LIGHTINGS	DMICE/22-23/MECH/OL-047
49	Kishore	210519114703	INDIA JAPAN LIGHTINGS	DMICE/22-23/MECH/OL-048

50	Monish R	210519114035	INDIA JAPAN LIGHTINGS	DMICE/22-23/MECH/OL-049
51	Harish R	210519114024	CK MOTHERSON	DMICE/22-23/MECH/OL-050
52	Harrishraj S	210519114025	CK MOTHERSON	DMICE/22-23/MECH/OL-051
53	Jeevadhas M	210519114026	CK MOTHERSON	DMICE/22-23/MECH/OL-052
54	Bharath V P	210519114012	CK MOTHERSON	DMICE/22-23/MECH/OL-053
55	Buvana Padmanaban P	210519114013	CK MOTHERSON	DMICE/22-23/MECH/OL-054
56	Hariharan N	210519114023	CK MOTHERSON	DMICE/22-23/MECH/OL-055
57	Kiran M	210519114032	CK MOTHERSON	DMICE/22-23/MECH/OL-056
58	Poovarasan G	210519114039	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-057
59	Prabhakaran L	210519114040	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-058
60	Rajesh R	210519114041	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-059
61	Thanaraj T	210519114060	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-060
62	Venkat D	210519114061	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-061
63	Vignesh K	210519114062	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-062
64	Alphin Raj A.	210519114301	SUPER AUTO FORGE	DMICE/22-23/MECH/OL-063

Assessment Year Name : CAYm3

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Paarthasarathy	210518114041	PRATICALLY	DMICE/21-22/MECH/OL-001
2	M.Veeramani	210518114050	SUTHERLAND	DMICE/21-22/MECH/OL-002
3	S. Magesh Kumar	210518114033	SUTHERLAND	DMICE/21-22/MECH/OL-003
4	Henry Marshal M	210518114021	SUTHERLAND	DMICE/21-22/MECH/OL-004
5	Nitish Antony P	210518114039	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-006
6	Aashick Prince.S	210518114001	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-007
7	Balasuryan. M.M	210518114009	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-008
8	Anbumani. A	210518114004	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-009
9	Fredjuel E	210518114016	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-010
10	Karthik Raja. P S	210518114027	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-011
11	Mohan Raj. A	210518114036	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-012
12	Christo Heartly. I	210518114012	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-013
13	Dravin Sam. S	210518114015	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-014
14	Mcgrath. S	210518114035	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-015
15	Dinesh Kumar. P	210518114013	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-016
16	Anto Jemin	210518114005	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-017
17	Vigneshwaran B	210518114302	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-018
18	V. Chandru	210518114011	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-019
19	Jackwin J	210518114023	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-020
20	Murugan S	210518114038	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-021
21	Halan Bruno	210518114019	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-022
22	Gowthaman K	210518114018	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-023
23	Manojkumar A	210518114034	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-025
24	Prabakaran C	210518114044	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-026
25	Yuvaraj L	210518114052	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-027
26	Sudharson W	210518114901	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-028
27	Gokulraj K	210518114017	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-029
28	Nivash V	210518114040	KK PRECISION COMPONENTS PVT LTD	DMICE/21-22/MECH/OL-030
29	Sivasankar. S	210518114049	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-031
30	Ivan Paul.B	201518114022	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-032
31	J. Dishon Stalin	210518114014	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-033
32	Ayyappan D	210518114008	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-035
33	Johan Deenadhayalu A	210517114303	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-036
34	Tacitos Anteen A	210517114145	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-037
35	R. Pasupathy Easwar	210518114042	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-038
36	Vignesh K	210518114051	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-039
37	Sanjay Kishore R	210518114046	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-024
38	Jeevanantham B	210518114024	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-032
39	Saran B	210518114047	PERFECT GEARS PVT LTD	DMICE/21-22/MECH/OL-040

4.6 Professional Activities (20) Total Marks 20.00

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

Institute Marks : 5.00

Sl. No	Name of the Membership/Chapters	Level	Academic Year	Activities	Date of Conduction/Venue	Resource Person / in Collaboration	Organizers	Number of Participants
1	SAE	Institute	2022-23	Guest Lecture on Tyre Basics-Construction	21-03-2023	Mr. Rajesh Ragavan Group Manager, Apollo Global R&D Center Asia on	Department of Mechanical Engineering DMI College of Engineering	56
				Automotive Engine Work shop	09-3-2023 to 10-3-2023	Mr. Xavier Jjaganathan, CEO, Goodwin Motors		35
2		National Level	2022-23	Four students from IV year went for SAEISS Trekking	01-04-2023	SAE	SCMS school of Engineering & Technology, Karukutty Ernakulam club	04
3		Institute	2023-24	Technical Quiz	22-04-2024	Mr. Rajamahendran S	Department of Mechanical Engineering DMI College of Engineering	28
4		Institute	2024-25	EV Workshop	03-10-2024 to 29-11-2024	Mr. Nithin Joint venture with Accenture	Department of Mechanical Engineering DMI College of Engineering	24
5	GSTE	National	2024-25	3 days online Workshop	09-01-2025 to 11-01-2025	Mr, Girish, CEO, Q-spiders	GSTE	20
6	ISTE	Institute	2024-25	Webinar on Navigating Potential Research and Report Writing	18-01-2025	Dr.J.S.Binoj Subject Matter Expert L&T Edu Tech, Chennai	Department of Mechanical Engineering DMI College of Engineering	45
7	IAEng	Institute	2022-23	National Engineers Day	15-09-2022	Mr. Senthil Kumaran M	Department of Mechanical Engineering DMI College of Engineering	35
8		Institute	2023-24	Engineers Day	15-09-2023	Mr. Tamil Kumaran G	Department of Mechanical Engineering DMI College of Engineering	40

9	ARMY	Department	2023-24	Technical Symposium - Mevolution 2K23	13-10-2023	All Departments	Department of Mechanical Engineering DMI College of Engineering	35
10	ARMY		2022-23	Technical Symposium - TESHFEST 2K22	18-10-2022	All Departments	DMI College of Engineering	40
11	ARMY	Institute	2023-24	International Conference RASMET'24	18-04-2024 & 19-04-2024	Dr. Keheng Lim Goh, Dr.S. Saravanperumal	DMI College of Engineering	50
12	ARMY		2022-23	International Conference RACMET'22	10-06-2022	SAEINDIA, ICI	Department of Civil & Mechanical, College of Engineering	35

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

Institute Marks : 5.00

The publication record of newsletters and periodicals demonstrate a sustained commitment to distributing information and updates in the field of mechanical engineering. The **MEVOLUTION** newsletter has been consistently issued biannually since August 2021, encompassing periods from August 2021 to January 2022 and from February 2024 to July 2024, all of which have been effectively released. The most recent edition, covering August 2024 to January 2025, has been published, while the forthcoming issue (February 2025 to July 2025) remains unreleased. The **MECHONS** magazine adheres to a yearly publishing cycle, with volumes released from August 2021 to June 2022 and from July 2023 to June 2024 already published. The most recent edition, encompassing July 2024 to June 2025, is yet to be published. These journals provide a significant platform for disseminating developments, research, and accomplishments within the mechanical engineering community, facilitating ongoing knowledge exchange and involvement. The editorial members include one faculty and on final year student.

News Letters

Sl. No.	Name of the News Letter	Duration	Status	Editors
1	MEVOLUTION 21-2	Aug 2021-Jan 2022	Published	Mr. E M Pradeep, Mr. Loydson P
2	MEVOLUTION 22-1	Feb 2022-July 2022	Published	Mr. E M Pradeep, Mr. Loydson P
3	MEVOLUTION 22-2	Aug 2022- Jan 2023	Published	Mr. E M Pradeep, Mr. Gowtham K
4	MEVOLUTION 23-1	Feb 2023- July 2023	Published	Mr. E M Pradeep, Mr.Antony Joy J
5	MEVOLUTION 23-2	Aug 2023- Jan 2024	Published	Mr. E M Pradeep, Mr. Thomas Alva Edision V
6	MEVOLUTION 24-1	Feb 2024- July 2024	Published	Mr. E M Pradeep, Mr. Jacob D
7	MEVOLUTION 24-2	Aug 2024- Jan 2025	Published	Mr. E M Pradeep, Mr. Naayagan S
8	MEVOLUTION 25-1	Feb 2025- July 2025	Yet to Publish	Mr. E M Pradeep, Mr. Naayagan S

Magazines

Sl. No.	Name of the Magazine	Duration	Status	Editors	Chief Editor
1	MECHONS'22	Aug 2021- June 2022	Published	Mr. G. Tamilkumaran Mr. E M Pradeep	Dr. T Senthilkumar
2	MECHONS'23	July 2022-June 2023	Published	Mr. G. Tamilkumaran Mr. E M Pradeep	Dr. V N Anbazhagan
3	MECHONS'24	July 2023-June 2024	Published	Mr. G. Tamilkumaran Mr. E M Pradeep	Dr. A. Amala Mithin Minther Singh
4	MECHONS'25	July 2024-June 2025	Yet to Publish	Dr. G. Tamilkumaran Mr. E M Pradeep	Dr. A. Amala Mithin Minther Singh

4.6.3 Participationininter-institute events by students of the program of study (10) Institute Marks : 10.00

Events within the State:

Sl. No	Name of the Student	Class	Title of the Event	Date/Duration of Event	Organizer	Mapped POs and PSOs
2024-25						
1	MANOJ KUMARAN	BE- IV	Gear Up Event	28-09-2024	Loyola ICAM College of Technology	PO1, PO2, PSO1
2	NANDAKUMAR	BE- IV				
3	SUNDARAMOORTHY	BE- II	Assembly and Technical Quiz	28-09-2024	Dr. M.G.R Educational and Research Institute, Chennai	PO2, PO5, PSO2
4	SAKTHIDHARAN	BE- II				
5	ASHWIN	BE- III	Engine components Assembly			PO1, PSO1
6	MAHAVISHNU	BE- III	Engine components Assembly			
7	MANOJ KUMAR	BE-III	Technical Quiz	04-10-2024	Sriram Engineering College	PO2, PO4, PSO2
8	SRIDHAR J	BE-II	Design Competition, Technical Quiz	28-10-2024	Rajalakshmi Engineering College	PO3, PO6, PSO3
9	SACHIN R					
10	JEYACHANDRAN S					
11	SAKTHIDHARAN C					
12	RANJITH SAHOO	BE-II	Technical Events	18-10-2024	Alpha Engineering College, Chennai	PO4, PO5, PSO2
13	SANJAY S		Technical Events			
14	THIRUNAVUKARASU V		Technical Events			
15	BHARATH R	BE- III	Mr. Machinist Event	18-10-2024	S.A Engineering College, Chennai	PO3, PO6, PSO3
16	VIKRAM V					
2023-24						
Sl. No	**Name of the Student**	**Class**	**Title of the Event**	**Date/Duration of Event**	**Organizer**	**Mapped POs and PSOs**
1	SARAN SS	BE-II	Workshop on Industry 5.0	23-04-2024	CEG campus, Anna University	PO1, PO5, PSO1
2	SARAN SS	BE-II	Workshop on Drone Development and Entrepreneur	06-03-2024 to 07-03-2024	Jeppiar Institute of Technology, Kunnam	PO2, PO6, PSO2
3	MAHAVISHNU A					
4	SANTHAKUMAR K					
5	RANJITH T					
6	ASHWIN M					
7	VIKRAM V					
8	45 STUDENTS	BE-III & IV	Educational Trip and Industrial Visit	11-04-2024 to 13-04-2024	GD Naidu Car Museum, Mills Tech CNC Applications, Coimbatore	PO1, PO3, PSO3
9	SARAN SS	BE-II	Technical Events	09-11-2023	SA Engineering College, Chennai	PO2, PO4, PSO2
10	MAHAVISHNU A					
11	VISHAL P					
12	RANJITH T					
13	ASHWIN M					
14	VIKRAM V					
15	HUDSON SAFIN					
16	SRIRAM					

17	SHARONRAJ E	BE-III	Workshop on 3D printing A revolutionary Technology	03-11-2023	Jeyasakthi Engineering College, Thiruvallur	PO3, PO5, PSO3
18	RAJ SINGH					
19	ABISHEK DYOUS					
20	MANOJ KUMARAN G	BE-IV				
21	MANO DAVID D					
22	AJAY N					
23	VICTOR K	BE-II				
24	KARTHIKEYAN K	BE-III	Technical Paper Presentation, Mr. Machinist, Chassis Assembly	01-11-2023	Alpha College of Engineering, Chennai	PO1, PO4, PSO1
25	HARISH BALA B	BE-IV				
26	MANO DAVID D	BE-IV				
27	SRINIVASAN V	BE-III				
28	MANOJKUMARAN G	BE-III				
29	JACOB D	BE-IV				
30	RAJ SINGH	BE-III				
31	KISHORE	BE-IV				
32	ABISHEK P	BE-IV				
33	ABISHEK DYOUS I	BE-III				
34	SHARONRAJ	BE-III				
35	RITHISHKUMAR	BE-III				
36	NARAYANAMOORTHY	BE-III				
37	JOEL JOHN J	BE-IV	SERB sponsored High End Workshop on Machining Microfabrication for Biomedical Devices	31-03-2024 to 06-04-2024	IITTDM, Kanchipuram	PO2, PO6, PSO2
38	JACOB D					
39	SURYA V					
40	DHEENA P	BE-II	Technical Event	13-04-2024	Agni College of Engineering. Chennai	PO4, PSO2
41	VIKRAM					
42	VISHAL					
43	UDAYA					

2022-23

Sl. No	Name of the Student	Class	Title of the Event	Date/Duration of Event	Organizer	Mapped POs and PSOs
1	SUNIL P	BE-III	Webinar on Robotics-Trends and Opportunities	15-06-2022	KCG College of Technology, Chennai	PO3, PO6, PSO3
2	PAVITHIRAN M					
3	HARISH BALA B					
4	SAGAYAKAVI M	BE-IV				
5	GOWTHAM J					
6	MANOJKUMARAN G	BE-III	Hydrogen Embrittlement of Degradation of Engineering Metals	10-07-2022	Sri Venkateswara College of Engineering, Chennai	PO2, PO5, PSO2
7	MANOJ P					
8	KIRAN M	BE-IV				

Events Outside the State:

Sl. No	Name of the Student	Class	Title of the Event	Date/Duration of Event	Organizer	Mapped POs and PSOs

2024-25

1	ABISHEK DYOUS	BE-IV	Innovation, Design and Entrepreneur Boot camp	23-09-2024 to 27-09-2024	Amal Jyothi College of Engineering, Kanjirapalli, Kottayam, Kerala	PO1, PO6, PO9, PSO2
2	NARAYANAMOORTHY R					
3	RITHISH KUMAR M					

2023-24						
Sl. No	**Name of the Student**	**Class**	**Title of the Event**	**Date/Duration of Event**	**Organizer**	**Mapped POs and PSOs**
1	26 STUDENTS	BE-IV	Educational Trip and Industrial Visit	22-09-2023 & 23-09-2023	Visweshreya Museum, Bengaluru	PO1, PO4, PO7, PSO3

2022-23						
Sl. No	**Name of the Student**	**Class**	**Title of the Event**	**Date/Duration of Event**	**Organizer**	**Mapped POs and PSOs**
1	KISHORE	BE-IV	Singapore Academic Internship	13-02-2023	NEWater Factory, Singapore	PO2, PO5, PO8, PSO2
2	STEPHEN RAJ S	BE-IV				
3	KATHIRAVAN C	BE-IV	SAEISS Trekking	01-04-2023	SCMS school of Engineering & Technology, Karukutty Ernakulam	PO4, PO6, PO7, PO10, PSO3,
4	ABISHEK A					
1	MAHEM VAZ V					
2	SUJITH KANNAN B					

Prizes and Awards Received by Students

Sl. No	**Name of the Student**	**Class**	**Title of the Event**	**Award/Prize**	**Organizer**
2023-24					
1	MANO DAVID D	BE-IV	Paper Presentation	Second	Alpha college on 01-11-2023
2	JACOB D				
3	HARISH BALA B				
4	SRINIVASAN V	BE-III	Mr. Machinist	First	
5	MANOJ KUMARAN G	BE-III	Mr. Machinist	Second	
6	MANO DAVID D	BE-IV	Chassis Assembly	Third	
7	ASHWIN	BE-II	Mr. Machinist	First	SA Engineering College in Chennai on 09-11-2023
8	SRINIVASAN	BE-III	Mr. Machinist	Third	
9	ASHWIN	BE-II	Treasure Hunt	First	
10	RANJITH SAHOO	BE-II	Technical Event	Second	Alpha Engineering College on 18-10-2024
11	THIRUNAVUKARASU V	BE-II	Technical Event	First	
12	MANOJ KUMARAN	BE-IV	Gear Up Event	First Prize with Rs.1000 cash Prize	Loyola ICAM College of Technology on 28-09-2024
13	NANDAKUMAR				

5 FACULTY INFORMATION AND CONTRIBUTIONS (200) Total Marks 177.26

Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining	As Ty
Dr. N.Azhagesan	ACLPN4832A	ME/M. Tech and PhD	06/06/2008	Heat Transfer	24	5	0	Professor	05/08/2019	05/08/2019	Re
Dr.V.L. Raja	AKWPR0969F	ME/M. Tech and PhD	03/08/2016	Material Science	23	0	0	Professor	05/08/2024	05/08/2024	Re
Dr. A.Amala Mithin Minther Singh	BHXPA0647Q	ME/M. Tech and PhD	26/08/2019	Material Science	19	3	0	Professor	28/08/2024	03/08/2020	Re
Dr. V.N. Anbazhagan	AWDPA5786A	ME/M. Tech and PhD	06/01/2021	Material Science	7	0	0	Associate Professor	23/01/2023	03/08/2020	Re
Dr. Tamil Kumaran G	AHJPT8209Q	ME/M. Tech and PhD	25/10/2024	WELDING	2	0	0	Assistant Professor		02/06/2015	Re
Dr. T. Senthilkumar	BLGPS4223P	ME/M. Tech and PhD	09/08/2017	MECHANICAL ENGINEERING	4	0	0	Professor	21/01/2019	28/04/2017	Re
Mr. Rajamahendran S	BEPPR5478K	M.E/M.Tech	30/11/2011	CAD / CAM	2	0	0	Assistant Professor		15/06/2015	Re
Mr. Kaniraj S O	DAMPK8569M	M.E/M.Tech	28/06/2013	ENGINEERING DESIGN	0	0	0	Assistant Professor		02/06/2015	Re
Mr.Venkatesh R	AMIPV2747D	M.E/M.Tech	30/06/2014	THERMAL ENGINEEIRNG	0	0	0	Assistant Professor		15/06/2015	Re
Mr. Krishnamoorthy N	CTHPK2110F	M.E/M.Tech	28/06/2013	ENGINEERING DESIGN	2	0	0	Assistant Professor		16/06/2016	Re
Mr. Senthilkumaran M	DLQPM1511L	M.E/M.Tech	30/05/2016	ENERGY ENGINEERING	0	0	0	Assistant Professor		15/06/2016	Re
Mr.Saravanan P	GYGPS2542B	M.E/M.Tech	30/06/2014	IC ENGINES	0	0	0	Assistant Professor		21/07/2016	Re
Mr. Pradeep E M	DIFPP6722J	M.E/M.Tech	30/06/2015	MANUFACTURING ENGINEERING	1	0	0	Assistant Professor		30/11/2020	Re
Mr. Xavier De Cruz	AAAPX8745P	M.E/M.Tech	29/06/2012	CAD	0	0	0	Associate Professor	12/07/2018	09/07/2012	Re
Mr. Robinson E K	BRHPR7218C	M.E/M.Tech	29/06/2016	CAD / CAM	0	0	0	Assistant Professor		19/06/2017	Re
Mr. Rajesh C	AOKPR8311B	M.E/M.Tech	28/06/2006	MACHINE DESIGN	0	0	0	Assistant Professor		03/08/2020	Re
Mr.Jagadeesan M	BARPJ3470R	M.E/M.Tech	29/06/2016	THERMAL ENGINEERING	0	0	0	Assistant Professor		13/08/2021	Re
Dr.S. Julyes Jaisingh	AHTPJ2820M	ME/M. Tech and PhD	24/06/2002	Material Science	16	0	0	Professor	13/08/2021	13/08/2021	Co
Mr. Venkatesan M	AXVPV8007C	M.E/M.Tech	27/06/2014	AUTOMOBILE ENGINEERING	0	0		Assistant Professor		04/08/2016	Re
Mr.Kumaresh D	DFFPK8413G	M.E/M.Tech	30/06/2015	CAD / CAM	0	0	0	Assistant Professor		24/06/2017	Re
Mr. Aravind S	BDTPA5527P	M.E/M.Tech	29/06/2017	CAD / CAM	0	0	0	Assistant Professor		01/06/2018	Re
Mr.Madhavsankar R	ESDPS9039C	M.E/M.Tech	27/06/2014	ENGINEERING DESIGN	0	0	0	Assistant Professor		03/08/2020	Re
Mr.Gloria Lidwin B	BTWPB7417E	M.E/M.Tech	28/06/2013	MANUFACTURING ENGINEERING	0	0	0	Assistant Professor		03/08/2020	Re

5.1 Student-Faculty Ratio (20)

Total Marks 18.00

Institute Marks : 18.00

UG

No. of UG Programs in the Department 1

B.E.MECHANICAL ENGINEERING						
Year of Study	**CAY (2024-25)**		**CAYm1 (2023-24)**		**CAYm2 (2022-23)**	
	Sanction Intake	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**
2nd Year	60	5	60	0	60	2
3rd Year	60	0	60	2	90	9
4th Year	60	2	90	9	150	6
Sub-Total	**180**	**7**	**210**	**11**	**300**	**17**
Total	**187**		**221**		**317**	

Grand Total	187	221	317

PG

No. of PG Programs in the Department 1

M.E THERMAL ENGINEERING			
Year of Study	**CAY(2024-25)**	**CAYm1(2023-24)**	**CAYm2 (2022-23)**
	Sanction Intake	**Sanction Intake**	**Sanction Intake**
1st Year	12	12	12
2nd Year	12	12	0
Total	**24**	**24**	**12**

Grand Total	24	24	12

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 1

Description	**CAY(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
Total No. of Students in the Department(S)	211 **Sum total of all (UG+PG) students**	245 **Sum total of all (UG+PG) students**	329 **Sum total of all (UG+PG) students**
No. of Faculty in the Department(F)	12 **F1**	16 **F2**	22 **F3**
Student Faculty Ratio(SFR)	17.58 **SFR1=S1/F1**	15.31 **SFR2=S2/F2**	14.95 **SFR3=S3/F3**
Average SFR	15.95 **SFR=(SFR1+SFR2+SFR3)/3**		
F=Total Number of Faculty Members in the Department (excluding first year faculty)			

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

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

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

	Total number of regular faculty in the department	**Total number of contractual faculty in the department**
CAY(2024-25)	12	0
CAYm1(2023-24)	16	0
CAYm2(2022-23)	21	1

Average SFR for three assessment years : 15.95

Assessment SFR : 18

5.2 Faculty Cadre Proportion (25) Total Marks 25.00

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2024-25)	1.00	3.00	2.00	1.00	7.00	8.00
CAYm1(2023-24)	1.00	2.00	2.00	2.00	8.00	12.00
CAYm2(2022-23)	1.00	2.00	3.00	1.00	10.00	18.00
Average Numbers	1.00	2.33	2.33	1.33	8.33	12.67

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

5.3 Faculty Qualification (25) Total Marks 18.26

Institute Marks : 18.26

	X	Y	F	FQ = 2.5 x [(10X + 4Y) / F)]
2024-25(CAY)	4	8	10.00	18.00
2023-24(CAYm1)	4	12	12.00	18.33
2022-23(CAYm2)	5	17	16.00	18.44

Average Assessment : 18.26

5.4 Faculty Retention (25) Total Marks 20.00

Institute Marks : 20.00

Description	2023-24	2024-25
No of Faculty Retained	16	11
Total No of Faculty	16	16
% of Faculty Retained	100	69

Average : 84.00

Assessment Marks : 20.00

5.5 Innovations by the Faculty in Teaching and Learning (20) Total Marks 18.00

Institute Marks : 18.00

Innovations by the Faculty in Teaching and Learning

The Institute helps instructors in fostering a student-centered learning experience. Faculty members support student-centered learning rather than teacher-centered methodologies. The majority of students find it challenging to sustain focus throughout a lecture. After around 30 minutes, their attention begins to diminish, first for brief intervals and then for longer durations, leading to limited understanding and retention at the end of the lecture. A classroom Studies revealed that students retained 70% of the knowledge presented in the first thirty minutes of a lecture, but only 20% was retained from the subsequent twenty minutes. The faculty members utilize effective innovative pedagogical methods to attain educational goals.

A. The work must be made available on Institute Website

The strategies are accessible in the Institutes website to aid instructors and students in comprehending and subsequently implementing these techniques for future use or replication.

B. The work must be available for peer review and critique

Innovative instructional strategies are utilized from the inaugural year. These strategies invigorate students excitement and engage their attention, as these novel methods markedly differ with conventional teaching techniques. The faculty members have the authority to choose appropriate teaching methods. The IQAC evaluates novel pedagogical methods and offers relevant feedback promptly. The faculty executes the process after consulting with peers and makes requisite modifications.

C. The work must be reproducible and developed further by others

The innovative teaching methods adopted by one instructor can be replicated or improved upon by other instructors. This enables improvisations, consequently stabilizing the system. The materials are accessible on the institutes website and ERP software to aid understanding and implementation of innovative teaching approaches by other academics, promoting continuous improvement. It is available to all, as it is published in the institutes website. The course materials are reproduced as necessary.

D. Statement of clear goals, use of appropriate methods, significance of results, effective presentation and reflective critique

The process is executed to achieve certain goals:

1. Enhancement of technical and life skills.
2. Improvement in placements.
3. Enhancement of comprehension on the subject matter.
4. Students are directed towards innovative projects.
5. Enhancement in learning the advancement and self-satisfaction of students are obvious through feedback and primarily through their examination performance.

The commonly practiced methods by the departmental faculty are listed below:

1. Peer learning- Students (Interactive Learning)
2. Collaborative Learning (Project Based Learning)
3. Flipped Classroom (Dissemination of Study material-ERP CAMU)
4. Case studies and Problem based Learning
5. PPT/ Keynotes/Mind Map
6. Gamification (MCQ/AICTE Parakh)
7. Experiential Learning (Industrial Visit, Internship, Laboratory Equipment Usage)
8. Online Learning (NPTEL/ Swayam Course)
9. Video Lectures

Reflective Critique

The implementation of novel teaching methodologies, including flipped classrooms, peer learning, gamification, and experiential learning, offer both advantages and obstacles for students and educators. Students frequently have challenges in adjusting to self-directed learning, technology obstacles, engagement deficits, cognitive overload, and evaluation difficulties. To address these problems, our institution organized training sessions for both students and teachers to facilitate seamless adaption to new methodologies. Digital infrastructure enhances to facilitate online learning, and blended teaching methodologies. Faculty members are motivated and supported in content development and evaluation strategies, while students should be progressively familiarized with active learning methodologies to enhance their participation. Consistent feedback systems enhance these pedagogies, promoting a more efficient and inclusive educational atmosphere.

Effective Presentation

- Motivating and engaging the student
- Providing individualized learning approaches
- Facilitating autonomy in learning
- Fostering collaborative and teamwork competencies
- Proposing innovative pedagogical methods for identical content
- Reducing time devoted on lesson preparation and administrative tasks
- Providing a more comprehensive approach to evaluation

Some of the innovations in teaching and learning bf the faculty for odd semester 2024-25 (final year students) are listed in Table 5.5.1.

Table 5.5.1 Innovations by the Faculty in Teaching and Learning

Sl.No	Subject code	Subject Name	PPT/ Keynotes/Mind Map	Flipped Classroom (Dissemination of Study material-Camu)	Gamification (MCQ)/AICTE Parakh	Peer learning-Students	Case Studies and Problem Based Learning	Project based learning	Industrial Visit/ Internship	Laboratory Equipment Usage	Nptel/ Swayam Course	Videos Lectures
1	ME3791	MECHATRONICS & IOT	Yes	Yes	Yes	Yes		Yes		Yes		Yes
2	ME3792	COMPUTER INTEGRATED MANUFACTURING	Yes	Yes	Yes	Yes	Yes		Yes			Yes
3	GE3791	HUMAN VALUES AND ETHICS	Yes	Yes	Yes	Yes	Yes					Yes

4	GE3792	INDUSTRIAL MANAGEMENT	Yes	Yes	Yes	Yes	Yes					Yes
5	CCS333	AUGMENTED REALITY/VIRTUAL REALITY	Yes	Yes	Yes	Yes	Yes			Yes		Yes
6	OML351	INTRODUCTION TO NON-DESTRUCTIVE TESTING	Yes	Yes	Yes	Yes	Yes					Yes
7	OHS352	PROJECT REPORT WRITING	Yes	Yes	Yes	Yes		Yes				Yes

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

Total Marks 15.00

Institute Marks : 15.00

Name of the faculty	Max 5 Per Faculty		
	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
Dr. N.Azhagesan	0.00	5.00	0.00
Dr. T. Senthilkumar	0.00	5.00	0.00
Dr. A. Amala Mithin Minther Singh	5.00	5.00	5.00
Dr. V.N. Anbazhagan	5.00	5.00	5.00
Dr. G. Tamil Kumaran	5.00	5.00	5.00
Mr. Rajamahendran S	5.00	5.00	3.00
Mr. Kaniraj S O	3.00	5.00	5.00
Mr.Venkatesh R	0.00	3.00	3.00
Mr. Krishnamoorthy N	5.00	3.00	3.00
Mr. Senthilkumaran M	5.00	5.00	5.00
Mr. Saravanan P	5.00	5.00	5.00
Mr. Pradeep E M	5.00	5.00	5.00
Mr. Xavier De Cruz	0.00	5.00	0.00
Mr. Venkatesan M	0.00	0.00	5.00
Mr. Robinson E K	5.00	0.00	5.00
Mr. Rajesh C	3.00	0.00	0.00
Mr. Jagadeesan M	5.00	0.00	0.00
Mr. Kumaresh D	0.00	5.00	0.00
Dr. S. Julyes Jaisingh	0.00	5.00	0.00
Mr. Aravind S	0.00	0.00	5.00
Mr. Madhavsankar R	0.00	5.00	3.00
Mr. Gloria Lidwin B	0.00	5.00	3.00
Sum	56.00	81.00	65.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratioas per 5.1	10.55	12.25	16.45
Assessment [3*(Sum / 0.5RF)]	31.85	39.67	23.71

Average assessment over 3 years: 31.74

5.7 Research and Development (30)

5.7.1 Academic Research (10)

A. **Number of Quality Publications in Refereed/ SCI Journals, Citations, Books/ Book Chapters etc.**

Table 5.7.1 List of Publication Details in Refereed/ SCI Journals

Sl. No	Name of the Faculty	2024-2025	2023-2024	2022-2023	Total
1	Dr. N.Azhagesan		**1**		**1**
2	Dr. T. Senthilkumar				
3	Dr.V.L. Raja				
4	Dr. A.Amala Mithin Minther Singh	**2**	**4**	**2**	**8**
5	Dr. V.N. Anbazhagan	**1**		**1**	**2**
6	Dr. Tamil Kumaran G		**2**		**2**
7	Mr. Rajamahendran S				
8	Mr. Kaniraj S O				
9	Mr.Venkatesh R				
10	Mr. Krishnamoorthy N				
11	Mr. Senthilkumaran M			**1**	**1**
12	Mr.Saravanan P				
13	Mr. Pradeep E M		**1**		**1**
14	Mr. Xavier De Cruz				
15	Mr.Venkatesan M				
16	Mr. Robinson E K				
17	Mr. Rajesh C				
18	Mr.Jagadeesan M				
19	Dr.S. Julyes Jaisingh				
20	Mr.Kumaresh D				
21	Mr. Aravind S				
22	Mr.Madhavsankar R				
23	Mr.Gloria Lidwin B				
Total		**3**	**8**	**4**	**15**

JOURNAL PUBLICATIONS

Academic Year – 2024-25

Table 5.7.1 (a) List of journal Publications for the Academic Year 2024-25

Sl.No	Name of the Authors	Title of the Paper	Month & Year	Volume, Issue & Page No	Name of the Journal with Publisher ISSN Number	Impact Factor	DOI Link	Category(SCI, ESCI, Scopus, WoS, Others)	Quartile (Q1, Q2, Q3 & Q4)
1	Bravin Daniel Emmanuel , Arul Franco Panimayam, Michael Raj Francis , **Amala Mithin Minther Singh Amirthaiah**	Exploring the adverse environmental effects of bio teakwood as filler in bio-degradable PU hybrid: A sustainable and systematic approach	December 2024	Vol.29 Issue.4	Revista Materia 1517-7076	**0.57**	https://doi.org/10.1590/1517-7076-RMAT-2024-0139	**SCI**	**Q4**
2	Prabhu B,Valan Arasu A, Gurusamy P**Amala Mithin Minther Singh A**	Solar photovoltaic cooling using paraffin phase change material: Comprehensive Assessment	June 2024.	Volume 197	Renewable and Sustainable Energy Reviews, Elsevier, Online: 1364-0321, Print:1879-0690	**16.3**	https://doi.org/10.1016/j.rser.2024.114372	**SCI**	**Q1**

3	**V.N.Anbazhagan** R. Edwin Raj S.C. Vettivel	Augmentation and Extensive Interpretation of Novel Fiber-Foam-Fiber Laminate (FFF) Using Basalt Fiber, Ceramic Mat, and Ceramic Foam	28 AUG 2024	Volume 25; Issue. 4	Anadolu Psikiyatri Dergisi, ISSN: 1302-6631		https://doi.org/10.5281/zenodo.13382431	**Scopus**	**Q4**

Academic Year – 2023-24

Table 5.7.1 (b) List of journal Publications for the Academic Year 2023-24

Sl.No	Name of the Authors	Title of the Paper	Month & Year	Volume, Issue & Page No	Name of the Journal with Publisher ISSN Number	Impact Factor	DOI Link
1	**Amirthaiah Amala Mithin Minther Singh,** Panimayam Arul Franco, Joseph Selvi Binoj, Amirthaiah Arul Shemin	Mechanical, morphological and water intake behavior of Mg-Si integrated carbon hybrid composite for marine deckhouse (https://revistademetalurgia.revistas.csic.es/index.php/revistademetalurgia/article/view/1572)	September 2023	Vol.59 Issue.3	Revista de Metalurgia eISSN: 1988-4222 ISSN-L: 0034-8570	**0.8**	https://doi.org/ (https://doi.org
2	G. Tamilkumaran**,** K. Jayakumar, **A. Amala Mithin Minther Singh**	Characterization of Pulsed-Tungsten Inert Gas (PTIG) Welding on AA5754-H111 Alloy: Mechanical Properties and Microstructural Analysis",	November 2023	Vol.10 Issue.11	Material Research Express, IOP Publishing 2053-1591	**2.3**	**https://doi.org** (https://doi.org
3	A. Sagai Francis Britto, N, Rajesh Prabha, B. Brailson Mansingh, R. David, **A. Amala Mithin Minther Singh,** J. S. Binoj	Extraction and Characterization of Dypsis lutescens peduncle fiber: Agro Waste to Probable Reinforcement in biocomposites- A Sustainable Approach	October 2023.	pp.1-10	Biomass Conversion and Biorefinery, Springer Berlin Heidelberg Electronic ISSN 2190-6823 Print ISSN 2190-6815	**3.5**	https://doi.org/ (https://doi.org y)
4	**A. Amala Mithin Minther Singh,** P. Arul Franco, N. Azhagesan, V. Sharun	Exploring Seashell and Rice husk Waste for Lightweight Hybrid Biocomposites: Synthesis, Microstructure and Mechanical Performance",	September 2023.	Vol. 14, pp.30161–30170	Biomass Conversion and Biorefinery, Springer Berlin Heidelberg Electronic ISSN 2190-6823 Print ISSN 2190-6815	**3.5**	https://doi.org/ (https://doi.org x)
5	**G. Tamil Kumaran,** K.S. Jayakumar	Exploring the relationship between TIG welding current and AA5754-H111 joint characteristics	October 2023	Vol. 24, Issue 5	Journal Of Ceramic Processing Research, 1229-9162	1.4	https://doi.org/ (https://doi.org

6	**G. Tamilkumaran,** K. Jayakumar, A. Amala Mithin Minther Singh	Characterization of Pulsed-Tungsten Inert Gas (PTIG) Welding on AA5754-H111 Alloy: Mechanical Properties and Microstructural Analysis",	November 2023	Vol.10 Issue.11	Material Research Express, IOP Publishing 2053-1591	**2.3**	https://doi.org/ (https://doi.org
7	A. Amala Mithin Minther Singh, P. Arul Franco, **N. Azhagesan,** V. Sharun	Exploring Seashell and Rice husk Waste for Lightweight Hybrid Biocomposites: Synthesis, Microstructure and Mechanical Performance",	September 2023.	Vol. 14, pp.30161–30170	Biomass Conversion and Biorefinery, Springer Berlin Heidelberg Electronic ISSN 2190-6823 Print ISSN 2190-6815	**3.5**	https://doi.org/ (https://doi.org x)
8	**Pradeep E M** Mathi Kannaiyan	A Comprehensive Review of Various Characterizations of Discarded PET / Metal Hybrid Composite	5 & 2023	6, 3	International Journal of Scientific Research and Engineering Development - 2581 - 7175		https://ijsred.c V6I3P138.pdf (https://ijsred.c V6I3P138.pdf)

Academic Year – 2022-23

Table 5.7.1 (c) List of journal Publications for the Academic Year 2022-23

Sl.No	Name of the Authors	Title of the Paper	Month & Year	Volume, Issue & Page No	Name of the Journal with Publisher ISSN Number	Impact Factor	DOI Link	Category(SC ESCI, Scopus, WoS, Others
1	Brailson Mansingh, Binoj, **A. Amala Mithin Minther Singh,** Sangai Francis Britto	Influence of SiC nanoparticles on properties of alkali-treated areca fruit husk fiber/hybrid polymer composites",	March 2023	Vol.140 Issue.10	Journal of Applied Polymer Science, Wiley Online ISSN:1097-4628 Print ISSN:0021-8995	**3.057**	https://doi.org/10.1002/app.53591 (https://doi.org/10.1002/app.53591)	**SCI**
2	Wenish G D, Prince M, Arul Franco P, **A. Amala Mithin Minther Singh**	Evaluation of Hardness of AISI 1045 Steel Rods Tested by Borided and Inducted	August 2022.	Vol.91 No:4, pp.832-856,	Periodico di Mineralogia, ISSN: 0369-8963	**1.2**	https://doi.org/10.37896/pd91.4/91456 (https://doi.org/10.37896/pd91.4/91456)	**SCI**
3	Joseph Selvi Binoj, Natarajan Manikandan, Bright Brailson Mansingh .,**VN Anbazhagan**	Taguchi's optimization of areca fruit fiber mechanical properties for polymer composite applications	7 OCT2022	Volume23/3207-3213	Fibers and polymers, Springer	**2.4**	https://link.springer.com/article/10.1007/s12221-022-0365-2 (https://link.springer.com/article/10.1007/s12221-022-0365-2)	**SCI**
4	D. Prabhakarana, S. Thiagarajana, **M.Senthilkumaran,** S. Selvarasud, S.Thirumavalavan S.Cheralathana	Performance and emission characteristics of jatropha and dimethoxy-methane fuel blends with EGR in single cylinder water cooled CI Engine	June, 2022	14(3) & 356	International Journal of Vehicle Structures & Systems ISSN: 0975-3060	**0.49**	https://doi.org/10.4273/ijvss.14.3.14 (https://doi.org/10.4273/ijvss.14.3.14)	**Scopus**

Table 5.7.1 (d) Details of Books/Book Chapters Published

Sl.No	Name of the Faculty	2024-2025	2023-2024	2022-2023	Total
1	Dr. N.Azhagesan			1	1
2	Dr. T. Senthilkumar				
3	Dr.V.L. Raja				
4	Dr. A.Amala Mithin Minther Singh	1	2	1	4
5	Dr. V.N. Anbazhagan			2	2
6	Dr. Tamil Kumaran G	1		2	3
7	Mr. Rajamahendran S	1	1		2
8	Mr. Kaniraj S O		1	1	2
9	Mr.Venkatesh R				
10	Mr. Krishnamoorthy N			1	1
11	Mr. Senthilkumaran M		1	1	2
12	Mr.Saravanan P	1	1		2
13	Mr. Pradeep E M	1	2		3
14	Mr. Xavier De Cruz				
15	Mr.Venkatesan M				
16	Mr. Robinson E K				
17	Mr. Rajesh C				
18	Mr.Jagadeesan M				
19	Dr.S. Julyes Jaisingh				
20	Mr.Kumaresh D				
21	Mr. Aravind S				
22	Mr.Madhavsankar R				
23	Mr.Gloria Lidwin B				
Total		5	8	9	22

B. Ph. D. Guided/ Ph. D. Awarded during the assessment period while working in the institute

Table 5.7.1 (e) List of faculties awarded Ph.D.

Sl.No	Name of the Faculty	University Name	Date	Academic Year	Reference Number	Research FIELD
1	Dr. Tamil Kumaran G	Anna University	25-10-2024	2024-202s5	17142991246/Ph.D./AR4	Welding of AluminumAlloys

Table 5.7.1 (f) List of Faculty Ph.D. Guiding/Guided

Sl.No	Name of the Supervisor	No. of Research Scholars Pursuing	No. of Research Scholars Guided	Total
1	Dr. A.Amala Mithin Minther Singh	3	0	3

Table 5.7.1 (g) Details of Ph.D. Guiding

Name of the Supervisor	Name of Research Scholar	Research Center	University	Month & Year of Registration

Dr. A.Amala Mithin Minther Singh	Saravanan P	Mechanical Engineering, DMI College of Engineering	Anna University	July 2023
	Mani Vannan M	Mechanical Engineering, DMI College of Engineering	Anna University	July 2024
	Senthil Kumaran M	Mechanical Engineering, DMI College of Engineering	Anna University	July 2024

Table 5.7.1 (h) Faculty Pursuing Ph.D.

Sl.No	Name of the Faculty	University	Registration Month & Year	Status
1	Mr.Venkatesh R	Anna University	July 2017	Confirmation Completed
2	Mr. Pradeep E M	Anna University	Jan 2022	Confirmation Completed
3	Mr. Krishnamoorthy N	Anna University	July 2022	Confirmation Completed
4	Mr.Saravanan P	Anna University	July 2023	Confirmation Completed
5	Mr. Rajamahendran S	Anna University	July 2024	Course Work
6	Mr. Senthilkumaran M	Anna University	July 2024	Course Work
7	Mr. Kaniraj S.O	Anna University	Jan 2025	Course Work

Table 5.7.1 (i) Publications in Conferences

Sl.No	Name of the Faculty	2024-2025	2023-2024	2022-2023	Total
1	Dr. N.Azhagesan		**2**		**2**
2	Dr. T. Senthilkumar		**2**		**2**
3	Dr.V.L. Raja				
4	Dr. A.Amala Mithin Minther Singh		**4**		**4**
5	Dr. V.N. Anbazhagan		**3**		**3**
6	Dr. Tamil Kumaran G		**4**	**1**	**5**
7	Mr. Rajamahendran S		**3**		**3**
8	Mr. Kaniraj S O		**3**		**3**
9	Mr.Venkatesh R		**2**		**2**
10	Mr. Krishnamoorthy N		**3**		**3**
11	Mr. Senthilkumaran M		**3**		**3**
12	Mr.Saravanan P		**3**		**3**
13	Mr. Pradeep E M		**3**		**3**
14	Mr. Xavier De Cruz				
15	Mr.Venkatesan M				
16	Mr. Robinson E K		**1**		**1**
17	Mr. Rajesh C		**1**		**1**
18	Mr.Jagadeesan M		**1**		**1**
19	Dr.S. Julyes Jaisingh				

20	Mr.Kumaresh D				
21	Mr. Aravind S				
22	Mr.Madhavsankar R				
23	Mr.Gloria Lidwin B				
Total			**38**	**1**	**39**

Table 5.7.1 (j) Details of Patents

Academic Year	Name of Faculty	Details	Indian/other	Patent Registration No	Date Filing
2024-25	**Rajamahendran S,** Mohamed Abbas S, Manikandan R, Kavita Sanjay Singh, Rohini G, Dr. Nirmala R	Hyper spectral sensing-based system for salad leaf disease detection and prediction using Machine learning algorithms	Indian	202441074598 A	Octob 2024
2023-24	Dr. N .Azhagesan Dr. T. Senthilkumar Dr. A. Amala Mithin Minther Singh S.Rajamahendran N. Krishnamoorthy P.Saravanan	Finger Cutting Accident Avoidance Alarm System For Rod Cutters Employing Cnn Based Image Processing	Indian	202341055171A	Octob 2023 17/08/2
	Dr.V.N. Anbazhagan, G.Tamil Kumaran, S.O. Kaniraj, M M.Senthilkumaran, E.M Pradeep	Temperature and Humidity Sensor based Air Blower Controller for Food Drying	Indian	202341055182A	Octob 2023 17/08/2
2021-2022	P. Arul (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Franco%2C+P.+Arul%22&type=Author&) Franco, A. Amala Mithin Minther (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Singh%2C+A.+Amala+Mithin+Minther%22&type=Author&) Singh, Sai, N. Prem (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Sai%2C+N.+Prem%22&type=Author&), Bhagavan, V. S (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Bhagavan%2C+V.+S%22&type=Author&), Daniel, E. Bravin (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Daniel%2C+E.+Bravin%22&type=Author&), Dharwal, Mridul (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Dharwal%2C+Mridul%22&type=Author&), Mateen, Ahmed (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Mateen%2C+Ahmed%22&type=Author&), Hariharan, G (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Hariharan%2C+G%22&type=Author&), Kailainathan, S (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Kailainathan%2C+S%22&type=Author&), K., Parthasarathy (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22K.%2C+Parthasarathy%22&type=Author&), Nayak, Biswajit (https://vufind-test.katalog.k.utb.cz/Summon/Search?lookfor=%22Nayak%2C+Biswajit%22&type=Author&)	Artificial Neural Network Based Production Monitoring With Optimized Tool Lifespan Syste (https://www.patentguru.com/AU2021103342A4)m	Australian (Grant)	AU2021103342A4	Augu 202 05/08/2

5.7.2 Sponsored Research (5) Institute Marks : 5.00

2023-24 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Design and Development of Aqua Silencer	6 months	TNCST	7500.00
			Total Amount(X): 7500.00

2022-23 (CAYm2)

Project Title	Duration	Funding Agency	Amount
NOURISED FOOD AND EGG PREPARATION FOR PATIENTS THROUGH 3-D PRINTING TECHNOLOGIES	3 years	Department of Science and Technology	0.00
NANO COATINGS FOR MARINE APPLICATIONS WITH DISCARDED SEA SHELL PARTICLES USING ADDITIVE MANUFACTURING TECHNOLOGY	3 years	Department of Science and Technology	0.00
			Total Amount(Y): 0.00

2021-22 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Empowerment of the Students and Teachers using ICT	1 year	Department of Science and Technology (NCSTC)	2387000.00
SURFACE NANO COATINGS USING DISCARDED SEA SHELL PARTICLES FOR MARINE APPLICATION	3 years	Department of Science and Technology (NCSTC)	0.00
Innovative Technology to Optimize the Accessing of Community Services and Rural Development	3 years	Department of Science and Technology	0.00
			Total Amount(Z): 2387000.00

Cumulative Amount(X + Y + Z) = 2394500.00

5.7.3 Development Activities (10)

Institute Marks : 10.00

5.7.3 Development Activities

The Mechanical Engineering Department is committed to ensure innovations, research, and practical learning through a variety of development activities. These efforts aim to bridge the gap between theoretical knowledge and practical application while addressing real-world challenges.

A. Product Development

The department has undertaken innovative product development projects that address real-world challenges and align with societal needs. These projects emphasize practical learning, technical skills, sustainability and industrial applications.

Table 5.7.3 (a) Details of Product Development for the Academic Year 2023-24

S.No	Project Title	Name of the Student	Year	Supervisor Name	Purpose/Features	PO Mapping	PSO Mapping
1	Experimental Investigation on Recyclability and Lifespan of Al-Zn Alloy for Naval & Aircraft Applications	Ajay N, Mano David D, Hariharan M	IV	Mr. Tamilkumaran G	Investigate the recyclability, durability, and extended lifespan of Al-Zn alloys for naval and aerospace use.	PO1, PO4, PO6	PSO1, PSO2
2	Experimental Investigation of Performance of Tamarind Husk Blended Epoxy Resin Reinforced by Delonix regia Seed Pod	Dhayanithi S, Harishbala B, Mohan D	IV	Mr. Kani Raj S O	Develop sustainable composites using tamarind husk and Delonix regia for structural applications.	PO4, PO7, PO12	PSO2, PSO3
3	Evaluation and In-situ Monitoring of Interfacial and Mechanical Properties of Epoxy Adhesive for Bio-Hybrid Composites	Jacob D, Joel John J, Surya V	IV	Dr. Amala Mithin Minther Singh A	Assess real-time interfacial and mechanical behavior for effective bio-hybrid adhesive applications.	PO1, PO4, PO9	PSO2, PSO3
4	Analyzing the Mechanical Behaviour of E-Glass/Carbon Fibre Reinforced Polyester Based Hybrid Polymer Matrix Composite for Domestic Application	Nithish K, Pavithran M, Sathish C	IV	Mr. Raja Mahendran S	Develop and optimize hybrid polymer matrix composites for domestic use with enhanced mechanical properties.	PO1, PO3, PO9	PSO1, PSO2
5	Hybrid Seashell and Rice Husk Filler as a Promising Additive for Sisal Fibre Polymer Composites: A Sustainable Approach	Kevin K, Abishek P, Dinesh S	IV	Dr. Amala Mithin Minther Singh A	Create sustainable polymer composites using hybrid natural fillers for structural applications with improved properties.	PO4, PO6, PO7	PSO2, PSO3
6	Experimental Analysis of Nano Coated Mild Steel Marine Hull Structure Using Plasma Spray Technique	Kishorekumar K, Logesh K, Narayanaswamy G	IV	Mr. Krishnamoorthy N	Improve durability and corrosion resistance of marine hull structures using plasma spray nano-coating techniques.	PO1, PO4, PO9	PSO1, PSO2
7	Characterization and Tribological Behaviour of PET/Rice Husk Nano Composite for Aerospace Application	Dinesh T, Samuel N, Varun D	IV	Mr. Pradeep E M	Develop lightweight, durable nano-composites for aerospace applications.	PO4, PO6, PO9	PSO2, PSO3
8	Experimental Investigation of Performance of Wood Apple Blended Epoxy Resin Reinforced by Delonix Regia Seed Pod	Sunil B, Thomas Alva Edison V, Gowtham R	IV	Mr. Senthilkumaran M	Fabricate and analyze sustainable composites for structural and industrial applications.	PO3, PO7, PO12	PSO1, PSO3
9	Analysis of the Mechanical Behaviour of Particulate Reinforced E Glass Fibre Hybrid Polymer Matrix Composites	Srijith V, Subash Chandra Bose B	IV	Dr. T. Senthil Kumar	Study and optimize mechanical performance of hybrid composites for structural and automotive uses.	PO1, PO4, PO9	PSO2, PSO3
10	Exploring the Mechanical Behaviour and Characterization of Bio Filler and Incorporated Hybrid Composite for Brake Pad: A Systematic and Sustainable Approach	Bibin T, Jeevanandhan B, Sriram S	IV	Mr. P. Saravanan	Develop sustainable and high-performance composites for brake pad applications.	PO3, PO6, PO12	PSO1, PSO3

Table 5.7.3 (b) Details of Product Development for the Academic Year 2022-23

S.No	Project Title	Name of the Student	Year	Supervisor Name	Purpose/Features	PO Mapping	PSO Mapping
1	Optimization and Analysis of Surface Texture on Coated Mild Steel in Marine Environment	Aashick Prince S, Manojkumar A, Mohan Raj A	IV	Dr. A. Amala Mithin	Improve surface properties and corrosion resistance of coated mild steel for marine applications.	PO1, PO2, PO4	PSO1, PSO2
2	Investigation of Tribological Performance of Discarded Hybrid Composite for Aircraft Structures	A. Anbumani, S. Magesh Kumar, S. Murugan	IV	E.M. Pradeep	Study the effects of welding parameters on strength and durability of welded joints.	PO1, PO6, PO9	PSO2, PSO3
3	Influence of Welding Parameters on Mechanical Properties of Pulsed GTAW Welded	Antony Hrithik W, Balasuryan M M, Henry Marshal M, Yuvaraj L	IV	G. Tamil Kumaran	Study the effects of welding parameters on strength and durability of welded joints.	PO1, PO6, PO9	PSO2, PSO3
4	Characterization and Mechanical Behaviour of Sisal/Pineapple Fibre Incorporated with Egg Shell Filler for Marine Structure	Ayyappan D Karthik Raja P Loydson. P. A	IV	M. Senthil Kumaran	Develop sustainable, high-strength composite materials for marine environments.	PO4, PO7, PO12	PSO1, PSO3
5	Design and Fabrication of Plunger Type Compression Moulding for Epoxy Polymer Matrix Composite Material	V. Chandru Jackwin J Jones Aldrin	IV	Dr.V.N.Anbazhagan	Design and fabricate a plunger type compression moulding system for efficient composite material production.	PO1, PO3, PO6	PSO2, PSO3
6	Design and Fabrication of Regenerative Braking System	Sunil B, Thomas Alva Edison V, Gowtham R	III	Mr. N. Krishna Moorthy	To improve energy efficiency by converting kinetic energy to electrical energy.	PO1, PO7	PSO1
7	Design and Fabrication of Automatic Paper Shearing Machine	Ajay N, Dinesh T, Mano David D	III	Mr. S. Rajamahendran	To automate paper cutting operations in a precise and efficient manner.	PO1, PO3	PSO2
8	Design and Fabrication of Fourway Hacksaw Machine	Agash T, Jeevanandhan B, Varun D	III	Mr. P. Saravanan	To enhance productivity by enabling simultaneous cutting of materials.	PO1, PO4	PSO1
9	Design and Fabrication of Ackerman Steering Mechanism	Bibin T, Dhayanithi S, Harish Bala B	III	Mr. Kaniraj S.O	To optimize vehicle steering by simulating Ackerman geometry for smooth turns.	PO1, PO5	PSO2
10	Design and Fabrication of River Cleaning Boat	Jacob D, Joel John J, Suriya V	III	Mr. G. Tamil Kumaran	To clean water bodies by collecting floating debris efficiently.	PO2, PO6	PSO3
11	Design and Fabrication of Ornithopter Flapping Machine	Srijith V, Hariharan M, Samuel N	III	Mr. G. Tamil Kumaran	To mimic bird flight for aerodynamic studies and testing.	PO1, PO5	PSO2
12	Design and Fabrication of Chain Link Mechanism for Wire Mesh	Nithish K, Pavithiran M, Sathish C	III	Mr. R. Venkatesh	To fabricate a chain link mechanism for creating wire meshes efficiently.	PO1, PO3	PSO2
13	Design and Fabrication of Solar Grass Cutter and Weed Trimmer	Kishore Kumar K, Lokesh S, Narayanaswamy G	III	Mr. E. M. Pradeep	To develop an eco-friendly grass cutter powered by solar energy.	PO1, PO7	PSO1
14	Design and Fabrication of Four Leg Spider Bot using Theo-Jansen Mechanism	Kevin K, Abishek P, Dinesh S, Antony John Jefferson D	III	Dr. V.N. Anbazhagan	To design a walking robot inspired by Theo-Jansen mechanisms for automation.	PO1, PO3	PSO2
15	Design and Fabrication of Pneumatic Jack	Subhash Chandra Bose B, Akash Raj N, Mohan D	III	Mr. M. Senthil Kumaran	To develop a pneumatic jack for lifting heavy loads efficiently.	PO1, PO4	PSO2

Table 5.7.3 (c) Details of Product Development for the Year 2021-2022

S.No	Project Title	Name of the Student	YEAR	Supervisor Name	Purpose/Features	PO Mapping	PSO Mapping
1	Mechanical Characterization of Epoxy Biocomposite Made Using Human Hair	Abimanyu S, Antony Joseph, Praveen D, Mohan Babu M	IV	Mr. Kani Raj S O	Develop and analyze bio-composites using human hair for improved mechanical properties.	PO4, PO7, PO9	PSO2, PSO3
2	Enhancement of Mechanical and Tribological Behaviour of PET Incorporated with UG Composite for Automobile Application	Abishek, Buvana Padmanaban P, Gokul V	IV	Mr. E M Pradeep	Improve mechanical strength and wear resistance of PET composites for automotive use.	PO1, PO3, PO7	PSO1, PSO3
3	Corrosion Behaviour of Surface Texture on Nano Coated Mild Steel	Balaji M, Kathiravan C, Mahem Vaz N	IV	Mr. N. Krishnamoorthy	Study and optimize corrosion resistance of nano-coated mild steel for various environments.	PO4, PO6, PO8	PSO1, PSO2
4	Bond Behaviour and Mechanical Stability by Hybrid Sisal Fiber Reinforced Bioshell Filler for Structural Applications	Anto Clanston C T, Christal Selvin M, Kiran M	IV	Dr. A. Amala Mithin	Develop eco-friendly structural composites with improved bonding and mechanical properties.	PO3, PO6, PO12	PSO1, PSO3
5	Mechanical Properties of a Nano Coated Mild Steel	Karthick M, Giritharan R, Manikandan V	IV	Mr. N. Krishnamoorthy	Investigate the mechanical performance of mild steel with advanced nano-coating techniques.	PO4, PO7, PO9	PSO2, PSO3
6	Influence of Groundnut Incorporates with Mg Filler in Physico Mechanical Properties of Epoxy Composites	Jeevadhas M, Karthick K, Ajay S	IV	Dr. A. Amala Mithin	Develop sustainable epoxy composites using agricultural by-products like groundnuts and Mg fillers.	PO4, PO7, PO12	PSO1, PSO3
7	Tribological Behaviour and Surface Texture of the Nano Coated Low Carbon Steel Using Plasma Spray Technique	Ahammed Rafiq M, Antony Joy, Gowtham J, Parthiban	IV	Dr. A. Amala Mithin	Enhance wear resistance and surface quality of low-carbon steel using plasma spray coating methods.	PO1, PO4, PO9	PSO1, PSO2
8	Mechanical Properties of Sandwich Structures by Additive Manufacturing	Abhishek Samuel M, Feslino D Christin, Kishore	IV	Dr. V. N. Anbhazhagan	Study and optimize mechanical properties of lightweight sandwich structures fabricated using 3D printing.	PO1, PO3, PO5	PSO1, PSO3
9	Fabrication and Testing of Natural Composite Material by Using Sisal Fibres	Anith R, Hariharan N, Monish R	IV	Mr. S. Rajamahendran	Develop and test sustainable composite materials using natural fibers for industrial applications.	PO4, PO7, PO12	PSO2, PSO3
10	Effect of Heat Input on Weld Bead Geometry and Tensile Properties of Dissimilar Aluminium Alloy Joints	Antony Hemi Ben J, Dinsan K, Kanish C	IV	Mr. G. Tamilkumaran	Investigate the influence of welding parameters on weld bead quality and joint strength in dissimilar alloys.	PO1, PO4, PO9	PSO1, PSO2
11	Comparison of Mechanical and Wear Performance of Natural Fiber Reinforced Epoxy Composite	Bharath V P, Harish R, Harrishraj S, Jenith Aakash J	IV	Mr. M. Senthilkumaran	Analyze and compare wear resistance and strength of different natural fiber composites for various applications.	PO4, PO6, PO9	PSO2, PSO3

B. Research Laboratories

Sl.No	Research Laboratory	Collaboration
1	New Materials	Mechanical Engineering Department
2	Additive Manufacturing	Wipro
3	Drone Technology	AI Robo Pvt.Ltd
4	Renewable Energy	Lantabbor Pvt.Ltd Department of Electrical Engineering
5	Design and Simulation	Mechanical Engineering Department

New Materials Laboratory

Objectives

- **Development of Sustainable Materials:** Convert waste materials into high-performance composite materials for industrial and structural uses.
- **Waste Minimization and Recycling**: Mitigate environmental effect through the repurposing of waste resources and the promotion of circular economy principles.
- **Material Characterization with other testing centers:** Analyze the mechanical, thermal, and chemical properties of newly designed composites to guarantee quality and longevity.
- **Processing Techniques:** Formulate and enhance production processes for creating sustainable composites with superior performance.
- **Application-Focused Research:** Investigate the utilization of recycled composites in the automotive, aerospace, construction, and consumer goods sectors.
- **Interdisciplinary Collaboration:** Collaborate with researchers to promote sustainable material solutions.
- **Education and Awareness:** Instruct students and professionals on sustainable material technologies and promote for sustainable engineering practices.

The New Materials Laboratory within the Department of Mechanical Engineering adheres to developing sustainable solutions through the recycling of waste materials into novel composite materials. The labs primarily aims to produce environmentally sustainable and high-performance composites, minimize environmental waste, investigate innovative material uses, and enhance recycling technologies for industrial and structural purposes. The laboratory combines sophisticated materials science with engineering principles to explore methods for improving the mechanical, thermal, and chemical properties of recycled composites, assuring compliance with industry standards. Laboratory research involves processing methodologies, material characterization, and performance assessment, emphasizing the development of sustainable alternatives for the automotive, aerospace, construction, and consumer product sectors. The laboratory seeks to advance a circular economy by limiting resource depletion and promoting innovation in materials engineering through interdisciplinary collaboration and advanced experimentation.

Design and Simulation Laboratory

The Design and Simulation Laboratory within the Department of Mechanical Engineering aims to augment students comprehension of mechanical systems via computational modeling, design optimization, and simulation methodologies. The main objectives of the laboratory are:

1. Augment Design Proficiencies: Equip students with practical experience in computer-aided design (CAD) and engineering analysis instruments for mechanical components and systems.
2. Simulation and Analysis: Facilitate students in conducting finite element analysis (FEA), computational fluid dynamics (CFD), and kinematic/dynamic simulations to forecast real-world behavior. .
3. Optimization of Mechanical Systems: Instruct students to enhance mechanical designs for efficiency, durability, and cost-effectiveness through simulation-based methodologies.
4. Incorporation of Contemporary Engineering Software: Implement industry-standard applications such as SolidWorks, ANSYS, and Simulink to address intricate engineering challenges.
5. Facilitate Research and Innovation: Establish a platform for teachers and students to engage in research on advanced engineering subjects, encompassing structural mechanics, thermodynamics, and robotics.
6. Practical Project Development: Motivate students to implement theoretical concepts in actual projects, prototype creation, and product design.
7. Enhance Problem-Solving Abilities: Cultivate analytical reasoning through the resolution of engineering challenges utilizing numerical and computational techniques.
8. Promote Sustainable and Intelligent Design: Advocate for environmentally conscious and efficient mechanical system designs that conform to sustainability principles and contemporary technological innovations.

Additive Manufacturing

Objectives

1. Propel research and development in additive manufacturing technology.
2. Deliver practical training and skill enhancement in additive manufacturing methods.
3. Facilitate rapid prototyping and product design verification.
4. Investigate novel materials and composites for improved additive manufacturing applications.
5. Formulate sustainable and energy-efficient production techniques.
6. Employ additive manufacturing for intricate geometry and mass customization.
7. Facilitate academic and industrial research initiatives in additive manufacturing.
8. Facilitate technological transfer, foster startups, and encourage entrepreneurship in AM.

The Additive Manufacturing Laboratory at the Department of Mechanical Engineering, in collaboration with Wipro, intends to enhance research and development in additive manufacturing (AM) technologies, encompassing 3D printing, material discovery, and process optimization. The laboratory promotes industrial-academic collaboration by collaborating with Wipro industry partners to create innovative applications in aerospace, automotive, healthcare, and various other areas. A primary emphasis is on skill enhancement and practical training, providing students, researchers, and professionals with proficiency in additive manufacturing methods, software, and materials. The laboratory enables swift prototyping and product validation, accelerating design iterations and minimizing time-to-market for new goods. The research also encompasses the exploration of novel materials, including improved polymers, composites, and biocompatible materials, to enhance the capabilities of additive manufacturing. Sustainability is a fundamental goal, with initiatives aimed at reducing material waste and improving energy efficiency in production operations. The laboratory also prioritizes mass customization and intricate geometric fabrication, which are distinctive advantages of additive manufacturing. The laboratory facilitates undergraduate, postgraduate, and doctorate studies through academic and industrial research projects, thereby contributing to technical developments. Moreover, testing and quality assurance are essential components of the research, guaranteeing the reliability, mechanical characteristics, and durability of components created by additive manufacturing. Finally, the laboratory promotes technology transfer, entrepreneurship, and startup incubation, facilitating the commercialization of breakthrough AM-based solutions and advancing the future of smart manufacturing.

Drone Technology

Objectives:

1. **Research & Development:** Innovate drone technologies for diverse applications.
2. **Autonomous Drone Systems:** Develop AI-powered self-operating UAVs.
3. **Surveillance & Security:** Design drones for monitoring, defense, and disaster management.
4. **Precision Agriculture:** Improve crop monitoring, spraying, and mapping solutions.
5. **Student Training & Skill Development:** Provide hands-on experience in drone technology.
6. **Environmental Monitoring:** Deploy drones for pollution, wildlife, and climate studies.

The Drone Technology Laboratory within the Department of Mechanical Engineering, in collaboration with Garuda Aerospace, is a state-of-the-art research and innovation facility focused on the advancement of sophisticated Unmanned Aerial Vehicles (UAVs). The laboratory specializes in the design, testing, and optimization of drones for diverse applications, such as surveillance, precision agriculture, industrial inspections, disaster management, and environmental monitoring. Garuda Aerospaces industrial knowledge enables the lab to include artificial intelligence, machine learning, and automation to create autonomous drone systems for real-time data collecting and analysis. The laboratory is as a center for student training, offering practical experience in drone technology, aerodynamics, propulsion systems, and UAV software development. It also aims to ensure regulatory compliance and improve drone safety measures for practical use. The laboratory facilitates industry-academia collaboration, significantly expanding drone technology for commercial, defense, and societal applications, thereby contributing to innovation and economic growth in the UAV sector.

Renewable Energy

The Renewable Energy Laboratory, a joint venture of the Department of Mechanical Engineering and the Department of Electrical and Electronics Engineering, is committed to promoting sustainable energy solutions, primarily concentrating on solar and biogas energy systems. The laboratory functions as a multidisciplinary hub for research, development, and innovation in renewable energy technology. It underscores the design, optimization, and integration of solar photovoltaic (PV) systems and biogas facilities to improve efficiency and dependability. The laboratory investigates enhanced energy conversion methods, effective storage solutions, and intelligent energy management strategies through experimental investigations and performance analysis. Furthermore, it offers practical training to students, researchers, and industry professionals, imparting expertise in solar panel installation, biogas production, and hybrid energy systems. The laboratory engages with industries and rural communities to implement economical, environmentally viable energy solutions, thereby promoting sustainable development and diminishing reliance on traditional fossil fuels.

Table 5.7.3 (d) Details of Products carried out in New Materials Lab

S. No.	Academic Year	Project Title	Focus Area	PO Mapping	PSO Mapping
1	2023-24	Experimental investigation of performance of tamarind husk blended epoxy resin reinforced by Delonix regia seed pod	Sustainable Composites	PO4, PO7, PO12	PSO2, PSO3
2	2023-24	Analyzing the mechanical behaviour of E-Glass/Carbon fibre reinforced polyester based hybrid polymer matrix composite for domestic application	Hybrid Polymer Composites	PO1, PO3, PO9	PSO1, PSO2
3	2023-24	Hybrid seashell and rice husk filler as a promising additive for sisal fibre polymer composites: A sustainable Approach	Eco-Friendly Composites	PO4, PO6, PO7	PSO2, PSO3
4	2023-24	Characterization and tribological behaviour of PET/Rice Husk nano composite for Aerospace application	Aerospace Composites	PO4, PO6, PO9	PSO2, PSO3
5	2022-23	Characterization and Mechanical Behaviour of Sisal/Pineapple Fibre Incorporated with Egg Shell Filler for Marine Structure	Hybrid Polymer Composites	PO4, PO6, PO9	PSO2, PSO3
6	2021-22	Fabrication and Testing of Natural Composite Material by Using Sisal Fibres	Natural Composite Material	PO4, PO6, PO9	PSO2, PSO3
7	2021-22	Influence of Groundnut Incorporates with Mg Filler in Physico Mechanical Properties of Epoxy Composites	Hybrid Polymer Composites	PO4, PO6, PO9	PSO2, PSO3
8	2021-22	Bond Behaviour and Mechanical Stability by Hybrid Sisal Fiber Reinforced Bioshell Filler for Structural Applications	Hybrid Polymer Composites	PO4, PO6, PO9	PSO2, PSO3
9	2021-22	Enhancement of Mechanical and Tribological Behaviour of PET Incorporated with UG Composite for Automobile Application	Hybrid Polymer Composites	PO4, PO6, PO9	PSO2, PSO3

C. Instructional Materials

To enhance teaching effectiveness and student learning, the department has developed comprehensive instructional materials.

1. **Lab Manuals**
   - Detailed manuals include real-world applications, safety protocols, and troubleshooting techniques.
   - Regular updates with new experiments and industry-relevant topics.
2. **Video Tutorials and E-Learning Modules**
3. In-house production of tutorial videos explaining complex concepts such as kinematics, heat transfer, and material strength.
4. Simulations for manufacturing processes like forging, casting, and metal cutting.
5. Industry-specific case studies on failure analysis, process optimization, and design challenges.
6. Focus on bridging theoretical knowledge with practical applications.
7. Digital repositories featuring project reports, research publications, and access to journals.
8. Online learning platforms for courses on advanced topics like FEM and CFD
9. Case Studies
10. E-Resources

Table 5.7.3 (e) List of Instructional Materials Available in the Department

SL.NO	SUB.CODE	SUBJECT NAME	INSTRUCTIONAL MATERIAL
1	GE3251	Engineering Graphics	• Lecture Notes. • Anna University question Bank. • Power point presentation. • Lecture videos. • Solid and Sectional wooden models • Auto CAD & solid works • Flipped classes
2	ME3351	Engineering Mechanics	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos.

3	ME3381	Computer Aided Machine Drawing	• Auto cad software usage to explain and practice exercises. • Lab manual is prepared and given to students as a self-learning guide.
4	ME3391	Engineering Thermodynamics	• Notes of lesson. • Steam Table. • Mollier Chart. • Compressibility Chart. • Psychrometric Chart • Two marks Q&A. • Anna University question Bank. • Power point presentation. • Lecture videos. • Flipped classes
5	CE3391	Fluid Mechanics and Machinery	• Notes of lesson. • Two marks Q&A. • Anna University question Bank. • Power point presentation. • Lecture videos. • Usage of Drawing Charts to explain concepts. • Flipped classes
6	ME3382	Manufacturing Technology Laboratory	• Lab manual is prepared and given to students as a self-learning guide. • Lecture videos.
7	ME3392	Engineering Materials and Metallurgy	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos.
8	ME3393	Manufacturing Processes	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos. • Usage of Drawing Charts to explain concepts. • Flipped classes
9	ME3491	Theory of Machines	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos. • Usage of Drawing Charts to explain concepts. • Flipped classes
10	ME3451	Thermal Engineering	• Notes of lesson. • Steam Table. • Mollier Chart. • Compressibility Chart. • Psychrometric Chart • Two marks Q&A. • Anna University question Bank. • Power point presentation. • Lecture videos. • Flipped classes
11	CE3481	Strength of Materials and Fluid Machinery Laboratory	• Lab manual is prepared and given to students as a self-learning guide. • NPTEL lecture videos.
12	ME3461	Thermal Engineering Laboratory	• Lab manual is prepared and given to students as a self-learning guide. • Lecture videos.
13	ME3492	Hydraulics and Pneumatics	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos. • Auto Cad software usage. • Flipped classes

14	ME3493	Manufacturing Technology	• Notes of lesson. • Steam Table. • HMT data book • Two marks Q&A. • Anna University question Bank. • Power point presentation. • Lecture videos. • Flipped classes
15	CE3491	Strength of Materials	• Notes of lesson. • PSG Design data book. • Two marks Q&A. • Anna University question Bank. • Power point presentation. • Lecture videos. • Flipped classes
16	GE3451	Environmental Sciences and Sustainability	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos. • Usage of metrology laboratory. • Flipped classes
17	ME3591	Design of Machine Elements	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos. • Flipped classes
18	ME6511	Dynamics Laboratory	• Lab manual is prepared and given to students as a self-learning guide. • Lecture videos.
19	ME6512	Thermal Engineering Laboratory-II	• Lab manual is prepared and given to students as a self-learning guide. • Lecture videos.
20	ME3581	Metrology and Dynamics Laboratory	• Lab manual is prepared and given to students as a self-learning guide. • Lecture videos.
21	ME3592	Metrology and Measurements	• Notes of lesson. • PSG Design data book. • Two marks Q&A. • Anna University question Bank. • Power point presentation. • Lecture videos. • Flipped classes
22	CME339	Additive Manufacturing	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos.
23	CME372	CAD and CAE	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • Lecture videos. • Flipped class
24	CME380	Automobile Engineering	• Notes of lesson. • Gas tables. • Two marks Q&A. • Anna University question Bank. • Power point presentation. • Lecture videos. • Flipped classes
25	ME3791	Mechatronics and IoT	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes

26	ME3781	Mechatronics and IoT Laboratory	• Lab manual is prepared and given to students as a self-learning guide. • Lecture videos. • Auto cad software usage • CNC Lathe & CNC Milling Machine
27	ME3711	Summer Internship	• Anna university norms are followed in guiding students for their successful completion of project work. • Showing previous year project works. • Videos on fabrication projects.
28	ME3792	Computer Integrated Manufacturing	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes
29	GE3791	Human Values and Ethics	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes
30	GE3792	Industrial Management	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes
31	CCS333	AR&VR	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes
32	OML351	Introduction to non- destructive testing	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes
33	ME3681	CAD/CAM Laboratory	• Lab manual is prepared and given to students as a self-learning guide. • Lecture videos. • ANSYS software usage.
34	ME3682	Heat Transfer Laboratory	• Lab manual is prepared and given to students as a self-learning guide. • Lecture videos.
35	OHS352	Project Report Writing	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • NPTEL lecture videos • Flipped classes
36	ME3691	Heat and Mass Transfer	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes
37	CME381	Design Concepts in Engineering	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped Classes
38	CME389	Design of Transmission System	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes

39	CME390	Thermal Power Engineering	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes
40	CRA332	Drone Technologies	• Notes of lesson. • Two marks Q&A • Anna University question Bank • Power point presentation. • lecture videos • Flipped classes
41	ME3811	Project Work/Internship	• Anna university norms are followed in guiding students for their successful completion of project work. • Showing previous year project works. • Videos on project works.

D. Working Models/Charts/Monograms

The department actively creates visual and practical aids to support student learning:

1. **Working Models**
   - **IC Engine Demonstrator**: Displays the internal workings of a four-stroke engine.
   - **Wind Turbine Model**: Highlights renewable energy generation techniques.
2. **Charts and Posters**
3. **Thermodynamics Flow Diagrams**: Visual representation of thermodynamic processes.
4. **Stress-Strain Curves**: For different materials with real-world applications.
5. **Manufacturing Process Flowcharts**: Detailed steps for machining, casting, and assembly.
6. Comprehensive formula charts for quick reference during labs and exams.
7. Key mechanical principles displayed for easy recall.
8. **Monograms**

Table 5.7.3 (f) Charts Available in the Class Rooms and Laboratory

Sl. No.	Name of the Laboratory	Charts
1	Engineering Graphics	• Simple solids like prisms, • pyramids, • cylinders, • cones, • truncated solids
2	Thermal Engineering	• Actual Rankine cycles, • Reheat and • Regenerative cycles
3	Metallurgy Lab	• Iron – Carbon equilibrium diagram
4	Thermal Engineering Lab	• Valve timing diagram and • port timing diagram, • Universal joints, • Differential and rear axle • Unit injector system, • Rotary distributor type, and • Common rail direct injection system • Multistage air compressor and inter-cooling • Vapour compression refrigeration cycle • Ammonia – Water vapour absorption
5	Basic engineering Lab	• Type of patterns • Cores – Types • Blast and Cupola Furnaces • Shell – Investment casting • Pressure die casting • Submerged arc welding • Electro slag welding

6	Manufacturing Processes Lab	• Taper Turning, Knurling • Internal Thread Cutting , • External Thread cutting • Eccentric Turning • Square Head Shaping • Hexagonal Head Shaping • Single point cutting tool • Surface grinding , • Cylindrical grinding, • Centreless grinding • Gear milling,
7	Fluid Mechanics and Hydraulic Machines Lab	• Orifice meter setup • Venturi meter setup • Rota meter setup • Centrifugal pump setup • Submersible pump setup • Reciprocating pump setup • Gear pump setup • Pelton wheel setup • Francis turbine setup • Kaplan turbine setup
8	Strength of materials Lab	• Impact test (Izod and Charpy)
9	Thermal Engineering Lab	• Multistage air compressor and inter-cooling • Vapour compression refrigeration cycle • Ammonia – Water vapour absorption

Working Models Details:

Table 5.7.3 (g) Working Models

SL.NO	LIST OF Working Models
1	IC Engine Demonstrator: Displays the internal workings of a four-stroke engine.
2	Wind Turbine Model: Highlights renewable energy generation techniques.
3	Twin Cylinder Four Stoke Diesel Engine
4	Gear Pump
5	Submersible Pump
6	Venturimeter
7	Orificemeter
8	Rotameter
9	Pelton Wheel
10	Francis Turbine
11	Pneumatic Shutter
12	Hydraulic Ram Pump
13	Internal Grinding Attachment In Lathe
14	Kaplan Turbine

15	Single Cylinder Four Stoke Diesel Engine
16	Air Compressor
17	Refrigerator
18	Air Conditioner
19	Gear Trains.
20	Centrifugal Pump Cut Model
21	Reciprocating Pump Cut Model
22	Microwave Oven
23	Water Purifier
24	Window Air Conditioner
25	Split Air Conditioner
26	Water Cooler
27	Note Counting Machine
28	Two-Stroke IC Engine Cut Model
29	Four-Stroke IC Engine Cut Model

5.7.4 Consultancy(from Industry) (5) Institute Marks : 1.00

2023-24 (CAYm1)

Project Title	Duration	Funding Agency	Amount
SHEET METAL FABRICATION	1 Year	AceTech	240000.00
			Total Amount(X): 240000.00

2022-23 (CAYm2)

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

2021-22 (CAYm3)

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

Cumulative Amount(X + Y + Z) = 240000.00

5.8 Faculty Performance Appraisal and Development System (FPADS) (30) Total Marks 30.00

Institute Marks : 30.00

Faculty Performance Appraisal and Development System (FPADS)

The institution has implemented a well-defined Faculty Performance Appraisal and Development System (FPADS) to enhance the quality of teaching, research, and institutional progress. The system is designed to ensure faculty members remain engaged, competent, and aligned with institutional goals. This structured mechanism enables evaluation, self-improvement, and career development opportunities for faculty while promoting organizational growth and excellence.

The objectives of Faculty Performance Appraisal Development System:

1. To Assess and promote excellence in the teaching/learning process.
2. To Meet the educational needs of students and community by continually monitoring instructional performance.
3. To provide a constructive framework for evaluating faculty performance by identifying areas of strength and areas for improvement in classroom instruction.
4. To Provide a basis for professional growth and development.

I. **Components of Faculty Performance Appraisal Development System:**
   1. Students Feedback
   2. Faculty Self Appraisal

II. **Students Feedback:**

Following are the components considered for Students Feedback

1. Presentation of the subject matter
2. Preparation for the class
3. Oral communication
4. Regularity and punctuality in conducting classes.
5. Coverage of syllabus
6. Clearing the doubts inside/outside the class
7. Level of interest shown in the class.
8. Maintenance of discipline and relationship with the students
9. Availability of teacher in department for discussion
10. How comfortable are you with the teacher. Each component is rated by giving 1 to 10 points.
    - Below average:1-4
    - Average:5-6
    - Good:7-8
    - Excellent:9-10

The performance analysis of faculty is carried out by calculating the average rating and the number of student responses for each component of the student feedback.

2. **Faculty Self Appraisal form:**

Individual faculty members rate themselves by completing the Faculty Self-Evaluation Form, being as objective as possible. Based upon self-evaluation findings or related areas of interest for self-improvement, the faculty member notes proposed professional development opportunities. The components of the Faculty Self- Appraisal Form are

Faculty contribution towards Research:

1. Publications in conferences and Journals
2. Submission of Research proposal
3. Contribution to growth of any industry, consultancy to industry, any solution developed by you is used in industry
4. Books, Printed lab journals, compendium, or any printed contribution to your academic area
5. Invited talks, workshops, conferences organized by you as coordinator or important role in the organization of the event
6. Funds received from funding agencies in last three years
7. Membership with Professional bodies (IEE,ISTE)

Faculty contribution towards curriculum

1. Best practice that is introduced to improve teaching and learning process
2. Abstract why student should join your department for pursuing higher education (BE course)
3. Course taught by you which contributes to contents beyond syllabus
4. What is your role in publishing newsletter of the college/Department
5. Contribution to E-Learning contents
6. List students under your guidance acquired certificates that can be used as proof of Lifelong Learning
7. Your contribution to help direct and indirect analysis of NBA. Collection of feedback forms of Alumni, Parent, and Employer for assessment of PEO and PO.
8. What is the role played by you in finalization Vision, Mission, PEO, PSO's or any other document.
9. Analysis of CO-PO mapping in last three years and suggestion to improve attainment of PO's. Expected target level shall be more than 50%
10. Analysis of course exit survey and suggestions to improve attainment of CO and PO's
11. Analysis of CO-PO mapping of Project works through rubric form in last three years

Faculty contribution at Department/Institute level

1. What is your contribution to the department in the current academic year?
2. Philosophy of teaching that includes staff member conception of teaching and learning, description of how staff members teach and justification for why you teach that way
3. Visiting status in other engineering institutions/universities
4. Have you helped the department to have MOU with any industry, Specify industry name and its activities.
5. Improvements in the department observed by you since last accreditation visit
6. List five strong and five weakness points about you
7. List at least three points why your presence or service is important to the department or college
8. List five strong and weakness of the department in preparation of NBA.
9. Role of Staff member at the institute level
10. Faulty publication in collaboration with peers of other institution
11. What is your contribution to improve campus placements /higher education etc.
12. Any other information that can help assessment of staff member or Help NBA process

Each faculty submits the Self Appraisal form annually to the HOD.

II Evaluation of faculty Form by Head of the department

Head of the department completes the Evaluation of Faculty Form using the information from observation of instruction, review of syllabi, evaluation of other duties, feedback from students, and subject results. HOD evaluates each faculty based on the following parameters:

1. Character and conduct
2. Regularity and punctuality/availability during the working hours/frequency of leaves availed
3. Attitude towards work.
4. Papers published
5. Papers presented
6. Sponsored projects
7. Presentation in class rooms/labs
8. Communication skills
9. Shouldering responsibility /Extra Curricular activities
10. Memos

Each component on the evaluation is rated by giving 1 to 10 points.

- Poor (2)
- Fair (4)
- Good (8)
- Excellent (10)

Based on the observation, HOD recommends promotion/increment for the faculty to the principal office.

III. **Evaluation by Principal office:**

1. Supports and monitor the execution of the system.
2. Verifies and accredits the results submitted by the respective departments.
3. Considers revaluation applications submitted by each faculty.
4. Prepares final college faculty evaluation report.
5. Sends final report/s to the Office of Evaluation.

Based on the feedback given by HOD, the principal office recommends for further action.

After completion of the system, the concerned Head of the Department is required to meet with every faculty member in person to provide necessary feedback on strengths and weaknesses of the faculty performance, so as to launch a better future plan.

Developmental Initiatives

Based on appraisal findings, the following developmental initiatives are undertaken:

1. Identification of training needs and provision of support for attending FDPs, workshops, and certifications.
2. Facilitation of research through seed funding, grants, and collaboration opportunities.
3. Encouragement of interdisciplinary and industry-oriented research.
4. Mentoring and counseling programs for faculty facing challenges in specific areas.
5. Career advancement through promotions, awards, and recognition for exceptional performance.

Outcomes and Impact

The implementation of FPADS has resulted in:

1. Improved teaching quality and student satisfaction.
2. Enhanced research output, with a significant increase in publications, patents, and funded projects.
3. Faculty engagement in community development initiatives, contributing to societal impact.
4. Recognition of faculty achievements through awards and career progression.
5. A culture of accountability, self-reflection, and continuous improvement.

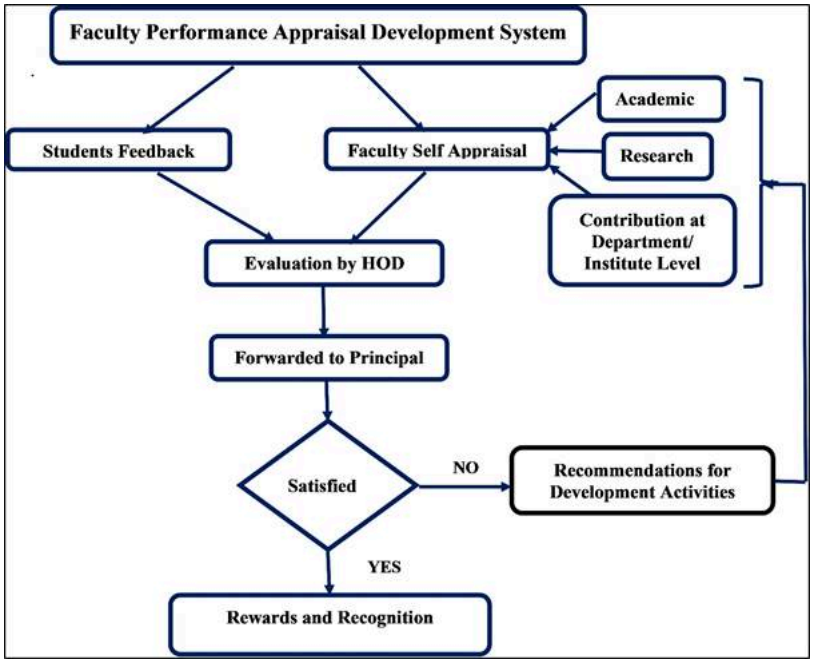


Figure 5.1 Faculty Performance Appraisal Process

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

Total Marks 7.00

Institute Marks : 7.00

Table 5.9.1 Details of Visiting/Adjunct/Emeritus Faculty

Sl. No.	Name of the Visiting Faculty	Course Name	Duration of the Course	Academic Year
1	Mr. P. Xavier Jaganathan, CEO, Goodwin Motors	E- Vehicle Automotive Technology	60 hours	2022-23
2	Dr. S. Loganathan, Professor, Department of Mechanical Engineering, St. Joseph University	Sustainable Energy Power Generations and Alternate Fuels	60 hours	2023-24

6 FACILITIES AND TECHNICAL SUPPORT (80)

Total Marks 80.00

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

Total Marks 30.00

Institute Marks : 30.00

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	CAD/CAM Lab	30	1.Computers 2. CNC Lathe 3. CNC Milling	1 Batch (3 hrs per week)	R. Baskar	Lab Technician	ITI
2	Strength of Materials Lab	30	1.Universal Tensile Testing machine with double 1 shear attachment –40 Ton Capacity 2. Torsion Testing Machine (60 NM Capacity) 3. Impact Testing Machine (300 J Capacity) 4. Brinell Hardness Testing Machine 5. Spring Testing Machine for tensile and compressive loads (2500 N) 6. Metallurgical Microscopes 7. Muffle Furnace (800 C)	1 Batch (3 Hrs per week)	R. Baskar	Lab Technician	ITI
3	Simulation and Analysis Laboratory	30	1.Computers	1 Batch (3 Hrs per week)	R. Baskar	Lab Technician	ITI
4	Metrology And Measurements Laboratory	30	1.Micrometre 2. Vernier Calliper 3. Vernier Height Gauge 4. Vernier depth Gauge 5. Slip Gauge Set 6. Gear Tooth Vernier 7. Sine Bar 8. Floating Carriage Micrometre 9. Profile Projector 10. Tool Makers Microscope 11. Mechanical Comparator 12. Electrical Comparator 13. Pneumatic Comparator 14. Autocollimator 15. Temperature Measuring Setup 16. Force Measuring Setup 17. Torque Measuring Setup 18. Surface finish measuring equipment 19. Bore gauge 20. Telescope gauge 21. Bevel protractor 3600 22. Displacement measuring setup 23. Vibration shock measuring setup	1 Batch (3 Hrs per week)	Vijayan	Lab Technician	DME
5	Manufacturing Technology Laboratory	30	1.Turret Lathe 2. Capstan Lathe 3. Horizontal Milling Machine 4. Vertical Milling Machine 5. Surface grinding Machine 6. Cylindrical Grinding Machine 7. Radial Drilling Machine 8. lathe Tool Dynamometer 9. Tool Makers Microscope 10. Centre less grinding machine 11. Tool and cutter grinder 12. Arc welding machine 13. Cast patterns 14. Shaper machine 15. Vertical drilling machine 16. Gear hobbing machine 17. Gear shaping machine	1 Batch (3 Hrs per week)	V. Ramamoorthy	Lab Technician	ITI
6	Fluid Mechanics And Machinery Laboratory	30	1.Orifice meter setup 2. Venturi meter setup 3. Rotameter setup 4. Pipe Flow analysis setup minor losses 5. Pipe Flow analysis setup major losses 6. Centrifugal pump setup 7. submergible pump 8. Reciprocating pump setup 9. Gear pump setup 10. Pelton wheel setup 11. Francis turbine setup 12. Kaplan turbine setup	1 Batch (3 Hrs per week)	R. Baskar	Lab Technician	ITI
7	Thermal Engineering Laboratory – I	30	1.Diesel engine 4-stroke single cylinder cut section 2. Apparatus for Flash and Fire Point 3. Single cylinder 4-stroke Diesel Engine with mechanical loading 4. Twin cylinder 4-stroke Diesel Engine with hydraulic loading 5. Twin cylinder 4-stroke Diesel Engine with electrical loading 6. Petrol Engine single cylinder 4-stroke with electric loading 7. Petrol Engine 2-stroke Single cylinder cut section 8. Cut Section of 2 stroke petrol engine 9. Cut section of 4 stroke diesel engine 10. Flash and Fire point Apparatus	1 Batch (3 Hrs per week)	R. Baskar	Lab Technician	ITI
8	Thermal Engineering Laboratory – II	30	1.Guarded plate apparatus 2. Lagged pipe apparatus 3. Natural convection-vertical cylinder apparatus 4. Forced convection inside tube apparatus 5. Composite wall apparatus 6. Thermal conductivity of insulating powder apparatus 7. Pin-fin apparatus 8. Stefan-Boltzmann apparatus 9. Emissivity measurement apparatus 10. Parallel/counter flow heat exchanger apparatus 11. Fluidized Bed cooling tower 12. Refrigeration & Air conditioning	1 Batch (3 Hrs per week)	R. Baskar	Lab Technician	ITI

9	Dynamics Laboratory	30	1.Cam follower setup 2. Motorised gyroscope 3. Governor apparatus - Watt, Porter, Proell and Hartnell governors 4. Whirling of shaft apparatus 5. Dynamic balancing machine 6. Two rotor vibration setup 7. Spring mass vibration system 8. Torsional Vibration of single rotor system setup 9. Gear Models 10. Kinematic Models to study various mechanisms 11. Turn table apparatus 12. Transverse vibration setup of a. cantilever b. Free-Free beam c. Simply supported beam	1 Batch (3 Hrs per week)	Vijayan	Lab Technician	DME
10	Mechatronics Laboratory	30	1.Flow control process 2. Pressure controller 3. Electro pneumatic kit 4. Electro pneumatic PLC 5. Stepper motor 6. Temperature controller 7. Fluid power control 8. Speed control Hybrid control	1 Batch (3 Hrs per week)	Vijayan	Lab Technician	DME
11	Research Laboratory	15	1.Hot air oven 2.Mufful furnace 3. 3D Printer	Project Works	V. Ramamoorthy	Lab Technician	ITI
12	Basic Enginnering Laboratory	30	Working Models 1. Centrifugal Pump Cut Model 2. Reciprocating Pump Cut Model 3. Microwave Oven 4. Water Purifier 5. Window Air Conditioner 6. Split Air Conditioner 7. Water Cooler 8. Note Counting Machine 9. Two-Stroke IC Engine Cut Model 10.Four-Stroke IC Engine Cut Model	3 Hrs per week	V. Ramamoorthy	Lab Technician	ITI
13	Engineering Practices Laboratory	30	(a) Plumbing Work: 1) Pipe Vice 2) Die Holder with Die set (b) Wood Work 1) Tri Square 2) Hand Saw 3) Carpentry bench wise 4) Firmer Chisel 5) Motrin Chisel 6) Iron Jack 7) Mallet 8) Bench hold fastens 9) Wooden Bench Hook 10) Wood Cutting Machine (a) Welding Work: 1) Arc welding unit 2) Gas welding unit (b) Basic Machining Work: 1) Lathe Machines 2) Drilling Machines (c) Assembly Work: 1) Centrifugal pump 2) Air-conditioner unit 3) Household mixer (d) Sheet Metal Work: 1) Steel rule 2) Bend snips 3) Straight snips 4) Scriber 5) Divider 6) Trammel 7) Prick Punches 8) Centre punches 9) Pliers 10) Ball pean hammer 11) Raising hammer 12) Riverting hammer 13) Square free hammer 14) Anvil 15) Swage block 16) Wige gauges (e) Foundry Work 1) Cope and Drag Box 2) Pattern 3) Solid pattern 4) Split pattern 5) Runner 6) Riser 7) Sprue 8) Sand reamer 9) Trowel	6 Batch(3 Hrs per week)	V. Ramamoorthy	Lab Technician	ITI

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25) Total Marks 25.00

Institute Marks : 25.00

Sr. No	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	Manufacturing technology Laboratory	Slotting Machine Injection Moulding Machine Tool & Cutter Grinder	Content beyond Syllabus and Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Manufacturing	PO1, PO3, PO5, PSO1, PSO2
2	Strength of Materials & Fluid Machinery Laboratory	Izod Test Charpy Test Orifice Meter Rota Meter	Content beyond Syllabus and Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Material Testing & Fluid Mechanics	PO1, PO2, PO4, PSO1, PSO2
3	Thermal Engineering Laboratory	Redwood Viscometer	Content beyond Syllabus and Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Thermal Properties on Fluids	PO1, PO2, PO4, PO5 PSO1, PSO2, PSO3
4	Metrology and Dynamics Laboratory	Load Cell, Torque Cell and Temperature Measurement Hartnell Governor Bifilar Suspension	Content beyond Syllabus and Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Quality Control and Theory of Machines	PO1, PO2, PO4, PO5 PSO1, PSO2, PSO3
5	Heat Transfer Laboratory	Air-Conditioning System Fluidised Bed Cooling Tower	Content beyond Syllabus and Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Thermodynamics and Heat Transfer	PO1, PO2, PO3, PO5, PO7 PSO1, PSO2, PSO3
6	Project & Research lab	New Material Fabrication	Content beyond Syllabus and Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Material Science	PO1, PO2, PO3, PO4, PO5, PO7, PSO1, PSO2, PSO3
7	Software	Quill Bot Software	Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Report Writing	PO5, PO10, PO12 PSO2, PSO3
8	3D Printing	3D Printer	Content beyond Syllabus and Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Advanced Manufacturing	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2, PSO3
9	Drone Technology	Drones	Content beyond Syllabus and Project Utilization	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Drone	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2, PSO3
10	Renewable Energy	Solar Plant, Bio Gas Plant	Energy Saving	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Renewable Energy	PO1, PO5, PO6, PO9, PO10, PO12, PSO1, PSO2, PSO3

6.3 Laboratories: Maintenance and overall ambiance (10) Total Marks 10.00

Institute Marks : 10.00

Laboratories Maintenance:

Proper maintenance of laboratories is essential for safety, efficiency, and compliance with regulations. Key aspects include:

1. Laboratories are Well-equipped with state-of-art facilities to meet the requirements of academic curriculum.
2. Laboratories have good ambiance with proper ventilation and lighting.
3. Maintenance of equipment's, machines and instruments are carried out regularly as per the requirement.
4. Calibrations of the instruments are carried out.
5. Technical and Supporting staff with required qualification are allotted to maintain the Laboratories.
6. Cleanliness and safety measures are strictly followed in Laboratories
7. Checks of safety equipment, such as fire extinguishers.
8. Immediate attention to damaged infrastructure, such as broken fixtures, HVAC systems, or plumbing.

Overall Ambiance:

The ambiance of a laboratory influences productivity, comfort, and morale. To create a positive and functional environment:

1. Lighting: Use bright, non-glare lighting to ensure visibility and reduce eye strain.
2. Ventilation: Maintain proper air circulation and temperature to support comfort and safety.
3. Organization: Arrange workstations ergonomically and ensure clear labeling of equipment and supplies.
4. Aesthetics: Incorporate calming or neutral colors and add greenery or art (if safe) to create a pleasant workspace.
5. Noise Control: Minimize unnecessary noise by using soundproofing materials or quiet equipment.
6. Space Utilization: Optimize layout for smooth workflow, ensuring adequate room for movement and collaboration.
7. Combining well-maintained facilities with a thoughtful ambiance creates a safe, efficient, and inviting laboratory environment.

6.4 Project laboratories (5) Total Marks 5.00

Institute Marks : 5.00

Facility	Equipment	Objective	POs Addressed	PSOs Addressed	Relevance
3D Printing Facility	High-precision 3D printers, filament materials, and software for 3D modeling.	To enable students to design and manufacture prototypes, enhancing creativity and innovation.	PO1, PO2, PO3, PO5, PO9, PO10	PSO1, PSO2	Promotes innovation and design through advanced prototyping capabilities.
Thermal Engineering Laboratory	Heat exchangers, air compressors, thermal conductivity apparatus, and calorimeters.	To provide practical insights into thermal energy systems and their applications.	PO1, PO2, PO4, PO6, PO7, PO12	PSO1, PSO2	Supports hands-on learning in thermal energy and heat transfer systems.
Strength of Materials Laboratory	Universal testing machine, torsion testing machine, hardness testing machine, and impact testing machine.	To help students understand material properties and their behavior under different loading conditions.	PO1, PO2, PO4, PO5, PO9, PO10	PSO1, PSO2	Enables testing and analysis of material strengths for engineering solutions.
Mechatronics Laboratory	PLC kits, sensors, actuators, and microcontrollers.	To blend mechanical engineering principles with electronics and automation.	PO1, PO2, PO3, PO4, PO5, PO9, PO10	PSO1, PSO2	Encourages interdisciplinary learning and automation technology skills.
ANSYS Laboratory	Licensed ANSYS software, high-performance computers for simulations.	To analyze and simulate mechanical components and systems.	PO1, PO2, PO3, PO4, PO5, PO9, PO11	PSO1, PSO2	Strengthens simulation and computational problem-solving abilities.
Fluid Mechanics Laboratory	Flow measurement apparatus, Reynolds apparatus, venturimeter, and orificemeter.	To provide insights into fluid flow principles and applications.	PO1, PO2, PO4, PO5, PO6, PO9, PO12	PSO1, PSO2	Enhances understanding of fluid dynamics and practical applications.
Automobile Engines	Petrol and diesel engine models, engine assembly, and disassembly tools.	To enable students to study automobile engine systems and components.	PO1, PO2, PO3, PO6, PO7, PO12	PSO1, PSO2	Facilitates understanding of automotive systems and sustainable solutions.
Manufacturing Technology Laboratory	Slotting machine, injection moulding machine, lathe, and milling machines.	To impart skills in manufacturing processes and modern production techniques.	PO1, PO2, PO3, PO5, PO7, PO9, PO10, PO11	PSO1, PSO2	Provides expertise in advanced manufacturing processes.
Renewable Energy Laboratory	Solar panels, wind turbine kits, and energy efficiency measurement systems.	To promote sustainable energy solutions through practical experimentation.	PO1, PO4, PO6, PO7, PO10, PO12	PSO1, PSO2	Aligns with sustainability and renewable energy research.
Research Laboratory	Advanced testing equipment, computational tools, and technical resources.	To foster innovation and support research-driven projects.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1, PSO2, PSO3	Facilitates cutting-edge research and interdisciplinary projects.

S. No.	Project Title	Name of the Student	Supervisor Name	Purpose/Features	POs Addressed	PSOs Addressed	Suitable Lab
1	Experimental Investigation on Recyclability and Lifespan of Al-Zn Alloy for Naval & Aircraft Applications	Ajay N, Mano David D, Hariharan M	Mr. Tamilkumaran G	Investigate the recyclability, durability, and extended lifespan of Al-Zn alloys for naval and aerospace use.	PO1, PO4, PO6	PSO1, PSO2	Metallurgy and Measurements Lab

2	Experimental Investigation of Performance of Tamarind Husk Blended Epoxy Resin Reinforced by Delonix regia Seed Pod	Dhayanithi S, Harishbala B, Mohan D	Mr. Kani Raj S O	Develop sustainable composites using tamarind husk and Delonix regia for structural applications.	PO4, PO7, PO12	PSO2, PSO3	Manufacturing Lab
3	Evaluation and In-situ Monitoring of Interfacial and Mechanical Properties of Epoxy Adhesive for Bio-Hybrid Composites	Jacob D, Joel John J, Surya V	Dr. Amala Mithin Minther Singh A	Assess real-time interfacial and mechanical behavior for effective bio-hybrid adhesive applications.	PO1, PO4, PO9	PSO2, PSO3	Research Lab
4	Analyzing the Mechanical Behaviour of E-Glass/Carbon Fibre Reinforced Polyester Based Hybrid Polymer Matrix Composite for Domestic Application	Nithish K, Pavithran M, Sathish C	Mr. Raja Mahendran S	Develop hybrid composites with improved strength and reduced cost for domestic applications.	PO1, PO3, PO9	PSO1, PSO2	Research Lab&Strength of Materials Lab
5	Hybrid Seashell and Rice Husk Filler as a Promising Additive for Sisal Fibre Polymer Composites: A Sustainable Approach	Kevin K, Abishek P, Dinesh S	Dr. Amala Mithin Minther Singh A	Develop eco-friendly composites with hybrid fillers for enhanced mechanical properties.	PO4, PO6, PO7	PSO2, PSO3	Renewable Energy Lab
6	Analyzing the Mechanical Behaviour of E-Glass/Carbon Fibre Reinforced Polyester Based Hybrid Polymer Matrix Composite for Domestic Application	Nithish K, Pavithran M, Sathish C	Mr. Raja Mahendran S	Develop and optimize hybrid polymer matrix composites for domestic use with enhanced mechanical properties.	PO1, PO3, PO9	PSO1, PSO2	Research Lab &Metallurgy and Measurements Lab
7	Hybrid Seashell and Rice Husk Filler as a Promising Additive for Sisal Fibre Polymer Composites: A Sustainable Approach	Kevin K, Abishek P, Dinesh S	Dr. Amala Mithin Minther Singh A	Create sustainable polymer composites using hybrid natural fillers for structural applications with improved properties.	PO4, PO6, PO7	PSO2, PSO3	Research Lab
8	Experimental Analysis of Nano Coated Mild Steel Marine Hull Structure Using Plasma Spray Technique	Kishorekumar K, Logesh K, Narayanaswamy G	Mr. Krishnamoorthy N	Improve durability and corrosion resistance of marine hull structures using plasma spray nano-coating techniques.	PO1, PO4, PO9	PSO1, PSO2	Research Lab &Metallurgy and Measurements Lab
9	Characterization and Tribological Behaviour of PET/Rice Husk Nano Composite for Aerospace Application	Dinesh T, Samuel N, Varun D	Mr. Pradeep E M	Develop lightweight, durable nano-composites for aerospace applications.	PO4, PO6, PO9	PSO2, PSO3	Research Lab

10	Experimental Investigation of Performance of Wood Apple Blended Epoxy Resin Reinforced by Delonix Regia Seed Pod	Sunil B, Thomas Alva Edison V, Gowtham R	Mr. Senthilkumaran M	Fabricate and analyze sustainable composites for structural and industrial applications.	PO3, PO7, PO12	PSO1, PSO3	Research Lab
11	Analysis of the Mechanical Behaviour of Particulate Reinforced E Glass Fibre Hybrid Polymer Matrix Composites	Srijith V, Subash Chandra Bose B	Dr. T. Senthil Kumar	Study and optimize mechanical performance of hybrid composites for structural and automotive uses.	PO1, PO4, PO9	PSO2, PSO3	Research Lab
12	Exploring the Mechanical Behaviour and Characterization of Bio Filler and Incorporated Hybrid Composite for Brake Pad: A Systematic and Sustainable Approach	Bibin T, Jeevanandhan B, Sriram S	Mr. P. Saravanan	Develop sustainable and high-performance composites for brake pad applications.	PO3, PO6, PO12	PSO1, PSO3	Manufacturing Lab
13	Mechanical Characterization of Epoxy Biocomposite Made Using Human Hair	Abimanyu S, Antony Joseph, Praveen D, Mohan Babu M	Mr. Kani Raj S O	Develop and analyze biocomposites using human hair for improved mechanical properties.	PO4, PO7, PO9	PSO2, PSO3	Research Lab
14	Enhancement of Mechanical and Tribological Behaviour of PET Incorporated with UG Composite for Automobile Application	Abishek, Buvana Padmanaban P, Gokul V	Mr. E M Pradeep	Improve mechanical strength and wear resistance of PET composites for automotive use.	PO1, PO3, PO7	PSO1, PSO3	Research Lab
15	Corrosion Behaviour of Surface Texture on Nano Coated Mild Steel	Balaji M, Kathiravan C, Mahem Vaz N	Mr. N. Krishnamoorthy	Study and optimize corrosion resistance of nano-coated mild steel for various environments.	PO4, PO6, PO8	PSO1, PSO2	Research Lab&Strength of Materials Lab
16	Bond Behaviour and Mechanical Stability by Hybrid Sisal Fiber Reinforced Bioshell Filler for Structural Applications	Anto Clanston C T, Christal Selvin M, Kiran M	Dr. A. Amala Mithin	Develop eco-friendly structural composites with improved bonding and mechanical properties.	PO3, PO6, PO12	PSO1, PSO3	Strength of Materials Lab
17	Mechanical Properties of a Nano Coated Mild Steel	Karthick M, Giritharan R, Manikandan V	Mr. N. Krishnamoorthy	Investigate the mechanical performance of mild steel with advanced nano-coating techniques.	PO4, PO7, PO9	PSO2, PSO3	Metallurgy and Measurements Lab
18	Influence of Groundnut Incorporates with Mg Filler in Physico Mechanical Properties of Epoxy Composites	Jeevadhas M, Karthick K, Ajay S	Dr. A. Amala Mithin	Develop sustainable epoxy composites using agricultural by-products like groundnuts and Mg fillers.	PO4, PO7, PO12	PSO1, PSO3	Research Lab (Composite Materials)

19	Tribological Behaviour and Surface Texture of the Nano Coated Low Carbon Steel Using Plasma Spray Technique	Ahammed Rafiq M, Antony Joy, Gowtham J, Parthiban	Dr. A. Amala Mithin	Enhance wear resistance and surface quality of low-carbon steel using plasma spray coating methods.	PO1, PO4, PO9	PSO1, PSO2	Metallurgy and Measurements Lab
20	Mechanical Properties of Sandwich Structures by Additive Manufacturing	Abhishek Samuel M, Feslino D Christin, Kishore	Dr. V. N. Anbhazhagan	Study and optimize mechanical properties of lightweight sandwich structures fabricated using 3D printing.	PO1, PO3, PO5	PSO1, PSO3	Research Lab
21	Fabrication and Testing of Natural Composite Material by Using Sisal Fibres	Anith R, Hariharan N, Monish R	Mr. S. Rajamahendran	Develop and test sustainable composite materials using natural fibers for industrial applications.	PO4, PO7, PO12	PSO2, PSO3	Research Lab
22	Effect of Heat Input on Weld Bead Geometry and Tensile Properties of Dissimilar Aluminium Alloy Joints	Antony Hemi Ben J, Dinsan K, Kanish C	Mr. G. Tamilkumaran	Investigate the influence of welding parameters on weld bead quality and joint strength in dissimilar alloys.	PO1, PO4, PO9	PSO1, PSO2	Manufacturing Lab
23	Comparison of Mechanical and Wear Performance of Natural Fiber Reinforced Epoxy Composite	Bharath V P, Harish R, Harrishraj S, Jenith Aakash J	Mr. M. Senthilkumaran	Analyze and compare wear resistance and strength of different natural fiber composites for various applications.	PO4, PO6, PO9	PSO2, PSO3	Research Lab&Strength of Materials Lab
24	Microstructure and Thermal (TGA & DTA) Analysis of a Polymer Based Composite Material	Aljin Brabhu G, Dennis Benedict Alwin A	Mr. Kani Raj S O	Investigate thermal stability and microstructural characteristics of polymer composites using TGA and DTA.	PO4, PO6, PO10	PSO1, PSO3	Research Lab&Strength of Materials Lab
25	Optimization and Analysis of Surface Texture on Coated Mild Steel in Marine Environment	Aashick Prince S, Manojkumar A, Mohan Raj A	Dr. A. Amala Mithin	Improve surface properties and corrosion resistance of coated mild steel for marine applications.	PO1, PO2, PO4	PSO1, PSO2	Research Lab&Strength of Materials Lab
26	Investigation of Tribological Performance of Discarded Hybrid Composite for Aircraft Structures	A. Anbumani, S. Magesh Kumar, S. Murugan	E.M. Pradeep	Study the effects of welding parameters on strength and durability of welded joints.	PO1, PO6, PO9	PSO2, PSO3	Research Lab&Strength of Materials Lab
27	Influence of Welding Parameters on Mechanical Properties of Pulsed GTAW Welded	Antony Hrithik W, Balasuryan M M, Henry Marshal M, Yuvaraj L	G. Tamil Kumaran	Study the effects of welding parameters on strength and durability of welded joints.	PO1, PO6, PO9	PSO2, PSO3	Manufacturing Lab
28	Characterization and Mechanical Behaviour of Sisal/Pineapple Fibre Incorporated with Egg Shell Filler for Marine Structure	Antony Hrithik W, Balasuryan M M, Henry Marshal M, Yuvaraj L	M. Senthil Kumaran	Develop sustainable, high-strength composite materials for marine environments.	PO4, PO7, PO12	PSO1, PSO3	Research Lab&Strength of Materials Lab

29	Design and Fabrication of Plunger Type Compression Moulding for Epoxy Polymer Matrix Composite Material	Ansh G, Ramkumar G, Varun R	Mr. M. Rajamahendran	Fabricate a plunger type compression mold for composite material processing with enhanced efficiency.	PO4, PO9, PO7	PSO1, PSO2	Manufacturing Lab
30	Process Optimization and Heat Treatment of Austenitic Stainless Steel for Automotive Applications	Aanjay R, Narayana Kumar K, Raja Manikandan V	Mr. M. Senthil Kumaran	Optimize the heat treatment processes for stainless steel to enhance performance in automotive components.	PO4, PO9, PO12	PSO2, PSO3	Heat Transfer Lab
31	Development of High Strength Biocomposite Materials for Aerospace and Automotive Applications	Surya Kumar R, Shakthi R, Santhosh K	Dr. A. Mithin	Develop and characterize high-strength biocomposites with enhanced mechanical properties for aerospace and automotive use.	PO4, PO1, PO9	PSO1, PSO2	Research Lab&Strength of Materials Lab
32	Evaluation of the Corrosion Resistance of the Hybrid Epoxy Composite for Marine Structures	Dinesh M, Rajesh Kumar K, Sathish Kumar S	Dr. Amala Mithin	Analyze corrosion resistance properties of hybrid epoxy composites for marine structures.	PO4, PO9, PO6	PSO1, PSO2	Corrosion Testing Lab
33	Effect of Nano Coatings on Friction and Wear Properties of Material Used in Aircraft Systems	Ramesh Kumar M, Rajvinder Singh, Karthik G	Dr. Krishnamoorthy N	Enhance wear resistance and friction properties of materials used in aircraft systems using nano coatings.	PO4, PO6, PO9	PSO1, PSO2	Research Lab&Strength of Materials Lab
34	Optimization of Cutting Parameters for Dry Turning of Al2024 Alloy with Coated Carbide Tool	Ajay G, Surya S, Karthick P	Mr. S. Raja Mahendran	Optimize machining parameters for improved cutting performance in the turning of Al2024 alloy.	PO1, PO4, PO9	PSO2, PSO3	Manufacturing Lab
35	Development of Composite Material for Wind Turbine Blade by Using Natural Fibre Reinforced Polymer Matrix	Praneshkumar T, Rajarajan V, Vikash Kumar M	Dr. Kani Raj S O	Develop composite materials using natural fibers for sustainable wind turbine blades.	PO1, PO4, PO7	PSO2, PSO3	Renewable Energy Lab

6.5 Safety measures in laboratories (10)

Total Marks 10.00

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	Engineering Practices Lab	• First Aid Box • Fire Extinguisher • EB Line Board • Gloves and goggles for safety • Do's and Don'ts
2	Manufacturing Technology Lab	• First Aid Box • Fire Extinguisher • Cleaning of machines with oil twice a month • Proper EB line board • Welding glasses • Steel fence for rotating parts • Do's and Don'ts
3	Strength of Materials Lab	• First Aid Box • Fire Extinguisher • Cleaning of machines once a month • Proper EB line boards • Do's and Don'ts
4	Fluid Mechanics and Machinery Lab	• First Aid Box • Fire Extinguisher • Cleaning the tank to avoid rust formation • Cleaning water once a month • Proper EB line boards • Do's and Don'ts
5	Thermal Engineering Lab	• First Aid Box • Fire Extinguisher • Overhauling once a month • Proper EB line boards • Steel fence for rotating parts • Do's and Don'ts
6	Dynamics Lab	• First Aid Box • Fire Extinguisher • Proper EB line boards • Do's and Don'ts
7	Metrology and Measurement Lab	• First Aid Box • Fire Extinguisher • Calibration of tools • Proper EB line boards • Do's and Don'ts
8	Mechatronics Lab	• First Aid Box • Fire Extinguisher • Proper EB line boards • Do's and Don'ts
9	CAD CAM Lab	• First Aid Box • Fire Extinguisher • EB Line Boards • MCB boards to avoid short circuits in networking cables • Do's and Don'ts
10	ANSYS Lab	• First Aid Box • Fire Extinguisher • Proper EB line boards • MCB boards to avoid short circuits in networking cables • Do's and Don'ts

7 CONTINUOUS IMPROVEMENT (50)

Total Marks 50.00

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

Total Marks 20.00

Institute Marks : 20.00

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

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2.35	2.35	1. Target is met.
Target is met. How ever the following actions were taken. Action 1: More complex problems are solved on confusing and difficult subjects. Action 2: Extra classes and practical models are shown of mechanical systems. Action 3: More emphasis was given on complex concepts which have mathematical applications.			
PO 2 : Problem Analysis			
PO 2	2.35	2.31	1. Achieved attainment is closed to the target 2. Students are to be exposed to research literature. 3. Students and few lateral entry students find difficult to identify and analyze numerical problem.
Action 1: More tutorials to be conducted to solve the engineering problems. Action 2: More diverse problems to be taught in extra classes. Action 3: Spot or unexpected tests were continued to evaluate each student's level of understanding, in which many students performed considerably well. Action 4: Many Students were able to solve problems on the board. Action 5: Mathematics courses were strengthened by various concepts and examples so that students improved their mathematics applications.			
PO 3 : Design/development of Solutions			
PO 3	2.35	2.23	1. Achieved attainment is closed to the target 2. Students find difficulty in solving design related practical problems.
Action 1: Design and thermal subjects were taught with various online learning materials. Action 2: Difficult problems are always explained with the help of physical models. Action 3: Thermal and design classes were taken and students were able to explain and solve some problems in tutorial classes. Action 4: A particular combination was implemented using design of experiments (DoE) which improves the performance and curtails exhaust emanations which do not affect public health and safety.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	2.35	2.14	1. Achieved attainment is closed to the target
Action 1: Students logged in to international journal papers based on syllabus topics. Using the data and properties of materials given in the researches, more examples on thermal and design were carried out considering case studies like cold storage design for agricultural products in rural areas.			
PO 5 : Modern Tool Usage			
PO 5	2.35	2.29	1. Achieved attainment is closed to the target
Action 1: Additional classes were conducted to introduce practical knowledge using teaching aids and physical models. Action 2: Students studied the working of IC engine using simulation and modeling using tools like Taguchi method, Response Surface Methodology, using software to analyze gas flow patterns and applied in the design to improve competence and reduce emanations.			
PO 6 : The Engineer and Society			
PO 6	2.35	2.25	1. Achieved attainment is closed to the target 2. Students are slowly learning that they are the part of the society and they are studying engineering to serve the society. 3. Students are exposed to development of products in industries and their ill effects like pollution and effect on health like use of polymer sheets.
Action 1: Practical approach of teaching method should be adapted. Action 2: Students should be exposed to outside world to know and solve the problems of society like road safety, how to avoid infections like Covid 19, Anthrax, H1N1 etc. Action 3: Local garbage issues undertaken by students Action 4: Lead team of the institute went to villages to teach them about cleanliness, sanitary requirements and also built a bathroom with toilets.			
PO 7 : Environment and Sustainability			
PO 7	2.35	2.07	1. Achieved attainment is closed to the target 2.Students should note the effect on people and nature due to various engineering applications. 3. Students should go through case studies to analyse the problems of technology and suggest remedies. 4. Students should explain about the knowledge of sustainable development
Action 1: Examples on the pollution related problems to be practiced by students in extra classes. Action 2: Student should practice and understand about carbon neutrality and thus avoid greenhouse gases CO2, NOx, SOx, O3, CH4 etc hence mitigate the problem of green house effect and avoid increase in global temperature. Action 3: Staff and Students have participated in plantation programme in the college.			
PO 8 : Ethics			
PO 8	2.35	2.29	1. Achieved attainment is closed to the target 2. Many students are tending to ignore ethics in engineering practices. 3. Students should understand nature and ethics follow code of conduct. 4. Students should keep their schools and colleges clean and tidy.
Action 1: Workshops were conducted on ethics so that students came to know how to improve personal performance in life, studies and also duties as a citizen by inviting Seers and Pontiffs as resource persons. Action 2: Other programs on ethics are also conducted for students like Swatch Bharat Abhiyan in the college by cleaning and sweeping the college and by planting trees. Action 3: Yoga classes are conducted to improve the health and moral values.			
PO 9 : Individual and Team Work			
PO 9	2.35	2.44	1. Achieved attainment is above to the target.
However the following action were taken. Action 1: Classes were continued to motivate students to do innovative projects which improve competence and reduce contaminating effects, like air pollution due to which many people died especially in New Delhi as air quality index increased to 650, safe zone is 0-50. Action 2: Students were sent to local Industries where they carried out different projects. Action 3: Students were sent to other colleges and universities to carryout project work and they learnt how to work as a team.			

PO 10 : Communication			
PO 10	2.35	2.36	1. Target is met
However the following actions were taken. Action 1: Elocution competitions were conducted for students for improving communication skills where they gave seminar on burning topics like COVID 19 problem, Swatch Bharat Abhiyan and terrorism and religious unrest etc. Action 2: Group discussions are conducted with a considerable improvement in communication. Action 3: Students are motivated to compulsory seminar where vocabulary improved.			
PO 11 : Project Management and Finance			
PO 11	2.35	2.19	1.Achieved attainment is closed to the target 2.Few students are not having knowledge of importance carrying out project works and group discussions. 3. Students should keep in mind that their project work should be cost effective.
Action 1: Workshops were conducted for students to teach them the various technologies and methodologies to manage a project effectively and efficiently with minimum finance. Action 2: Project works carried out by final year students much more efficiently and also by cost analysis.			
PO 12 : Life-long Learning			
PO 12	2.35	2.24	1. Achieved attainment is closed to the target 2. Few students do not know about learning processes that they continue even after completing degree. 3. They should continuously go through websites papers and new innovations and update themselves. 4. Students still not aware of the fact that life long learning is a self education so that they can get a place in the engineering business.
Action 1: Whenever workshops and webinars are arranged in the college, the old students asked to join either offline or online so that they keep contact with the concepts which help them to pursue their career. Action 2: Short term programs were conducted to highlight applications of mechanical engineering in day-to-day life.			

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

PSOs	Target Level	Attainment Level	Observations
PSO 1 : DESIGN AND MANUFACTURING SKILLS: Apply the knowledge of design and analysis, manufacturing and quality assurance in the field of automotive manufacturing, mechatronics and robotics.			
PSO 1	2.35	2.12	1. Achieved attainment is closed to the target 2. Students lack confidence in solving real life career in the specific field of research, product development. 3. Students can also show their capability and build career in the specific field to design and development of mechanical components
Action1: Encourage students to publish research papers in design, manufacturing, and robotics domains. Action 2: Facilitate industrial visits to automotive and robotics manufacturing plants. Action 3: Encourage students to undergo internships in leading design and manufacturing companies. Action 4: Activities like case study, assignment on updated manufacturing systems were given to the students			
PSO 2 : PROBLEM SOLVING ABILITIES: Apply the knowledge acquired in the domains of thermal, fluid and solid mechanics to solve the problem related to their equipment and evaluating the performance.			
PSO 2	2.35	2.25	1. Achieved attainment is closed to the target 2. Students lack in problem solving and optimization techniques. 3. Still students have not carried out research work on recent trends.
Action 1: Reinforce fundamental concepts of thermodynamics, fluid mechanics, and solid mechanics through interactive lectures and problem-solving sessions. Action 2: Conduct case studies and real-world problem-solving exercises.			
PSO 3 : MANAGERIAL SKILLS: Apply the managerial skills to work effectively in a team and in a society of following ethical and environmental practices.			
PSO 3	2.35	2.77	1. Target is met
No actions taken			

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

Institute Marks : 10.00

Academic Audit and Action Taken therefore during the period of Assessment

Objective

To enhance the quality of academic processes and ensure continuous improvement in the teaching-learning process through rigorous academic audits. Regular follow-ups and reviews will ensure sustained quality in academic delivery and student outcomes.

Academic Audit Process

- The academic audit at DMI College of Engineering is conducted to evaluate the following aspects
- Reviewing curriculum implementation and its alignment with POs (Program Outcomes) and PSOs (Program Specific Outcomes).
- Evaluating faculty performance in teaching, research, and student mentoring.
- Assessing the adequacy of infrastructure and learning resources.
- Analyzing examination results and student progression.
- Co-curricular and extracurricular activities supporting academic learning
- Gathering feedback from students, alumni, and industry experts.

Documents to be verified during the internal academic audits.

1. Calendar of Events.
2. Lesson Plan
3. Syllabus, Attendance Registers.
4. Individual Time Table.
5. IA Question Paper, Scheme of Evaluation and Assignment Questions.
6. Model Question Papers, Previous University Question Papers.
7. Lab Records, Lab Manuals, Ledger
8. Course File
9. Remedial and Tutorial Class Records.
10. Result Analysis
11. Counseling and Mentoring Records.
12. Additional Resources to Students (Notes, PPT, Etc.)
13. Co-Curricular Activities: Seminar/Conference/Workshop/Guest Lecture Conducted and attended.
14. Industrial Visits, Faculty Achievements: Paper publications, Books etc.
15. Feedback mechanism for assessing the Teaching-Learning Process.
16. Audit committee submits the report of audit to the IQAC Convener and also shares it with the concerned Head of the Department.
17. IQAC Convener and members do the analysis of the report and initiates the corrective measures as necessary with the department.
18. The Head of the department discuss the audit findings with the faculty and prepares plan of action in the DAC meeting for addressing any concern(s) identified by the auditor.
19. Department Submits the Action taken report with respect to audit report to IQAC.

Audit Committee Composition:

- Internal Faculty Members: Senior professors from respective departments.
- External Members: Experts from academia and industry.
- Administrative Representatives: Deans and Heads of Departments.

Key Observations from the Audit

Strengths Identified

- Effective implementation of Outcome-Based Education (OBE).
- Well-maintained student performance records.
- Adequate laboratory facilities and usage.
- Regular conduction of internal assessments.
- Active involvement of students in co-curricular activities.

Areas of Concern

- Gaps in achieving program-specific outcomes (PSOs).
- Inconsistency in student feedback mechanism.
- Limited industry interaction and internships.
- Irregular mentoring sessions for students.
- Lack of structured documentation of remedial classes.

Action Taken

Based on the audit findings, the following actions were implemented:

Table 7.2.1 Audit observations and Action Taken

Year	Observation	Action Taken	Impact
2022-2023	Insufficient practical exposure	Introduced additional lab sessions and real-time project-based learning.	Improved practical understanding among students.
	Gaps in achieving PSOs	Additional workshops and hands-on training sessions introduced.	Improvement in technical skills and employability.
2022-2023	Delays in implementing feedback	Established a dedicated committee to address student feedback promptly.	Faster resolution of academic and administrative concerns.

2023-2024	Lack of alumni engagement	Organized alumni meets and developed an online alumni portal for continuous interaction.	Improved alumni involvement in mentoring and placements.
	Documentation of remedial classes	Implemented a standardized format for recording and reporting remedial sessions.	Improved monitoring of academic support programs.
2023-2024	Integration of co-curricular activities	Mapped co-curricular activities to specific POs and made participation mandatory for certain credits.	Enhanced holistic development of students.
	Limited industry interaction	MOUs signed with three new industries; increased guest lectures and industrial visits.	Enhanced industry exposure for students
2024-2025	Need for interdisciplinary projects	Introduced collaborative projects between departments with dedicated funding.	Encouraged teamwork and cross-domain innovation among students.
2024-2025	Insufficient entrepreneurship development	Partnered with incubation centers and organized workshops on startups and innovation.	Increased student interest in entrepreneurship and innovation-based careers.

Outcome of Actions Taken

- Improved alignment of PSOs with student performance.
- Increased student satisfaction scores in annual feedback surveys.
- Enhanced industry participation in placement activities.
- Improved documentation and academic record-keeping practices.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10) Total Marks 10.00

Institute Marks : 10.00

Improvement in Placement, Higher Studies and Entrepreneur:

Assessment is based on improvement in:

- Placement
- Number of students placed
- Quality placement
- Type of industry
- Pay scale / packages etc.

Higher Studies:

- Admissions in premier institutions
- National / State / Global Level

Table 7.3.1 Improvement in Placement

Sl.No	Acadamic Year	No of Students admitted	No of Students placed	Placement Percentage
1	2023-24	36	26	72
2	2022-23	69	66	96
3	2021-22	46	44	96

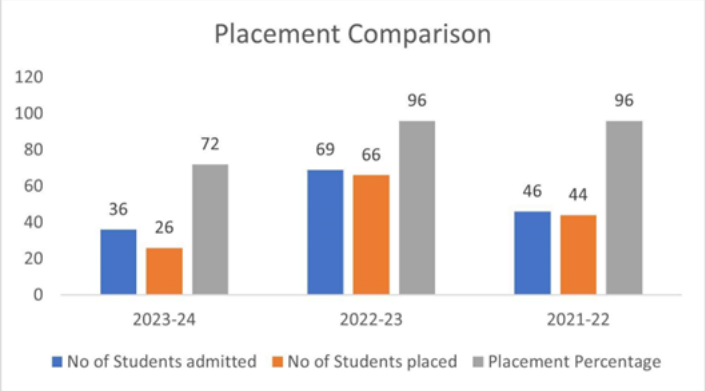


Figure 7.3.1 Improvement in Placement

Still placements are going on and more improvement in placements can be observed, further it is concluded that there is improvement in placements every year.

7.3.2 Details of Higher Studies for AY: 2023-24

BE- Mechanical Engineering 2023-24					
S.no.	**Name of the student**	**Higher Education Degree**	**College / University**	**Year of Completion**	**Class Obtained**
1	THOMAS ALVA EDISON V	ME -Thermal Engineering	DMI College of Engineering/Anna University	2026	NA
2	DINESH S	ME -Thermal Engineering	DMI College of Engineering/Anna University	2026	NA
3	SILAS KENOLEY ROY S	ME -Thermal Engineering	DMI College of Engineering/Anna University	2026	NA
4	AJAY N	Graduate in Marine Engineering Training	G-Met, Hindustan University	2025	NA
5	SUNIL B	MBA	Chennai University	2026	NA
6	LOKESH S	MBA	Chennai University	2026	NA

7.3.3 Details of Higher Studies for AY: 2022-23

BE- Mechanical Engineering 2022-23					
S.no.	**Name of the student**	**Higher Education Degree**	**College / University**	**Year of Completion**	**Class Obtained**
1	MATHIVANAN E	MBA	Indira Institute of Engineering and Technology	2025	1ST CLASS
2	SUJITH KANNAN B	Graduate In Marine Engineering Training	AMET University	2025	1ST CLASS

7.3.4 Details of Higher Studies for AY: 2021-22

BE- Mechanical Engineering 2021-22					
S.no.	**Name of the student**	**Higher Education Degree**	**College / University**	**Year of Completion**	**Class Obtained**
1	BONI FACE P	MBA	Rajalakshmi school of Business	2024	1ST CLASS
2	LOYDSON P A	MBA	Loyola Institute of Technology and Science	2024	1ST CLASS
3	KIRAN	MBA	Rajalakshmi school of Business	2024	1ST CLASS
4	ANTONY HRITHIK	Graduate In Marine Engineering Training	Vels University	2023	1ST CLASS
5	LAKSHMI PRIYA	MSc – Cyber Forensics & Information Security	University of Madras	2024	1ST CLASS

As per available data it is observed that there is good progress in students admitted to higher studies and to improve this category in house motivational programs are being organized. Our students have appeared in various competitive exams for higher studies, and have opted for premier institutions.

7.4 Improvement in the quality of students admitted to the program (10) Total Marks 10.00

Institute Marks : 10.00

Item		**2024-25**	**2023-24**	**2022-23**
National Level Entrance Examination NA	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others Single Window System	No of students admitted	14	11	13
	Opening Score/Rank	152	179	163
	Closing Score/Rank	83	82	82
Name of the Entrance Examination for Lateral Entry or lateral entry details NA	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		59	65	61

8 FIRST YEAR ACADEMICS (50) Total Marks 40.83

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

Institute

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

Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)
							CAY	CAYm1	CAYm2		
BABU J	BEIPB8517G	M.Sc. and Ph.D. (Chemistry)	16/05/2022	ORGANIC CHEMISTRY	Assistant Professor	03/09/2024	100	0	0	Yes	Regular
RAGHU Y	BADPR2839G	M.Sc. (Physics) and Ph.D.	24/03/2017	RADIATION PHYSICS	Professor	05/07/2023	100	100	0	Yes	Regular
STELLA MARY	CHEPS9723B	M.Phil	30/05/2006	PHYSICS	Assistant Professor	20/07/2017	100	100	100	Yes	Regular
AJITHA R	BBQPA2758D	M.SC. (Mathematics) and PhD	11/02/2023	GRAPH THEORY	Assistant Professor	14/07/2023	100	100	0	Yes	Regular
ANANTHARAM	ANZPA7425R	M.SC. (Mathematics) and PhD	21/03/2022	GRAPH THEORY	Assistant Professor	01/08/2024	100	0	0	Yes	Regular
KAMARAJ K S	GATPK0598G	M.Phil	31/05/2014	Graph Theory	Assistant Professor	21/01/2019	100	100	100	Yes	Regular
HARIPRIYA R	AIRPH5830J	M.A and Ph.D	27/10/2022	MUTICULTURAL PERCEPTIVES	Assistant Professor	24/05/2023	100	100	0	Yes	Regular
STANISLAUS A	JDWPS8875P	M.A and Ph.D	14/10/2024	ENGLISH LANGUAGE TEACHING	Assistant Professor	29/01/2024	100	50	0	Yes	Regular
THARANI K	BEWPT7079H	MA	31/05/2018	CULTURAL ALIENATION	Assistant Professor	11/04/2022	100	100	100	Yes	Regular
SUBASHINI J	DGOPS0803Q	M.Sc. (Physics) and Ph.D.	31/03/2007	Physics	Assistant Professor	12/07/2021	0	100	100	No	Regular
KIRUBHA G	GGSPK5810C	M.Phil	31/05/2015	Fuzzy Logics	Assistant Professor	03/01/2022	0	100	100	No	Regular
SNEHA	BRQPS7176H	M.Phil	31/05/2007	Algebra	Assistant Professor	10/06/2019	0	50	100	No	Regular
NANDAGOPAL	AJXPN9655L	M.SC. (Mathematics) and PhD	23/08/2023	Graph Theory	Assistant Professor	05/07/2023	0	50	0	No	Regular
JASMINE G	AUVPJ6612N	M.SC. (Mathematics) and PhD	03/11/2023	Fractional differential equations	Assistant Professor	24/07/2023	0	50	0	No	Regular
ANBARASAN V	CHNPA4232N	M.Sc. and Ph.D. (Chemistry)	16/05/2022	Physical Chemistry	Assistant Professor	17/11/2021	100	100	100	Yes	Regular
EDWARD JEY	ABCPE8130C	M.Sc. and Ph.D. (Chemistry)	10/03/2022	Physical Chemistry	Assistant Professor	14/09/2022	50	100	100	No	Regular
EMMANUAL S	ABCPE2112Q	M.E/M.Tech	30/06/2007	Manufacturing Technology	Assistant Professor	02/01/2025	50	0	0	Yes	Regular
VIGNESH S	FCCPS2002F	M.E/M.Tech	30/09/2020	Computer Science	Assistant Professor	15/12/2023	100	50	0	Yes	Regular
STEFFY TEEN	DULPS2462E	M.E/M.Tech	30/06/2013	Geomatics	Assistant Professor	10/06/2019	100	100	100	Yes	Regular
AMBROSE PR	AHZPP6467G	M.SC. (Mathematics) and PhD	21/10/2016	Graph Theory	Associate Professor	26/03/2021	0	0	100	No	Regular
SATHIRAGAVA	GIGPS2307M	M.Phil	31/05/2012	Graph Theory	Assistant Professor	20/08/2022	0	100	100	No	Regular
SHEELA C	COIPC9609D	M.Phil	30/01/2003	Graph Theory	Assistant Professor	09/05/2022	0	0	100	No	Regular

JASWINI JANI	OHHPS3198R	M.Phil	15/07/2019	PSYCHOLOGICAL HORROR THRILLER	Assistant Professor	20/09/2021	0	0	100	No	Regular
NIKITHA B	FXTPB7110P	MA	31/05/2019	ENGLISH	Assistant Professor	20/09/2021	0	0	100	No	Regular
KRISHNAMAL	BFYPJ8711H	M.E/M.Tech	28/06/2019	EMBEDDED SYSTEM	Assistant Professor	14/08/2023	100	100	0	Yes	Regular
MONISHA V	BZSPV6413J	M.E/M.Tech	30/06/2021	WIRELESS TECHNOLOGY	Assistant Professor	03/10/2024	100	0	0	Yes	Regular
PETCHIAMMA	BCFPP8217G	M.Sc. and Ph.D. (Chemistry)	24/02/2020	Inorganic chemistry	Assistant Professor	15/09/2022	100	100	100	Yes	Regular
ALWIN STAR A	BONPA1632N	ME/M. Tech and PhD	30/03/2020	POWER SYSTEM	Assistant Professor	19/09/2023	0	100	0	No	Regular
CHANDRAN G	ARPPC0884N	M.E/M.Tech	30/06/2010	Power Electronics and Drives	Assistant Professor	14/12/2018	100	100	100	Yes	Regular
VIJAYA G	BDXPV1664G	M.E/M.Tech	25/06/2013	Power Electronics and Drives	Assistant Professor	18/01/2019	100	100	100	Yes	Regular
SUDHA MERL	EDTPS9437R	M.E/M.Tech	30/06/2017	Power Electronics and Drives	Assistant Professor	02/02/2023	100	100	50	Yes	Regular
PRADEEP E M	DIFPP6722J	M.E/M.Tech	20/07/2015	Manufacturing Engineering	Assistant Professor	30/11/2020	50	50	50	Yes	Regular
GEETHA V	ARQPG7248B	M.Phil	31/05/2015	English	Assistant Professor	19/09/2022	0	0	50	No	Regular
VISHNUPRIYA	AECPV5768E	M.SC. (Mathematics) and PhD	05/01/2015	GRAPH LABELLING	Associate Professor	19/02/2024	100	100	0	Yes	Regular
JEBARAJ G	BCLPJ7846R	M.E/M.Tech	15/05/2017	Structural Engineering	Assistant Professor	15/06/2017	100	100	100	Yes	Regular
SYED FEROZI	DMGPS3202H	M.E/M.Tech	31/05/2011	Fiber optics	Assistant Professor	26/06/2023	50	50	0	Yes	Regular
CHITRADEVI S	AINPC0709R	M.Sc. and Ph.D. (Chemistry)	14/09/2014	ORGANIC CHEMISTRY	Professor	01/11/2023	100	100	0	Yes	Regular
IMMACULATE	BWGPG4754E	M.Sc. (Physics) and Ph.D.	17/07/2017	PHYSICS INTERDICIPLINARY	Professor	06/08/2001	100	100	100	Yes	Regular
KAVITHA M	AMAPK5888Q	M.Phil	31/05/2006	Mathematics	Associate Professor	15/04/2002	100	100	100	Yes	Regular
KRISHNAMOC	CTHPK2110F	M.E/M.Tech	30/06/2019	Engineering Design	Assistant Professor	16/06/2016	50	50	50	Yes	Regular
PREETHI VIN	CICPP2057A	M.E/M.Tech	28/06/2011	Communication Networks	Assistant Professor	05/02/2025	100	0	0	Yes	Regular
EVANGELINE	EDPPK4636G	M.A and Ph.D	07/04/2016	Tamil	Assistant Professor	20/11/2024	100	0	0	Yes	Regular
ROSHINI L	HLPPR3469P	M.SC. (Mathematics) and PhD	04/01/2024	Graph Theory	Assistant Professor	08/07/2024	100	0	0	Yes	Regular

Year	Number Of Students(approved intake strength) N	Number of Faculty members(considering fractional load) F	FYSFR (N/F)	*Assessment= (5*20)/FYSFR(Limited to Max.5)
2022-23(CAYm2)	420	22	19	5
2023-24(CAYm1)	480	27	18	5
2024-25(CAY)	540	29	19	5
Average	480	26	18	5

8.2 Qualification of Faculty Teaching First Year Common Courses (5) Total Marks 2.67

Institute Marks : 2.67

Year	x (Number Of Regular Faculty with Ph.D)	y (Number Of Regular Faculty with Post graduate Qualification)	RF (Number Of Faculty Members required as per SFR of 20:1	Assessment Of Faculty Qualification [(5x + 3y) / RF]
2022-23	3	13	21	2.00
2023-24	8	13	24	3.00
2024-25	10	12	27	3.00

Average Assessment: 2.67

8.3 First Year Academic Performance (10) Total Marks 3.16

Institute Marks : 3.16

Academic Performance	2024-25	2023-24	2022-23
Mean of CGPA or mean percentage of all successful students(X)	3.68	3.98	2.91
Total Number of successful students(Y)	33.00	32.00	32.00
Total Number of students appeared in the examination(Z)	38.00	36.00	34.00
API [X*(Y/Z)]	3.20	3.54	2.74

Average API[(AP1+AP2+AP3)/3] : 3.16

Assessment [1.5 * Average API] : 3.16

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

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5) Institute Marks : 5.00

8.4.1. Quality of internal semester Question papers, Assignments and Evaluation:

Our college conducts two Internal Assessment Test (IAT-I & IAT-II) and Model Exam. IAT – I covers Unit-I & II. IAT – II covers Unit-III & IV. All the five units (Unit-I, II, III, IV, V) are covered in Model Exam Question paper. The internal test consists of 50 Marks with duration of 1.5 hours and Model Exam consists of 100 Marks with duration is 3 hours. The question paper are set to make the student to learn time management.

A. Process for Internal semester Question Paper Setting, Evaluation and effective process implementation: (5)

1. Internal semester Question Paper Setting:

- Question papers all prepared by the course in-charges.
- For each subjects, question bank is prepared.
- While setting the question paper all previous university exam papers are taken into consideration.
- According to level of toughness the questions are prepared (viz., analyzing the problems implementation of modern tools, formulating the problems etc), which is termed as Bloom's Taxonomy.
- The students are asked to prepare and submit unit wise assignments, prior to Model examinations. The assignment should contain Key points, Neat diagrams / circuit, Derivations and Tables or plots as expected in the answer scripts in university exams.
- Evaluated answer scripts are randomly selected and checked for the authenticated awarding of marks by the senior faculty members. Changes are made in the marks when there is a genuine claim.

2. Evaluation:

- The faculties after every internal assessment test they explain the solution of the questions in the class which will enable them to perform well in the final examination.
- For any genuine reasons, if a student was unable to perform well in the given three internal assessment tests, retest is given to students..
- Department exam Cell will conduct the exams and answer scripts are evaluated by the Concern subject In-charges.
- Department will consolidate the marks after two days of the exam.
- Department categorize the students such as Advance Learners, average and slow learners based on their marks.
- Special coaching classes are conducted for the students by the subject In-charges.

3. Student Performance Analysis:

Department categorize the students such as Advance Learners, average and slow learners based on their marks.

Students Level Analysis:

Level 1: Internal Assessment Test marks > 80 % = Advance Learners Students

- Mementos are distributed to motivate them to continue their Excellency in academics.
- Giving special coaching to achieve university ranks.

Level 2: Internal Assessment Test marks 50 % to 80 % = Average Students

- Student mentors follows their progress regularly advising students about attending classes, making up classes missed, and getting additional help
- Repeated University questions are given to make them to get more marks
- Taking necessary actions to promote them to the next level
- Concentrating on analytical papers
- Motivating them through Parent teachers Association
- Encourage them to implement the innovative ideas as the projects
- Encourage them to participate in various activities of the Department and also Colleges.

Level 3: Internal Assessment Test marks < 50 % = Slow Learners

- Concentrate on two marks questions
- Repeated University questions are given to make them pass.
- Special Coaching are given for all papers before the University exams
- Regularly Counseling them in all aspects
- Help them by conducting regular Coaching Classes to clear the papers
- Student mentors follows their progress regularly advising students about attending classes, making up classes missed, and getting additional help.
- Conduction of extra classes to those who failed in previous semester subjects.

B. Process to ensure questions from Outcomes/learning levels perspective: (5)

Each question is mapped with COs. Student who answered to particular question is taken into consideration and average of all students' marks is taken for CO-PO attainment. Knowledge levels and learning levels are incorporated in the question banks and internal exam questions, that ensures COs level and its accomplishment.

Assessment Process	Evaluation
Theory	
Class tests	Class testsareconductedeverydayduring1st hourfor25marks.
Continuous Assessment tests	Three continuous assessment tests will be conducted. The first two willbeconductedfor50marksforthedurationof1.30Hrscovering 4 units (2 units each). The last assessment will be a model exam for 100marks foradurationof3 Hrs with all 5-units.
End Semester Examination	Will be conducted as per Anna University schedule
Laboratory	

Model Exam	Lab model exam will be conducted after completion of all the experimentsfor100 marks for a duration of3 Hrs
End Semester Exam	Will be conducted as per Anna University schedule

Others	
Assignments	Three Assignment topics per subject will be given to students
Tutorials	The entire class will be divided into three batches where each batch will have 20 to 23students. A faculty will be allotted for each batch. Every week an hour will be conducted for tutorials wherein the Faculty will make the students solve more problems.

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

Institute Marks : 5.00

Assessment Tools

Assessment Tools are categorized into direct and indirect methods. The CO, PO and PSO attainment is calculated based on the assessment process through assessment tools. The direct assessment tools used to calculate the attainment of Course Outcomes are Internal Assessment Tests, Assignments and University Examination. 20% of weightage is given to Internal Assessment Tests and Assignments, 80% of weightage is given to University Examination. The indirect assessment tool used to calculate the attainment of Course end-survey. The Course End Survey consists of Questionnaires prepared with four scale range by focusing to evaluate the COs attainment of all courses in a semester.

Each CO is mapped with POs and the direct attainments of POs are calculated. The indirect assessment tools used to calculate the attainment of Program Outcomes are the Employer, Parent, Professional body activities and Graduate Exit Survey. For both PO and CO assessment, the weightage of direct assessment is 80% and indirect assessment is 20%.

Laboratory courses are assessed through the marks obtained by the students in the model examination, record book and university examination. The attainment levels for recording the attainment of Course Outcomes are defined based on the average performance of students in each subject.

B. The quality of assessment process and tools used:

All the Internal Assessmentmarks will be uploaded in Anna University web portal and the internal marks will be awarded purely based on their marks in the internal assessment and the assignments. Therefore students are expected to take the tests seriously and perform well in the tests & examination. Parents are requested to have a close watch on their ward's performance.

Table 3.2 a - Assessment process – Tools used

Test	Portion/Unit	Evaluation period
Internal Assessment Test – I	40% / 1&2	Within 3-5 days after the last exam
Internal Assessment Test – II	40% / 3&4	
Model Exam	100% (All Units)	
Model Practical Exam	As per Syllabus	

Attainment level:

Attainment level 1: 60% of students scoring more than 60 marks.

Attainment level 2: 70% of students scoring more than 60 marks.

Attainment level 3: 80% of students scoring more than 60 marks.

SAMPLE DATA ACADEMIC YEAR 2023-2024

MECH-23-24			Attainment level					Attained Y/N				
	CODE	SUBJECT	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
SEM -I	HS3152	Professional English I	2.55	2.55	2.50	2.50	2.65	Y	Y	Y	Y	Y
	MA3151	Matrices and Calculus	1.68	1.68	1.75	1.75	1.50	N	N	N	N	N
	PH3151	Engineering Physics	1.82	1.82	1.85	1.85	1.80	N	N	N	N	N
	CY3151	Engineering Chemistry	2.15	2.15	2.11	2.11	2.20	Y	Y	Y	Y	Y
	GE3151	Problem Solving and Python Programming	1.75	1.75	1.85	1.85	1.90	N	N	N	N	N
	GE3152	Heritage of Tamils	2.80	2.80	2.80	2.80	3.00	Y	Y	Y	Y	Y
	BS3171	Physics and Chemistry Laboratory	2.75	2.75	2.75	2.75	2.75	Y	Y	Y	Y	Y
	GE3171	Problem Solving and Python Programming Laboratory	2.56	2.56	2.60	2.60	3.00	Y	Y	Y	Y	Y
	GE3172	English Communication lab	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
SEM-II	HS3252	Professional English - II	2.35	2.35	2.40	2.40	2.20	Y	Y	Y	Y	Y
	MA3251	Statistics & Numerical Methods	1.52	1.52	1.55	1.55	1.70	N	N	N	N	N
	PH3256	Material Science	2.18	2.18	2.23	2.23	2.10	N	N	N	N	N
	BE3251	Basic Electrical & Electronics Engineering	1.65	1.65	1.69	1.69	1.78	N	N	N	N	N
	GE3251	Engineering Graphics	2.60	2.60	2.60	2.60	2.60	Y	Y	Y	Y	Y
	GE3252	Tamils & Technology	2.92	2.90	2.92	2.92	2.92	Y	Y	Y	Y	Y
	GE3271	Engineering Practices Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
	BE3271	Basic Electrical &Electronics Engineering Lab	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
	GE3272	Communication Laboratory	2.52	3	3	3	3	Y	Y	Y	Y	Y
			2.38	2.40	2.42	2.42	2.45					

SAMPLE DATA ACADEMIC YEAR 2022-2023

MECH-22-23	Attainment level	Attained Y/N

	CODE	SUBJECT	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
	HS3152	Professional English I	2.86	2.61	2.81	2.63	2.93	Y	Y	Y	Y	Y
	MA3151	Matrices and Calculus	1.90	1.74	1.60	1.71	1.80	N	N	N	N	N
	PH3151	Engineering Physics	1.93	1.91	1.93	1.93	1.91	N	N	N	N	N
	CY3151	Engineering Chemistry	2.03	2.05	2.11	2.11	2.20	Y	Y	Y	Y	Y
SEM -I	GE3151	Problem Solving and Python Programming	1.72	1.78	1.61	1.82	1.65	N	N	N	N	N
	GE3152	Heritage of Tamils	2.86	2.86	2.86	2.86	2.86	Y	Y	Y	Y	Y
	BS3171	Physics and Chemistry Laboratory	3	3	3	3	3	Y	Y	Y	Y	Y
	GE3171	Problem Solving and Python Programming Laboratory	2.5	2.5	2.6	2.6	2.7	Y	Y	Y	Y	Y
	GE3172	English Communication lab	3	3	3	3	3	Y	Y	Y	Y	Y
	HS3252	Professional English - II	2.34	2.34	2.34	2.34	2.34	Y	Y	Y	Y	Y
	MA3251	Statistics & Numerical Methods	1.80	1.89	1.75	1.84	1.73	N	N	N	N	N
	PH3256	Material Science	1.90	1.83	1.89	1.61	1.72	N	N	N	N	N
	BE3251	Basic Electrical & Electronics Engineering	1.81	1.62	1.76	1.81	1.61	N	N	N	N	N
	GE3251	Engineering Graphics	2.30	2.30	2.30	2.40	2.40	Y	Y	Y	Y	Y
SEM-II	GE3252	Tamils & Technology	2.92	2.90	2.92	2.92	2.92	Y	Y	Y	Y	Y
	GE3271	Engineering Practices Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
	BE3271	Basic Electrical &Electronics Engineering Lab	2.92	2.90	2.92	3.00	3.00	Y	Y	Y	Y	Y
	GE3272	Communication Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
			2.43	2.40	2.41	2.42	2.43					

SAMPLE DATA ACADEMIC YEAR 2021-2022

MECH-21-22

			Attainment level					Attained Y/N				
	CODE	SUBJECT	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
	HS3152	Professional English I	2.86	2.61	2.81	2.63	2.93	Y	Y	Y	Y	Y
	MA3151	Matrices and Calculus	1.85	1.70	1.65	1.71	1.86	N	N	N	N	N
	PH3151	Engineering Physics	1.93	1.60	1.80	1.70	1.61	N	N	N	N	N
	CY3151	Engineering Chemistry	2.03	2.05	2.11	2.11	2.20	Y	Y	Y	Y	Y
SEM -I	GE3151	Problem Solving and Python Programming	1.61	1.81	1.71	1.61	1.86	N	N	N	N	N
	GE3152	Heritage of Tamils	2.86	2.86	2.86	2.86	2.86	Y	Y	Y	Y	Y
	BS3171	Physics and Chemistry Laboratory	3	3	3	3	3	Y	Y	Y	Y	Y
	GE3171	Problem Solving and Python Programming Laboratory	2.5	2.5	2.6	2.6	2.7	Y	Y	Y	Y	Y
	GE3172	English Communication lab	3	3	3	3	3	Y	Y	Y	Y	Y
	HS3252	Professional English - II	2.34	2.34	2.34	2.34	2.34	Y	Y	Y	Y	Y
	MA3251	Statistics & Numerical Methods	1.63	1.80	1.76	1.68	1.74	N	N	N	N	N
	PH3256	Material Science	1.76	1.62	1.81	1.71	1.83	N	N	N	N	N
	BE3251	Basic Electrical & Electronics Engineering	1.81	1.85	1.76	1.65	1.83	N	N	N	N	N
	GE3251	Engineering Graphics	2.30	2.30	2.30	2.40	2.40	Y	Y	Y	Y	Y
SEM-II	GE3252	Tamils & Technology	2.92	2.90	2.92	2.92	2.92	Y	Y	Y	Y	Y
	GE3271	Engineering Practices Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
	BE3271	Basic Electrical &Electronics Engineering Lab	2.92	2.90	2.92	3.00	3.00	Y	Y	Y	Y	Y
	GE3272	Communication Laboratory	3.00	3.00	3.00	3.00	3.00	Y	Y	Y	Y	Y
			2.41	2.38	2.41	2.38	2.45					

8.5 Attainment of Program Outcomes from first year courses (20) Total Marks 20.00

8.5.1 Indicate results of evaluation of ezch relevant PO and/ or PSO, if applicable (15) Institute Marks : 15.00

POs Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	0	0	0	0	1	0	0	0	0	3	0	1
C102	3	3	3	3	0	0	0	0	0	0	1	1
C103	3	1	1	2	2	0	0	0	0	0	0	1
C104	3	1	0	2	0	1	2	1	0	0	0	3
C105	3	2	2	2	3	0	0	1	2	2	3	3
C106	3	3	3	3	2	0	0	2	0	2	0	3
C107	3	2	1	1	2	1	0	0	2	0	0	1
C108	3	2	2	1	0	1	1	2	1	0	0	1
C109	0	0	0	0	1	0	0	0	0	3	0	1
C110	3	3	3	0	2	0	0	0	1	1	1	1
C111	3	1	0	1	0	0	0	0	0	0	0	1
C112	3	2	0	1	0	3	0	0	0	3	0	3
C113	1	1	0	0	0	2	3	2	0	1	0	1
C114	3	3	3	3	0	0	0	1	0	1	0	2
C115	3	3	2	1	0	1	0	2	2	0	0	2
C116	3	2	2	0	0	1	1	1	2	1	1	2

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.86	2.07	2.2	1.82	1.86	1.43	1.75	1.5	1.67	1.89	1.5	1.69
CO Attainment	2.86	2.07	2.2	1.82	1.86	1.43	1.75	1.5	1.67	1.89	1.5	1.69

PSOs Attainment:

Course	PSO1	PSO2	PSO3
C101	0	0	1
C102	1	0	0
C103	0	0	0
C104	0	0	0
C105	3	2	1
C106	0	0	0
C107	0	0	0
C108	2	2	2
C109	0	0	1
C110	1	2	0
C111	2	1	1
C112	1	1	0
C113	2	0	0
C114	1	1	0
C115	1	1	0
C116	2	1	1
PSO Attainment	1.6	1.38	1.17

PSO Attainment Level

Course	PSO1	PSO2	PSO3
Direct Attainment	1.6	1.38	1.17

8.5.2 Actions taken based on the results of evaluation of relevant POs (5) Institute Marks : 5.00

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

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2.5	2.30	1. Achieved attainment is close to target and it is at level. 2. Still students are finding difficult in analyzing and solving the problems of complex subjects because of lack in basic science and engineering knowledge. 3. Students are unaware of multiple solutions for a same problem.
Action 1: More complex problems are solved on confusing and difficult subjects. Action 2: Extra classes and practical models are shown for physics, chemistry and python. Action 3: More emphasis was given on complex concepts which have mathematical applications.			
PO 2 : Problem Analysis			
PO 2	2.35	2.31	1. Students are to be exposed to research literature. 2. Students find difficult to identify and analyze numerical problem. 3. Students need to learn first principles of mathematics to formulate and solve the complex problems.
Action 1: More tutorials to be conducted to solve the engineering problems. Action 2: More diverse problems to be taught in extra classes. Action 3: Spot or unexpected tests were continued to evaluate each student's level of understanding, in which many students performed considerably well. Action 4: Many Students were able to solve problems on the board. Action 5: Mathematics courses were strengthened by various concepts and examples so that students improved their mathematics applications.			
PO 3 : Design/development of Solutions			
PO 3	2.08	2.21	Target met.
Target met, However the following actions were taken: Action 1: Engineering Graphics were taught with various online learning materials. Action 2: Difficult problems are always explained with the help of physical models.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	2.5	2.14	Target not attained.
ACTIONS: Lectures were given on research based knowledge and motivating students to read research journal papers.			
PO 5 : Modern Tool Usage			
PO 5	2.14	2.27	Target met.
Action 1: Additional classes were conducted to introduce practical knowledge using teaching aids and physical models.			
PO 6 : The Engineer and Society			
PO 6	1.53	2.38	1. Students are slowly learning that they are the part of the society and they are studying engineering to serve the society. 2. Students are exposed to development of products in industries and their ill effects like pollution and effect on health like use of polymer sheets.
Action 1: Practical approach of teaching method should be adapted. Action 2: Students should be exposed to outside world to know and solve the problems of society like road safety, how to avoid infections like Covid 19, Anthrax, H1N1 etc. Action 3: Local garbage issues undertaken by students			
PO 7 : Environment and Sustainability			
PO 7	1.52	2.08	1. Students should note the effect on people and nature due to various engineering applications. 2. Students should go through case studies to analyse the problems of technology and suggest remedies. 3. Students should explain about the knowledge of sustainable development
Action 1: Examples on the pollution related problems to be practiced by students in extra classes. Action 2: Student should practice and understand about carbon neutrality and thus avoid greenhouse gases CO2, NOx, SOx, O3, CH4 etc hence mitigate the problem of green house effect and avoid increase in global temperature. Action 3: Staff and Students have participated in plantation programme in the college.			
PO 8 : Ethics			
PO 8	1.82	2.26	1. Many students are tending to ignore ethics in engineering practices. 2. Students should understand nature and ethics follow code of conduct. 3. Students should keep their schools and colleges clean and tidy.
Action 1: Workshops were conducted on ethics so that students have shown improvement in personal performance in life, studies and also duties as a citizen. Action 2: Other programs on ethics are also conducted for students like Swatch Bharat Abhiyan in the college by cleaning and sweeping the college and by planting trees. Action 3: Yoga classes are conducted to improve the health and moral values.			
PO 9 : Individual and Team Work			
PO 9	1.80	2.45	1. Usually the behavior of the students not good enough to associate with other students. 2. Effectiveness of the student and that of team should improve for a successful engineering work. 3. Few students do not show interest to carry out their role as a team member.
Action 1: Classes were continued to motivate students to do innovative projects which improve competence and reduce contaminating effects, like air pollution due to which many people died especially in New Delhi as air quality index increased to 650, safe zone is 0-50. Action 2: Students were sent to local Industries where they carried out different projects. Action 3: Students were sent to other colleges and universities to carryout project work and they learnt how to work as a team.			
PO 10 : Communication			
PO 10	1.88	2.38	1.Few students are not having proper communication skills to convey importance of engineering applications. 2. They should work in groups to solve complex engineering problems which are possible only by effective communication.

Action 1: Elocution competitions were conducted for students for improving communication skills where they gave seminar on burning topics like COVID 19 problem, Swatch Bharat Abhiyan and terrorism and religious unrest etc. Action 2: Group discussions are conducted with a considerable improvement in communication. Action 3: Students are motivated to compulsory seminar where vocabulary improved.

PO 11 : Project Management and Finance

PO 11	2.5	2.1	1.Few students are not having knowledge of importance carrying out project works and group discussions. 2. Students should keep in mind that their project work should be cost effective.
Action 1: Workshops were conducted for students to teach them the various technologies and methodologies to manage a project effectively and efficiently with minimum finance. Action 2: Project works carried out by final year students much more efficiently and also by cost analysis.			

PO 12 : Life-long Learning

PO 12	2.21	1.97	1. Few students do not know about learning processes that they continue even after completing degree. 2. They should continuously go through websites papers and new innovations and update themselves. 3. Students still not aware of the fact that life long learning is a self education so that they can get a place in the engineering business.
Action 1: Whenever workshops and webinars are arranged in the college, the old students asked to join either offline or online so that they keep contact with the concepts which help them to pursue their career. Action 2: Short term programs were conducted to highlight applications of engineering in day-to-day life.			

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

PSOs	Target Level	Attainment Level	Observations
PSO 1 : DESIGN AND MANUFACTURING SKILLS: Apply the knowledge of design and analysis, manufacturing and quality assurance in the field of automotive manufacturing, mechatronics and robotics.			
PSO 1	2.03	2.12	1.Students lack confidence in solving real life career in the specific field of research, product development. 2. Students can also show their capability and build career in the specific field to design and development of mechanical components
Action1: Encourage students to publish research papers in design, manufacturing, and robotics domains. Action 2: Facilitate industrial visits to automotive and robotics manufacturing plants. Action 3: Encourage students to undergo internships in leading design and manufacturing companies. Action 4: Activities like case study, assignment on updated manufacturing systems were given to the students			
PSO 2 : PROBLEM SOLVING ABILITIES: Apply the knowledge acquired in the domains of thermal, fluid and solid mechanics to solve the problem related to their equipment and evaluating the performance.			
PSO 2	2.20	2.25	1. Students lack in problem solving and optimization techniques. 2. Still students have not carried out research work on recent trends.
Action 1: Reinforce fundamental concepts of thermodynamics, fluid mechanics, and solid mechanics through interactive lectures and problem-solving sessions. Action 2: Conduct case studies and real-world problem-solving exercises.			
PSO 3 : MANAGERIAL SKILLS: Apply the managerial skills to work effectively in a team and in a society of following ethical and environmental practices.			
PSO 3	1.44	2.77	1. Students require exposure to team-based projects, decision-making, and leadership roles to enhance managerial effectiveness. 2. Students need to be familiar with project management, supply chain logistics, lean manufacturing, and financial decision-making.
Action 1: Implement team-based projects where students collaborate to solve real-world engineering and managerial problems. Action 2: Organize group discussions, role-playing exercises, and case studies on ethical dilemmas and environmental issues in industries. Action 3: interdisciplinary teamwork by involving students from different engineering and business backgrounds.			

9 STUDENT SUPPORT SYSTEMS (50) Total Marks 50.00

9.1 Mentoring system to help at individual level (5) Total Marks 5.00

Institute Marks : 5.00

The mentoring system of DMICE is designed to provide personalized guidance and support to each student, addressing their academic, professional, and personal development needs. Mentors work closely with students to identify challenges, set goals, and track progress, ensuring they receive the necessary assistance, motivation, and resources to succeed. This system fosters one-to-one interactions, enabling students to enhance their skills, confidence, and overall growth in a structured and supportive environment.

Student Counselling Centre

The Student Counselling Centre at DMI College of Engineering (DMICE) provides a dedicated professional counsellor and a safe, supportive space on campus for students. It offers guidance on personal, academic, and career-related challenges through one-on-one sessions, helping students manage stress, anxiety, and emotional difficulties. The centre is a place where students are heard, understood, and encouraged, fostering resilience and emotional well-being. By nurturing a positive mindset and providing compassionate support, the centre plays a vital role in students overall growth, aligning with the college's commitment to holistic education and excellence.

Mentoring Process

Each faculty member is assigned to a batch of 15 to 20 students in a class. Mentor-Student Meetings are conducted once a month in every semester. Each student are required to complete a Student history card containing details about their parents or guardian, addresses, contact numbers, and academic history, including marks from all end-semester exams and periodical tests. The class coordinators or mentors maintain these Data Books. Mentors keep track of progress through the Performance Improvement Plan (PIP).

Mentoring and Counselling the Students

- To monitor student's regularity and discipline.
- To enable parents to stay informed about the performance and regularity of their wards.
- To improve the teacher-student relationship.
- To counsel students, address their problems, and provide confidence to improve their quality of life.
- Mentors meet the students assigned to them once a month in a semester.
- Parents or guardians of students with poor attendance or performance are called to meet the mentors, and corrective and preventive measures are implemented for further improvement.
- Each mentor maintains detailed student information, which is reviewed by the Head of the Department (HOD) and other concerned author

Figure 9.1: Sample Photo for Student Mentoring

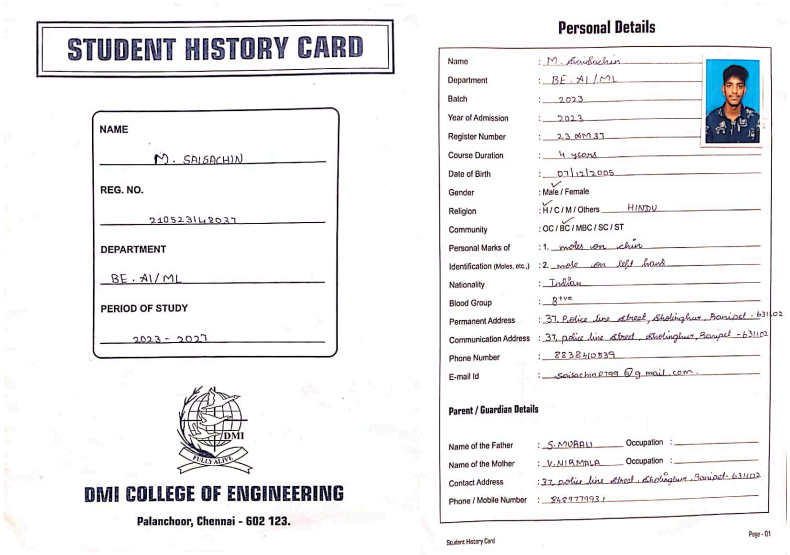


Figure 9.2: Sample Student History Card

9.1.1	Mentoring Process Flow

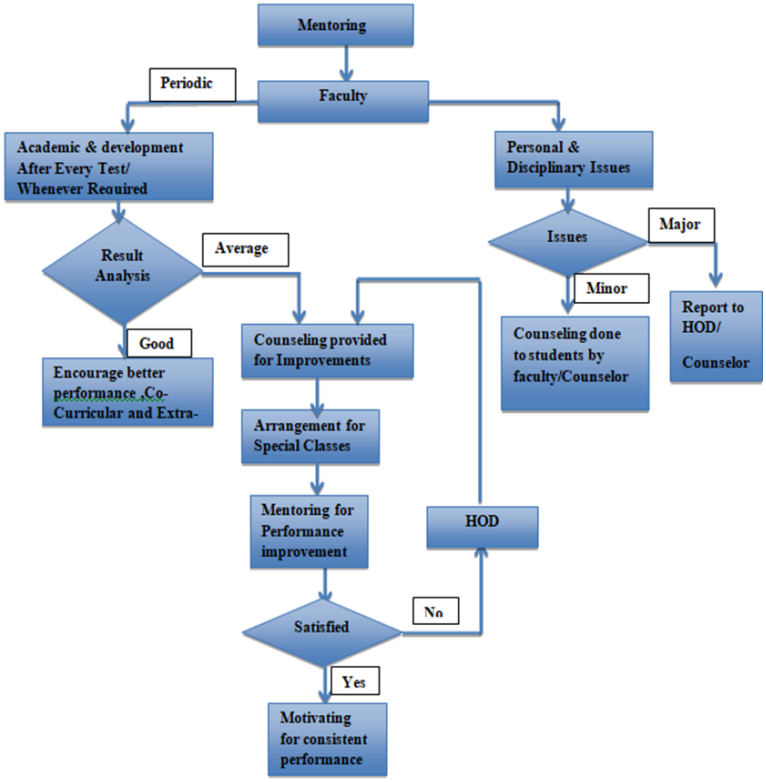


Figure.9.3: Mentoring Process

Role of Mentors

- Ensure that students understand not only their commitment to their studies but also the value of contributing to the professional community and society.
- Keep track of students' progress and achievements, set milestones, and acknowledge their accomplishments.
- Observe students from diverse cultural and ethnic backgrounds and adopt productive methods to support their unique needs.
- Encourage students to explore new techniques and discuss concepts for better outcomes.

Provide support and encouragement during times of emotional and physical distress, and recognize their accomplishments.

9.1.2	Policy Mechanism of Mentoring System

Table.9.1: Policies of Mentoring

Mentoring System	Description
Type of Mentoring	Professional Guidance/ Carrier Advancement / Academic Specific/ Laboratory Specific / All- Round Development/ Personal
Number of Students per Mentor	15 to 20
Frequency of Meeting	Meeting conducted every month after internal assessment by OFFLINE MODE
Parents Feedback	The Parents feedback is collected after every parents meet in the department or through phone calls.
Analysis	The feedback analysis will be referred by the HOD's for corrective measures, through Head of the Institution

9.1.3	Outcome of Mentoring System

- Increase in student attendance and active participation in academic activities.
- Enhanced academic performance, technical skills, and engagement in extracurricular activities.
- Significant improvement in the quality and innovation of student projects.
- Development of students personality, confidence, and mental resilience.
- Greater opportunities for career advancement, including higher education prospects.
- Enhanced capability to understand, evaluate, and contribute to resolving societal challenges effectively.

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

Total Marks 10.00

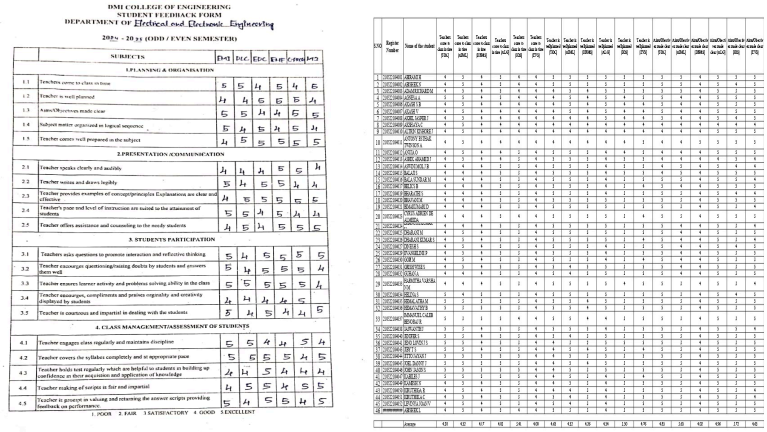
Institute Marks : 10.00

Feedback Collection Frequency: Conducted twice per semester for all courses (**YES/NO** format).

- Mode of Feedback Collection**:** Online Process.

Procedure

- Students from each class follow a pre-planned schedule and are guided to the computer lab for feedback submission.
- The questionnaire allows students to rate their experience as Excellent, Good, Satisfactory, Average, Poor based on their learning experience.
- Upon completion, a consolidated report is automatically generated and submitted to the Head of Department (HOD) and Principal for review.
- The final compiled report is shared with individual faculty members for feedback analysis and improvement.



DMI COLLEGE OF ENGINEERING
STUDENT FEEDBACK FORM
DEPARTMENT OF Electrical and Electronic Engineering
2024 - 2025 (ODD / EVEN SEMESTER)

	SUBJECTS	EE1	EE2	EE3	EE4	EE5
	1.PLANNING & ORGANISATION					
1.1	Teachers come to class in time	5	5	4	5	4	5
1.2	Teacher is well planned	4	4	5	5	5	4
1.3	Aims/Objectives made clear	5	5	4	4	5	5
1.4	Subject matter organized in logical sequence	5	4	5	4	5	4
1.5	Teacher comes well prepared in the subject	4	5	5	5	5	5
	2.PRESENTATION /COMMUNICATION					
2.1	Teacher speaks clearly and audibly	4	4	4	5	5	4
2.2	Teacher writes and draws legibly	5	4	5	5	4	4
2.3	Teacher provides examples of concept/principles Explanations are clear and reflective	4	5	5	5	5	5
2.4	Teacher's pace and level of instruction are suited to the attainment of students	5	5	4	5	4	4
2.5	Teacher offers assistance and counseling to the needy students	4	5	4	5	5	5
	3. STUDENTS PARTICIPATION					
3.1	Teachers asks questions to promote interaction and reflective thinking	5	4	5	5	5	5
3.2	Teacher encourages questioning/raising doubts by students and answers them well	5	4	5	5	5	4
3.3	Teacher ensures learner activity and problems solving ability in the class	5	5	5	5	5	4
3.4	Teacher encourages, compliments and praises originality and creativity displayed by students	4	4	4	4	5	5
3.5	Teacher is courteous and impartial in dealing with the students	5	4	5	4	4	5
	4. CLASS MANAGEMENT/ASSESSMENT OF STUDENTS					
4.1	Teacher engages class regularly and maintains discipline	5	5	4	4	5	4
4.2	Teacher covers the syllabus completely and at appropriate pace	5	5	5	5	4	5
4.3	Teacher holds test regularly which are helpful to students in building up confidence in their acquisition and application of knowledge	4	4	5	4	4	4
4.4	Teacher making of scripts in fair and impartial	4	5	5	4	5	5
4.5	Teacher is prompt in valuing and returning the answer scripts providing feedback on performance	5	4	5	5	4	5

1. POOR 2. FAIR 3.SATISFACTORY 4. GOOD 5.EXCELLENT

Figure: 9.4 Sample Feedback(Offline and Online)

Feedback Analysis Process

- **Student Participation Rate:** More than 90% of students actively participate in the feedback process.
- **Feedback Evaluation Method:**
  - The collected feedback is assessed using a 5-point scale, and the average score is converted into a percentage.
  - The Head of Department (HOD) and Principal conduct a detailed analysis of the feedback.
  - Faculty members receive constructive feedback and necessary guidance to enhance their teaching effectiveness.
  - Appropriate counselling and support are provided to staff for continuous improvement.
  - We also collaborate with Performance Improvement Plan (PIP).

Table.9.2: Feedback Analysis Grading

Grading	Points
Excellent	5
Good	4
Satisfactory	3
Average	2
Poor	1

Feedback-Based Rewards & Corrective Measures

Based on student feedback on faculty performance and result analysis, the institute implements the following rewards and corrective measures

Rewards

- Faculty feedback scores are taken into account when evaluating eligibility for rewards and responsibilities.

Corrective Measures

- Faculty members receiving a feedback score below 70% are provided counselling and guidance by the HOD and Principal to help improve their performance.
- They are encouraged to participate in Faculty Development Programs **(FDPs)** and other professional training sessions to enhance their teaching skills and methodologies.

Corrective Actions Taken

Faculty members with below-average performance undergo continuous training through Faculty Development Programs (FDPs) to improve their teaching quality, instructional methods, and overall effectiveness.

9.3 Feedback on facilities (5)

Total Marks 5.00

Institute Marks : 5.00

Assessment is based on the collection and analysis of student feedback, followed by the implementation of corrective actions.

Feedback on Facilities

Our college follows a standard procedure for gathering feedback on its facilities. Students provide feedback on various amenities, including water, internet, canteen, sports, and washroom facilities. The collected feedback is analysed, and after discussions with the Management, necessary corrective actions are taken.

Feedback Preventive Action

- When complaints are received from students regarding general facilities such as the library, hostel, canteen, etc., a report is submitted to the appropriate authorities for immediate corrective measures.
- All actions taken are promptly recorded for reference and accountability.

Following is the Process of Feedback on Facilities

- Feedback Collection Process
- Feedback Analysis
- Corrective Measures

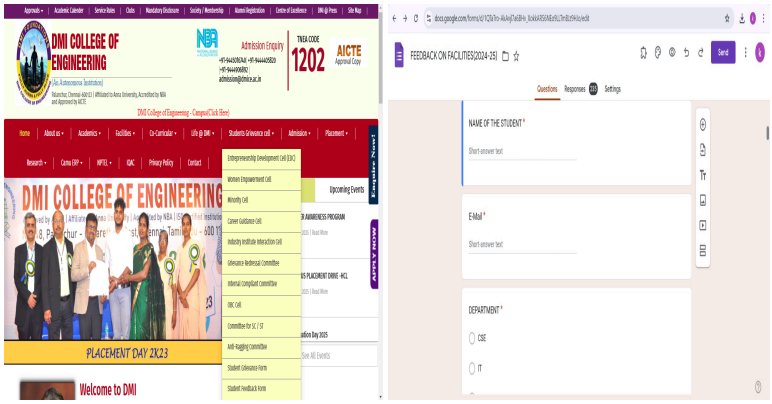


Figure.9.5: Facility Feedback on DMICE

1) Feedback Collection Process

Table 9.3: Details of Feedback Collection Process

Items	Description	
Feedback collected on all facilities provided by the college	YES	
Feedback Collection Process	Computerized	
Feedback Receiver	Principal / HOD/ Academic Audit Coordinator	
Frequency of Feedback Collection	Once in a year	
Metrics used for Calculation	Poor:	1
	Fair:	2
	Satisfactory:	3
	Good:	4
	Excellent:	5
Purpose of Comments	For improving the quality of facilities.	

Format of Student Feedback on Facility

Table 9.4: Questionnaires on Facilities Feedback

S. No	Questionnaires
1	Whether the lighting and ventilation in classrooms are satisfied?
2	Whether the furniture quality and quantity is maintained?
3	Projectors and screens available in classroom?
4	Whether the cleanliness is maintained in the class room?
5	No. of Computers sufficient for all students?
6	Whether the software required is available in the lab?
7	Is Cleanliness maintained in the lab?
8	Is Food price normal?
9	Is food quantity apt with the price?

10	Is food hygiene maintained?
11	Is the food provided is quality one?
12	Is no. of washrooms sufficient?
13	Is cleanliness maintained in washrooms?
14	Availability of ample water supply?
15	Is Drinking water quality maintained?
16	Is Wi-Fi Accessible?
17	Is Net speed?
18	Enough space available to play sports in college?
19	Is there Support and promotion of sports activities by university authorities?
20	Is there Motivation from institute authorities to participate and other college fest?

Table 9.5: Rating Scale

Grading	Points
Excellent	5
Good	4
Satisfactory	3
Average	2
Poor	1

2) Feedback Analysis

The feedback given by the students is consolidated and analyzed. Principal / HOD/ Academic audit Coordinator will discuss about the consolidated report with the management and come out with necessary actions.

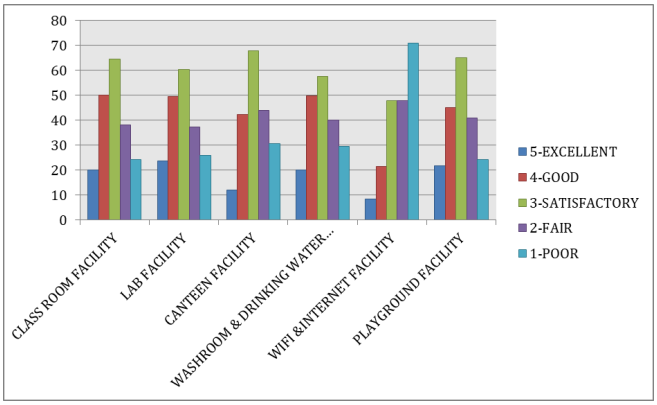


Figure: 9.4 Overall Feedback Analysis on Facilities for 2024-25

3) Corrective Measures

The college will take corrective action about the complaint by informing the facilities manager or administrator, who will then have the campus team address the issue.

9.4 Self-Learning (5) Total Marks 5.00

Institute Marks : 5.00

Self-learning helps students develop a sense of responsibility, equipping them with essential attributes for their careers. It enables them to gain knowledge and apply it to broader domains, fostering a deeper understanding of their discipline. The college provides self-learning resources for students, including webinars, NPTEL, SWAYAM, KARMA, Google certifications and more. Additionally, self-learning encourages active participation in industrial training like implant trainings and internships. ERP CAMU is available where besides the course materials, quizzes, assignments and tutorials are uploaded to promote self-learning.

- Central Library
- Department Library
- Digital Library
- Wi-Fi Connectivity
- Course Materials uploaded on the CAMU (ERP)

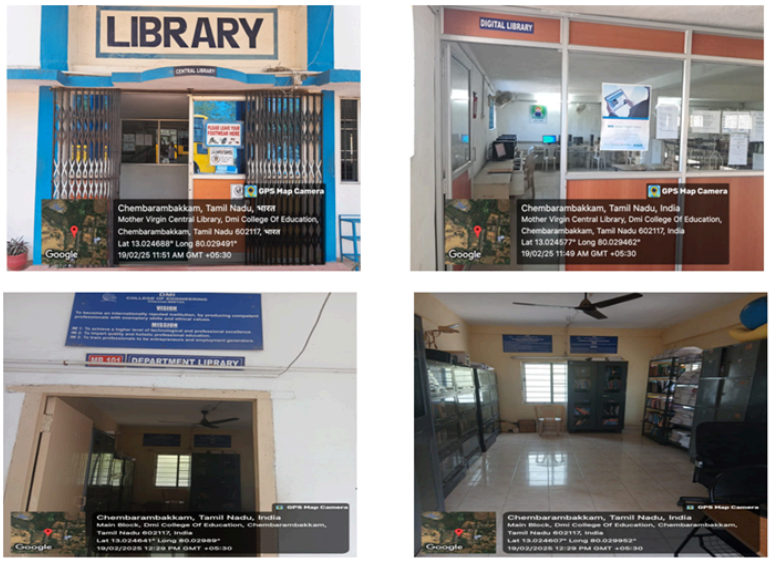


Figure.9.7: Library in DMICE

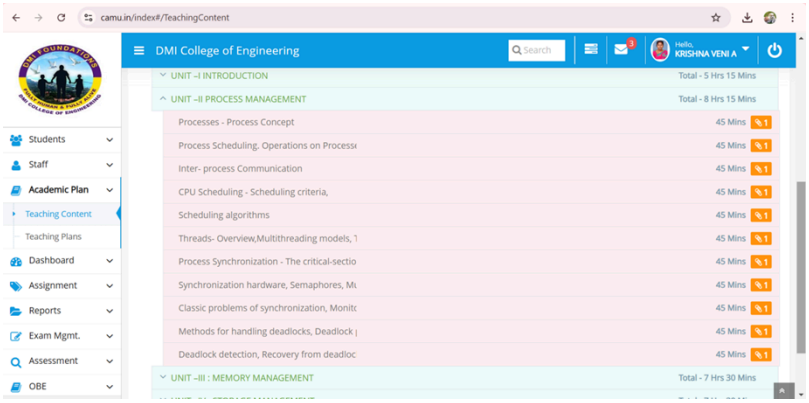


Figure. 9.8: Sample Course Material in CAMU (ERP)

Facilities

- The **C**entral Library is well-equipped with journals and books related to subject knowledge, general knowledge, and skill development.
- The library offers web-based learning resources, including access to online journals and open-access materials through platforms like IEEE Online and DELNET.
- The institution provides access to NPTEL online **courses** to support student development.

Figure. 9.9: Sample NPTEL Certificate

Figure. 9.10:Sample Google Course Certificate

- Students engage in online courses through platforms such as MOODLE and participate in webinar**s**.
- Students are encouraged to participate in technical contests in other institutions.
- Students gain hands-on experience through in-plant training in industries relevant to their subjects.
- Annual industrial **visits** are organized to factories and companies related to current subjects, enabling students to acquire practical knowledge and learn beyond the classroom.
- Technical symposiums are conducted by each department, inviting experts in technical fields to share insights and broaden students knowledge.

Figure. 9.11 : Webinar on Electronic Commerce

9.5 Career Guidance, Training, Placement (10) Total Marks 10.00

Institute Marks : 10.00

Career Guidance

Career counselling is a vital process that helps students and professionals make informed career decisions. It enables individuals to explore career options, understand available opportunities, and assess career prospects, including earning potential.

Career Guidance Mechanism

- DMI College of Engineering conducts career assessment tests to evaluate students' interests, strengths, aptitudes, and personality traits.
- Faculty members and industry professionals provide mentorship on career selection, higher education, and industry trends.
- Career counselling sessions and workshops with industry experts enhance awareness of job roles and skill requirements.
- Internships, training programs, and on-the-job experiences improve students employability and career preparedness.

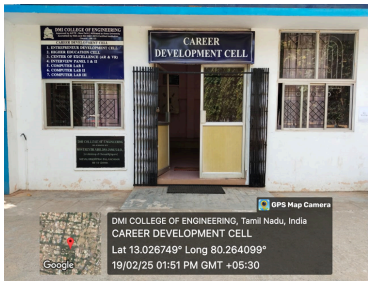


Figure. 9.8: Career Guidance Cell

Training and Placement

DMI College of Engineering has established a dedicated Training and Placement Cell, led by the Placement Officer and a department coordinator from each department. This Cell plays a crucial role in securing job placements for eligible students while striving to improve the average and highest salary packages each year.

Key Responsibilities and Activities:

- Actively connects with industries across the country to arrange placement talks and recruitment processes.
- Develops and systematically imparts comprehensive study materials covering Quantitative Aptitude, Reasoning, Verbal Ability, Personality Development, and Presentation Skills to enhance career readiness and professional competence.
- Conducts regular mock interviews to prepare students for real-world placement scenarios.
- Organizes training programs to enhance students employability and career readiness.
- Collects feedback from recruiting companies at the end of each placement process to improve career competency development programs.

Table 9.6: Placement Details

S.NO	YEAR	NO.OF STUDENTS PLACED	HIGHER EDUCATION	ENTREPRENEUR	TOTAL
1	2023-24	295	8	1	304
2	2022-23	277	6	2	285
3	2021-22	290	17	2	309
	TOTAL	862	31	5	898

9.6 Entrepreneurship Cell (5) Total Marks 5.00

Institute Marks : 5.00

- The Entrepreneur Development Cell (EDC) at DMI College of Engineering fosters an entrepreneurial culture, encouraging innovation among students and faculty. It serves as a platform to equip aspiring entrepreneurs with the knowledge and skills to transform ideas into successful ventures.
- The EDC regularly hosts industry experts for guest lectures, offering insights into business strategies, start-up management, and success stories. These interactions help students develop an entrepreneurial mind-set and innovative thinking.
- Led by Dr. R. UmaMaheswari, Associate Professor, ECE, along with faculty coordinators from various departments, the EDC provides mentorship, training, and resources to empower students to innovate, take risks, and contribute to economic growth.
- Our College is an active partner of Wadhwani foundation that focuses on accelerating job growth.

Table 9.7: Activities of EDC

S. No	EDC EVENT	GUEST SPEAKER	EVENT DATE
1	ED Bazaar	Mrs. BoomaSubbarao	15/03/2024
2	Entrepreneurship Challenges	Mr. VijayaKomagan	26/09/2023
3	Be You	Mr. Lion Kishore Srinivasan	22/09/2023
4	Developing & Implementing strategies plans for Business Growth	Mr. Rajeshkumar Ravichandran	12/09/2023
5	Funding Opportunities for New Entrepreneurs	Dr. P Anandhan- Asst. Professor/ Senior Grade 2 at VIT, Chennai.	04/03/2023
6	Innovation & Entrepreneurship	1.Prof.Dr.C.B.Ragothaman 2.Dr.Sankaraman-Professor	28/02/2023
7	Budding Entrepreneur	Mr. Mohan Ram, Founder and Director of &IEQS.	02/12/2022
8	Nuances in Entrepreneurship	Mr. Thompson Abraham, Entrepreneur, Freelancer.	17/09/2022
9	Being an Entrepreneur	Mr. G.K. Narayanan, Director, Joyce Infratech Ltd & Joyce Power International Pvt. Ltd, Singapore.	13/02/2022
10	Entrepreneurship Awareness Programme	1.Dr. Daniel Chellappa-Eminent Nuclear scientist, Dr. KLS 2.Dr. KLS Reddy, IEDS, Asst. Director-MSME-DI 3.Shri Leela Krishnan-Asst. Director-MSME-DI,	23/03/2022
11	Unleashing the new trends of an Entrepreneur	Mr. S. Pandian, Founder, Kathir Sudhir Automation Pvt. Ltd	26/10/2021

Figure 9.13: "Developing and Implementing Strategic Plans for Business Growth" held on 12/09/23

9.7 Co-curricular and Extra-curricular Activities (10) Total Marks 10.00

Institute Marks : 10.00

Co-Curricular and Extra–Curricular Activities

DMI College of Engineering recognizes the significance of co-curricular and extra-curricular activities in fostering the holistic development of students. The institution provides various opportunities and resources to encourage student participation in technical, cultural, and professional activities.

Co-Curricular Activities

- Students are encouraged to engage in paper presentations, project displays, and technical competitions through professional societies, department associations, and clubs.
- Technical symposiums, workshops, and guest lectures are organized annually, ensuring active student participation.
- Specific courses and assignments integrate co-curricular activities into the academic curriculum to enhance practical learning.
- Departments host student associations that conduct conferences, seminars, and workshops.
- The college houses student chapters of professional organizations such as ISTE, IEEE, CSI, SAE, IAEng fostering networking and skill development.
- Students are motivated to participate in technical symposiums, seminars, and cultural fests at other institutions, enhancing their exposure to industry trends and innovations.
- The college encourages students to organize and participate in national-level symposiums, cultural events, and technical fests.
- Our College has various department wise clubs to encourage students actively participate in the club activities.

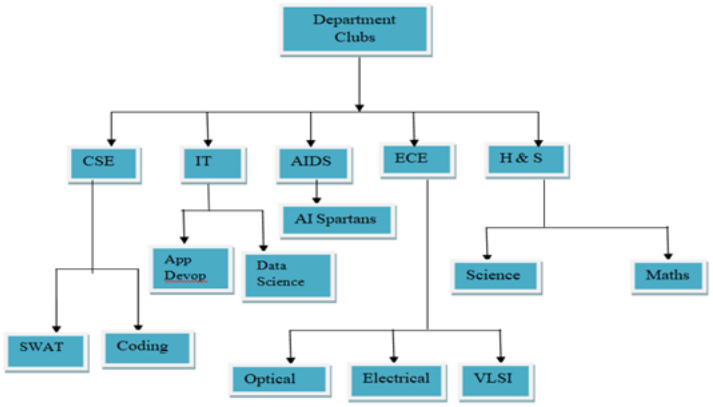


Figure. 9.14: Department Clubs

Table 9.8: Department Clubs

DEPARTMENT	NAME OF THE CLUB
AIDS	AI SPARTANS Club
CSE	SWAT Club
	Coding Club
ECE	Electronics Club
	Microwave Club
	VLSI Club
EEE	Energy Club
	Dr. Abdul Kalam Club
IT	App Development Club
	Data Science Club
MECH	Robotics Club
	SAE Club
	Additive Manufacturing Club
S&H	Science Club
	Maths Club

Extra-Curricular Activities
Clubs for Social Activities or Connect

1. **National Service Scheme (NSS)**

The NSS unit at DMI College of Engineering plays a crucial role in nurturing responsible and compassionate citizens. Comprising dedicated volunteers, the unit promotes a spirit of service, empathy, and community engagement.

NSS provides students with valuable opportunities to understand societal challenges and develop a sense of responsibility. One of its key initiatives is a week-long special camping program in adopted villages, where students collaborate on various activities, share experiences, and take on social responsibilities to address regional and national issues.

DMI College of Engineering conducts NSS activities annually by the Anna University NSS schedule. Some of the key initiatives include

- Tree Plantation Drive

- Swachh Bharat Abhiyan
- Traffic and General Awareness Program
- COVID-19 Awareness and Facilitation
- COVID-19 Vaccination Drive for Staff
- Plastic Eradication Awareness Camp
- International Day of Yoga Celebration
- Dengue Awareness Program
- Waste Management Awareness Campaign
- Tobacco Awareness Program

Through these initiatives, the NSS unit instils a strong sense of social responsibility and service, empowering students to make meaningful contributions to society.

Figure 9.15: **Tree Plantation at DMICE**

Table 9.10: NSS Activities

S. NO	NSS EVENT	CHIEF GUEST	EVENT DATE
2024-25			
1	Tree Plantation Program	Principal Dr.Azhagesan, Rev. Sr. Pradeepa	05/06/2024
2	International Yoga Day	Ms. Anne Williams	21/06/2024
3	Eye and Dental Camp	Dr.Abishek and Mr.Kiran	19/07/2024
3	Blood Donation Camp	Nemam Health Inspector Mr.Vijayakumar and doctors Dr.Jothi and Dr. Jaya Lakshmi	20/09/2024
4	Plastic Awareness Program	Principal	25/10/2024
5	Anti-Drug Awareness Program	Ms.Navarathna	06/11/2024
2023-24			
1	Voter's awareness rally	Principal	21/03/2024
2	Campus Cleaning Program	Principal	02/04/2024
3	SwachhBharat Mission	-	11/04/2024
4	Village Cleaning	-	12/04/2024
5	Temple Cleaning	-	13/04/2024
6	Plastic Awareness	-	14/04/2024
7	Special Program to Elementary School Students	-	15/04/2024
8	Medical Camp to Village People	Nemam Health Inspector Mr.Vijayakumar and doctors Dr.Kamatchi, Government Health Primary Centre	16/04/2024
9	Tobacco awareness rally	Nemam Health Inspector Mr.Vijayakumar and Mr. Ramesh, Inspector of Police	27/06/2023
10	Drug Abuse awareness Program	Nemam Health Inspector Mr.Vijayakumar and Mr. Krishna, Inspector	11/08/2023
11	Blood Donation Camp	Nemam Health Inspector Mr.Vijayakumar and doctors Dr.Kamatchi, Government Health Primary Centre	21/09/2023
12	Traffic Awareness Program	Mr.Sivam, Inspector of Police, Nazaretpet	24/11/2023
2022-2023			
1	SwachhBharat Mission	-	14/02/2023
2	Village Cleaning	-	15/02/2023
3	Temple Cleaning	-	16/02/2023
4	Plastic Awareness	-	18/02/2023
5	Special Program to Elementary School Students	-	17/02/2023
6	Blood Donation Camp	Nemam Health Inspector Mr.Vijayakumar and doctors Dr.Kamatchi, Government Health Primary Centre	21/09/2022

7	National Deworming Day	Mr.Adhiseshan	17/08/2022
8	Tree Plantation Program	Mr.Marimuthu, Lawyer, Palanchur	05/06/2022

2. Red Ribbon Club (RRC)

The Red Ribbon Club of DMI College of Engineering actively organizes various awareness programs and community initiatives to promote health and social responsibility among students. The club conducts blood donation camps, plastic awareness rallies, dengue awareness rallies, tobacco awareness programs, and rabies awareness rallies to educate and engage students in meaningful social causes.

Through these initiatives, the Red Ribbon Club fosters a sense of social responsibility and encourages students to contribute to the well-being of the community. By spreading awareness on critical health and environmental issues, the club continues to make a positive impact both within the campus and beyond.

Figure 9.16: **Sample Program Organized by RRC**

3. LEO Club

A Leo Club is a youth organization that empowers young individuals to become active community leaders. Sponsored by Lions Clubs International, Leo Clubs offer opportunities for members to develop leadership skills, serve their communities, and build lasting friendships. With a strong focus on service, leadership, and fellowship, Leo Clubs inspire young people to create a positive impact in their communities.

Figure 9.17 Sample LEO Club Activities

4. Go Green Club

The Go Green Club at DMI College of Engineering promotes environmental sustainability through awareness, waste management, energy conservation, and green initiatives like tree plantations and clean campus drives. It organizes eco-friendly workshops, rainwater harvesting awareness, and e-waste collection to instill environmental responsibility. By fostering a culture of sustainability, the club inspires students to contribute to a greener campus and a healthier planet.

Figure 9.18: **Sample Program Organized by Go Green Club**

5. IGEN

The IGEN Club at DMI College of Engineering (DMICE) promotes sustainability, green energy, and environmental responsibility among students. It fosters awareness, innovation, and action through seminars, workshops, and research on renewable energy and sustainable development. The club collaborates with industry experts and organizations to provide valuable learning opportunities while encouraging student-led projects in green technology. Through community engagement and awareness drives, it instills ecological responsibility. Additionally, it offers skill development in waste management, energy conservation, and emerging green technologies. Committed to shaping future leaders in sustainability, the IGEN Club at DMICE empowers students to contribute to a greener future.

Figure 9.19 Sample IGEN program

6. Vanam

The Vanam Club of DMI College of Engineering actively collaborated with Vanam India Foundation to participate in their Short Film Competition, fostering creativity and enviromental awareness among students.

This initiative provided students with a platform to express their ideas through short films while strengthening their association with Vanam India Foundation. It reinforced a shared dedication to environmental and social causes. The Vanam Club continues to inspire and engage students in impactful activities, encouraging them to contribute positively to society.

7. Bhoomi

Students of DMI College of Engineering partnered with Bhumi NGO to conduct an awareness program, educating the public on key social and environmental issues. As part of this initiative, students actively participated by distributing pamphlets and walking through the streets to spread awareness within the community.

This initiative was a significant step toward social engagement, encouraging responsible actions and informed decision-making. Through this collaboration with Bhumi, students not only contributed to a noble cause but also developed a strong sense of civic responsibility and leadership.

Cultural Activities

Cultural activities play a vital role in student life, fostering creativity, self-expression, and holistic development. DMI College of Engineering encourages student participation in cultural, literary, and fine arts events, providing a platform to showcase talents, enhance skills, and promote traditional values. Various competitions and programs are organized annually, with outstanding students recognized during **College Day** celebrations.

- Encourages creativity and self-expression.
- Provides opportunities for students to showcase talents.
- Promotes cultural, traditional, and ethical values.
- Enhances personality development and networking.
- Recognizes and honours outstanding performers.

Figure 9.20: **Sample Program for Cultural Activities**

Sports Facilities and Activities

The college has a dedicated Physical Education Department led by a Physical Education Director, responsible for organizing sports and recreational activities. The institution provides excellent facilities for major sports and indoor and outdoor recreational activities.

A well-equipped sports facility is available, offering opportunities for students to participate in various games and sports. The available options include:

- Indoor games: Shuttle, Table Tennis, Chess, Carom.
- Outdoor sports: Cricket, Athletics, Volleyball, Basketball.

The college actively promotes a sports culture, encouraging students to engage in physical activities for overall well-being and fitness by Annual Sports Day

Table 9.10: Available Sports Facilities

S. No	Description	Details
1	Total area of the Play Ground	1132560 Sq. ft.

2.	Outdoor Games available	1. Ball Badminton court-1nos. 2. Basket Ball court-2nos. 3. Kabaddi Court-1nos. 4. Kho-Kho Court -1no. 5. Cricket Net's – 2 no 6. Football Field – 1 no 7. Athletics Track – 200 m 8. Throw ball – 1 no 9.Volley Ball court with Fencing-2nos.
3.	Indoor Games available	1. Badminton court -2nos. 2. Table Tennis – 1 no 3. Carom–1nos. 4. Chess–3nos.
4.	Details of Gymnasium (Fitness Equipments)	1. Four station multi gym-2 2. Weight rod-4 3. Rubber Dumb Bells-20 kgs 4. Flat Bench Press-1 5. Rubber plates-20 kgs
	Details of Outdoor Fitness Equipments	Parallel bar-1 No

Table.9.11: Achievements in Sports

S.NO	EVENT TITLE	POSITION	EVENT PLACE	DURATION
2023 – 2024				
1	Football	First place	P.B college of engineering	19/10/2023
2	Volleyball	Fourth place	Chennai institute of technology	05/10/2023
3	Cricket	Participated	Sri Venkateswara College of Engineering	04/10/2023
4	Basketball	Participated	Rajalakshmi College of Engineering	04/10/2023
5	Badminton Men	Participated	Sri Venkateswara College of Engineering	11/10/2023
6	Chess Men	Participated	Saveetha Engineering College	23/09/2023
7	Kabaddi	Participated	St. Joseph College of Engineering	17/10/2023
8	Table Tennis	Participated	Rajalakshmi Institute of Technology	08/10/2023
9	Badminton Women	Participated	Sri Venkateswara College of Engineering	31/10/2023
10	Chess Women	Participated	Saveetha College of Engineering	23/09/2023
11	Athletics Men & Women	First, Second and Third place	Saveetha College of Engineering	29/11/2022
12	Volleyball Women	Participated	Kings College of Engineering	26/10/2023
13	Kho-Kho	Participated	Saveetha college of Engineering	31/10/2023
14	Half Marathon	Second place	Thiruvallur District	28/08/2023
15	10km Marathon	Third place	Chennai District	15/09/2023
16	Football	Participated	Saveetha University	05/03/2024
17	Basketball	Participated	Sri Venkateswara College of Engineering	27/02/2024
18	Football	Fourth place	Sri Venkateswara College of Engineering	27/02/2024
19	Chess	Participated	Peri Engineering College	28/08/2023
20	Football	Participated	Adhiyamaan College of Engineering	03/12/2023
2022 – 2023				

1	Football	Fourth place	Saveetha College of Engineering	21/11/2022
2	Volleyball	Fourth place	Chennai Institute of Technology	24/11/2022
3	Cricket	Participated	Sri Venkateswara College of Engineering	27/10/2022
4	Basketball	Participated	Rajalakshmi College of Engineering	23/09/2022
5	Badminton Men	Fourth place	Sri Venkateswara College of Engineering	18/11/2022
6	Chess Men	Participated	Saveetha Engineering College	08/08/2022
7	Kabaddi	Fourth place	St. Joseph College of Engineering	15/10/2022
8	Table Tennis	Participated	Rajalakshmi Institute of Technology	10/09/2022
9	Badminton Women	Participated	Sri Venkateswara College of Engineering	08/11/2022
10	Chess Women	Participated	Saveetha College of Engineering	23/09/2022
11	Athletics Men & Women	Second and Third place	Saveetha College of Engineering	23/10/2023
12	Karate	First place	Kanyakumari District	04/12/2022
13	Cricket	Participated	Sathyabama university	17/04/2023
14	Basketball	Participated	Sri Venkateswara College of Engineering	24/02/2022
15	Volleyball	Second place	Saveetha School Mgt	16/02/2023
2021 – 2022				
1	Football	Participated	Saveetha College of Engineering	19/11/2021
2	Volleyball	Third place	Chennai Institute of Technology	24/11/2021
3	Cricket	Participated	Sri Venkateswara College of Engineering	05/12/2021
4	Basketball	Participated	Rajalakshmi College of Engineering	10/09/2021
5	Badminton Men	Fourth place	Sri Venkateswara College of Engineering	23/01/2021
6	Chess Men	Participated	Rajalakshmi Institute of Technology	08/09/2021
7	Kabaddi	Third place	St. Joseph College of Engineering	13/11/2021
8	Table Tennis	Participated	Rajalakshmi Institute of Technology	11/10/2021
9	Badminton Women	Participated	Sri Venkateswara College of Engineering	08/11/2021
10	Chess Women	Participated	Saveetha College of Engineering	16/10/2021
11	Athletics Men & Women	Second and Third place	Saveetha College of Engineering	29/11/2021
12	Athletics	Second Place	Kancheepuram District	14/04/2022
13	Athletics	Second Place	Thanjavur District	09/10/2021

Figure 9.21: Sample Photo for Sports Activite

10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

Total Marks 120.00

10.1 Organization, Governance and Transparency (40)

Total Marks 40.00

10.1.1 State the Vision and Mission of the Institute (5)

Institute Marks : 5.00

Vision :
To become an internationally reputed institution by producing competent professionals with exemplary skills and ethical values.
Mission :
IM 1: To achieve higher level technological and professional excellence. IM 2: To impart quality and holistic professional education. IM 3: To train professionals to be entrepreneurs and employment generators.

10.1.2 Governing body,administrative setup,functions of various bodies,service rules, procedures, recruitment and promotional policies (10)

Institute Marks : 10.00

DMI College of Engineering consists of the following Academic and Administrative Bodies

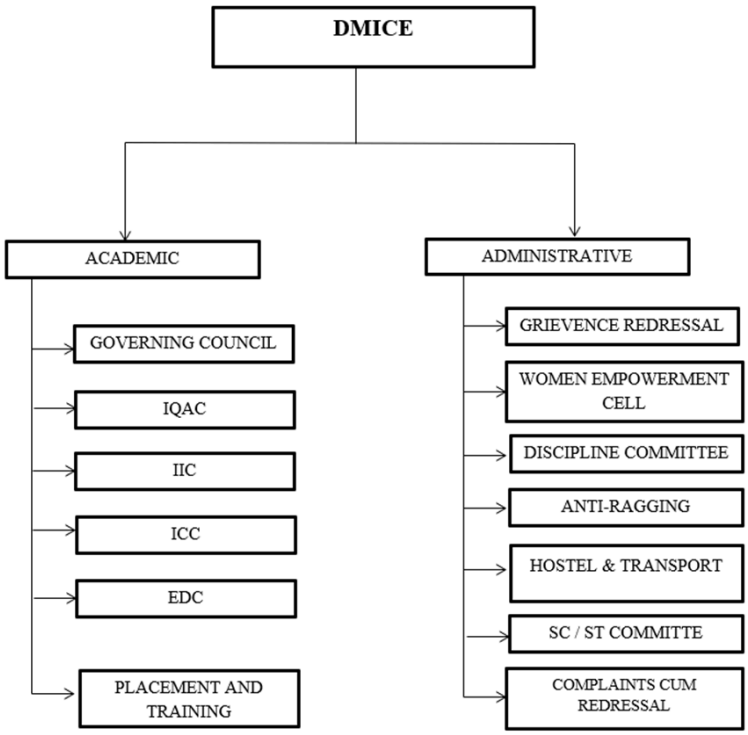


Figure 10.1: Academic and Administrative Body in DMICE

ACADEMIC BODIES

GOVERNING COUNCIL

The governing Council has been constituted as per the guidelines of AICTE and Anna University to guide and advise the management in running the Engineering College efficiently. This council consists of Educationalists and Industrialists Administrators.

Roles and Responsibilities of Governing Council

- To monitor the academic and other related activities of the College.
- To consider the recommendations of the Staff Selection Committee
- To consider the important communications and policy decisions received from the University, Government, AICTE, etc.
- To monitor the students and faculty development programmes
- To consider the recommendations of the Planning and Monitoring Board of the college for implementation.
- To pass the annual budget of the college.

Table 10.1: Governing Council Members

S. No.	Name of the Member	Position in GC	Category
1	Rev. Fr. Dr. J. E. Arulraj Founder (DMI Foundations)	Chairman	Members of the Management
2	Rev. Sr. S. Gnanaselvam, Managing Trustee	Member	
3	Rev. Sr. M. K. Teresa, Correspondent	Member	
4	Rev. Sr. S. Xavier Selvi In-charge of Higher Education DFT Group of Institutions	Member	
5	Rev. Sr. Dr. K. Sandhiyagu Mary, Correspondent, DFT Group of Institutions	Member	
6	Dr. M. A. Leo Vijilious Director	Member	
7	Dr. L. M. Merlin Livingston Director	Member	

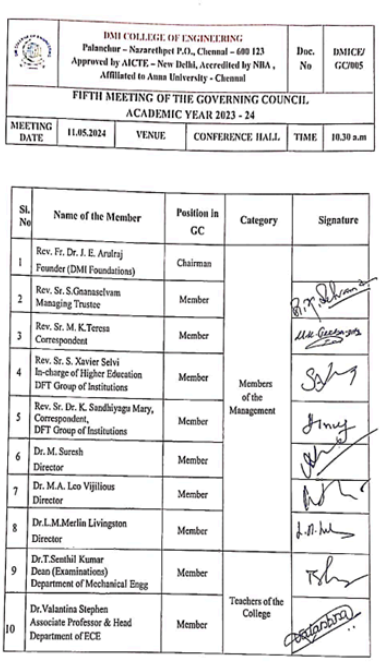
8	Dr. V. L. Raja Controller of Examination Department of Mechanical Engineering	Member	Teachers of the College
9	Dr. K. Kalai Kumar Associate Professor Department of AI&DS	Member	
10	Dr. V. Subbiah Bharathi Vice Chancellor, St. Joseph University	Member	Educationist – Management Nominee
11	Mr. Ganesh Thirunavukkarasu, Regional Head-Academic Alliances, Tata Consultancy Services, Chennai	Member	Industrialist – Management Nominee
12	Regional Officer Southern Regional Office, AICTE, Chennai	Member	AICTE (Southern Region) Nominee
13	Dr. S. Letitia, Professor, Department of ECE, Thanthai Periyar Government Institute of Technology, Vellore.	Member	State Government Nominee
14	Dr. M. A. Bhagyaveni, Professor, Department of ECE, College of Engineering, Guindy Anna University, Chennai	Member	University Nominee
15	Dr. Sujatha Jamuna Anand	Member Secretary	Principal of the College

***Frequency of Meeting - Every year in May**

Minutes of Meeting for Governance Council

The inaugural meeting of the Governance Council took place in the Chairmans office. The Chairman welcomed all members, introduced them to one another, and emphasized the significance of this first gathering. He informed the members that the Management has provided excellent infrastructural facilities to the College, marking a strong beginning. He acknowledged and appreciated the dedicated efforts of the Faculty and Principal for achieving commendable academic results. He expressed his hope that the Institute would continue to uphold its standing and strive for further improvement in its outcomes.

Chairman and Members Present:



DMI COLLEGE OF ENGINEERING Palanchur – Nazarethpet P.O., Chennai – 600 123 Approved by AICTE – New Delhi, Accredited by NBA, Affiliated to Anna University - Chennai				Doc. No	DMICE/ GC/005
FIFTH MEETING OF THE GOVERNING COUNCIL ACADEMIC YEAR 2023 - 24					
MEETING DATE	11.05.2024	VENUE	CONFERENCE HALL	TIME	10.30 a.m

Sl. No	Name of the Member	Position in GC	Category	Signature
1	Rev. Fr. Dr. J. E. Arulraj Founder (DMI Foundations)	Chairman	Members of the Management	
2	Rev. Sr. S.Gnanaselvam Managing Trustee	Member		
3	Rev. Sr. M. K.Teresa Correspondent	Member		
4	Rev. Sr. S. Xavier Selvi In-charge of Higher Education DFT Group of Institutions	Member		
5	Rev. Sr. Dr. K. Sandhiyagu Mary, Correspondent, DFT Group of Institutions	Member		
6	Dr. M. Suresh Director	Member		
7	Dr. M.A. Leo Vijilious Director	Member		
8	Dr.L.M.Merlin Livingston Director	Member		
9	Dr.T.Senthil Kumar Dean (Examinations) Department of Mechanical Engg	Member	Teachers of the College	
10	Dr.Valantina Stephen Associate Professor & Head Department of ECE	Member		

Figure 10.2: Attendance for Governance Council Meeting

INTERNAL QUALITY ASSURANCE CELL (IQAC)

- Promoting a learner-centric environment that supports quality education and helps faculty adopt the necessary knowledge and technology for a participatory teaching and learning process.
- Organizing feedback collection from students, parents, and other stakeholders regarding quality-related institutional processes.
- Documenting various programs and activities that lead to quality enhancement.
- Serving as the institutions central agency for coordinating quality-related activities, including the adoption and dissemination of best practices, and fostering a culture of quality within the institution.
- Preparing the Annual Quality Assurance Report (AQAR) according to NAAC guidelines and parameters for submission to NAAC.
- Disseminating information on various quality parameters to all stakeholders.
- Organizing inter and intra-institutional workshops and seminars on quality-related themes and promoting quality circles.

Table 10.2: Internal Quality Assurance Cell Members

Sl. No	Category	Name	Designation
1	Chair Person	Dr. Sujatha Jamuna Anand	Principal
2	Management	Rev. Sr. M. K. Teresa	Correspondent
3	Coordinator	Dr. R. Senthil Rama	Associate Professor & Head / EEE
4	Members	Mrs. S. P. Shally	Assistant Professor / ECE
5	Members	Mrs. S. Jenitha Karthiga	Assistant Professor / MBA
6	Members	Mr. T. Tamil Kumaran	Assistant Professor / Mechanical
7	Members	Mrs. P. Swarna Lakshmi	Assistant Professor / CSE
8	Members	Mrs. P. M. Steffy Teena Thushara	Assistant Professor / Civil
9	Members	Mrs. J. Jenifer	Assistant Professor / IT
10	Members	Mrs. M. Jasmin Ananthi	Assistant Professor / EEE
11	Members	Mrs. K. Tharani	Assistant Professor / S&H
12	Local Society Nominee	Ms. G. Viji Dali	Official of NGO
14	Alumni Nominee	Mr. Pravin Robert Simon	Deputy General Manager, Randstad India Pvt Ltd
15	Employers/Industrialist/Stakeholders Nominee	Mr. Rajasekar	Employer
16	Student Nominee	Mr. Magesh Krishna	Student (III CSE)

***Frequency of Meeting - Every year in the month of May and December.**

INSTITUTION INNOVATION COUNCIL

The Institution's Innovation Council (IIC) fosters a culture of innovation and entrepreneurship within the institution. It actively organizes workshops, hackathons, and mentorship programs to nurture creative ideas among students and faculty. The council collaborates with industry and government bodies to facilitate startup initiatives and research commercialization. Regular activities are conducted as per MoE Innovation Cell (MIC) guidelines to strengthen the innovation ecosystem. IIC aims to develop a vibrant entrepreneurial mindset, aligning with national innovation and startup policies.

Table 10.3: Institution Innovation Council

Sl. No	Designation	Name of the Faculty
1	President	Dr. A. Amala Mithin Minther Singh, Dean (Research)
2	Vice President	Dr. K. G. Revathi/Dean (Student Affairs)
3	Convenor	Dr. G. Tamilkumaran/Assistant Professor/MECH
4	Innovation Activity Coordinator	Dr. B. Ram Priya/Professor/EEE
5	Start-up Activity Coordinator	Dr. Shankar /Assistant Professor & HOD/MBA
6	Internship Coordinator	Dr. T. D. Sairam/Dean (Placement)/DMICE
7	IPR Activity Coordinator	Dr. W. Agitha/Assistant Professor/ CSE
8	Social Media Coordinator	Dr. V. Anbarasan/Assistant Professor/S&H
9	ARIIA Coordinator	Dr. T. Selvin Retna Raj/Assistant Professor/ECE
10	NIRF Coordinator	Dr. L. Jimson/Assistant Professor & HOD/AIML

11	Members	Dr. N. Nirmal Singh, Dean (Academics) Dr. R. Denslin Brabin, Professor & HOD/CSE Dr. R. Senthil Rama Professor & HOD/EEE Dr. R. Balamurugan, Associate Professor & HOD/IT Dr. Y. Raghu, Associate Professor & HOD/S&H Dr. Venmathi Professor & HOD/ECE Dr. K. Kalai Kumar Associate Professor & HOD/AI&DS

***Frequency of Meeting – Occurring Every Four Months once in a Year**

INTERNAL COMPLIANCE CELL

The Internal Compliance Cell (ICC) ensures adherence to institutional policies, regulatory guidelines, and accreditation requirements. It monitors academic and administrative compliance, conducts internal audits, and addresses any deviations. The ICC facilitates regular training sessions to enhance awareness among faculty, staff, and students. It also acts as a bridge between various departments and regulatory bodies to ensure seamless compliance. Through continuous evaluation and reporting, the ICC strengthens institutional accountability and governance.

Table 10.4: Internal Compliance Cell Members

S. No	Name of Faculty	Category	Designation
1	Dr. Sujatha Jamuna Anand	Principal	Chairman
2	Dr. S. Chitradevi	Professor	Member
3	Dr. L. Jimson	Assistant Professor	Member
4	Mrs. V. Nageswari	Assistant Professor	Member
5	Mrs. J. Delphin Cinthiya	Assistant Professor	Member
6	Dr. V. Anbarasan	Assistant Professor	Member
7	Ms. A. Nadera Banu	III–AI&DS	Student representative
8	Mr. RanjithSahoo	III–Mech	Student representative
9	Rev. Fr. Williams	NGO	Ombudsman

***Frequency of Meeting – Occurring Bi-Monthly in a Year**

ENTREPRENEURSHIP DEVELOPMENT CELL

The Entrepreneurship Development Cell (EDC) fosters entrepreneurial skills and innovation among students by providing guidance, mentorship, and resources. It organizes workshops, seminars, and training programs to promote start-ups and business ventures. The cell collaborates with industry experts and funding agencies to support aspiring entrepreneurs. Various initiatives are undertaken to create a dynamic entrepreneurial ecosystem within the institution. EDC aims to nurture creativity, leadership, and self-reliance among students.

Table 10.5: Entrepreneurship Development Cell Members

Sl. No	Name of the Faculty	Department	Designation
1	Dr. Uma Maheshwari	ECE	Associate Professor
2	Mrs. Mary Varsha J	AI&DS	Assistant Professor
3	Mrs. Abisha G	CSE (AI&ML)	Assistant Professor
4	Mr. Rajthilak D	CSE	Assistant Professor
5	Mrs. Jasmine Ananthi M	EEE	Assistant Professor
6	Dr. Selvin Rethna Raj T	ECE	Assistant Professor
7	Mrs. Jenifer J	IT	Assistant Professor
8	Ms. Kayathri S	MBA	Assistant Professor

9	Mr. Saravanan P	MECH	Assistant Professor

***Frequency of Meeting – At least Two Times in the Year and as the case may be.**

PLACEMENT AND TRAINING CELL

The Training and Placement Cell at DMI is dedicated to enhancing student employability by providing comprehensive training and career guidance. It actively collaborates with leading industries to facilitate campus placements, internships, and skill development programs. The cell conducts workshops, mock interviews, and technical training to prepare students for competitive job markets. Through continuous industry interaction, it ensures excellent placement opportunities for students.

Table 10.6: Placement and Training Cell

Sl. No	Name	Department/Designation	Responsibility
1	Dr. T. D. Sairam	ECE/Professor	Dean Training & Placement
2	Mrs. R. Lavanya	CSE/Assistant Professor	Member
3	Mrs. J. Jenifer	IT/Assistant Professor	Member
4	Dr. Selvin Ratna Raj	ECE/Assistant Professor	Member
5	Mr. S. O. Kaniraj	MECH/Assistant Professor	Member
6	Mrs. M. Jasmine Ananthi	EEE/Assistant Professor	Member
7	Ms. S. Jenitha Karthiga	MBA/Assistant Professor	Member

***Frequency of Meeting – Twice in a Year.**

ADMINISTRATIVE BODIES

The institution has a well-defined administrative structure that ensures smooth functioning and efficient management. It oversees key areas such as academics, student services, infrastructure, and faculty development, fostering a productive learning environment

Table 10.7: Administrative and Organizational Structure

Sl. No.	Name	Designation	Responsibility
1	Rev. Fr. Dr. J. E. Arulraj Founder (DMI Foundations)	Chairman	Administration
2	Rev. Sr. S. Gnanaselvam	Member	Administration, Managing Trustee
3	Rev. Sr. M. K. Teresa	Member	Administration, Correspondent
4	Rev. Sr. S. Xavier Selvi	Member	Administration, In-charge of Higher Education, DFT Group of Institutions
5	Rev. Sr. Dr. K. Sandhiyagu Mary	Member	Administration, Correspondent, DFT Group of Institutions
6	Dr. N. Nirmal Singh	Professor & ECE Dean	Dean Academics
7	Dr. K.G. Revathi	Professor & ECE Dean	Dean Student Affairs
8	Dr. A. Amala Mithin Minther Singh	Professor & HOD / Mech., Dean	Dean R & D Departmental Academic Work
9	Dr. T. D. Sai Ram	Professor & ECE	Dean Training and Placement
10	Dr. D. R. Denslin Brabin	Professor & HoD / CSE	Dean CSE Departmental Academic Work

11	Dr. R. Senthil Rama	Associate Professor & HOD, EEE	IQAC Coordinator Departmental Academic Work
12	Dr. A. R. Venmathi	Professor & HOD, ECE.	Departmental Academic Work
13	Dr. K. Kalai Kumar	Associate Professor & HOD, IT.	Departmental Academic Work
14	Dr. L. Jimson	Assistant Professor & HOD / AI&ML	Departmental Academic Work, NIRF coordinator
15	Mr. G. Aruna Giri	Assistant Professor, MBA Co-Ordinator	Departmental Academic Work
16	Dr. Y. Raghu	Professor & HOD, S&H	Departmental Academic Work
17	Mrs. V. Vishnu Priya	Professor & HOD, Mathematics	Departmental Academic Work
18	Mrs. S. Chitra Devi	Professor & HOD, Chemistry.	Departmental Academic Work
19	Mr. K. S. Kamaraj	Assistant Professor	NSS / RED CROSS Coordinator
20	Mr. Anto Pathrose	Warden	Boys Hostel Warden
21	Miss. A. Anitha	Warden	Girls Hostel Warden
22	Mr. M. Prakash	Librarian	Library
23	Dr. Uma Maheshwari	Assistant Professor	Entrepreneur Development Cell
24	Mr. I. Kumar	Assistant Professor	Physical Director

GRIEVANCE REDRESSAL COMMITTEE CELL

An exclusive department, led by the Principal and supported by a team of faculty members, is dedicated to addressing student grievances.

- Grievances of students related to academics and personal grievances of students within campus and hostel may be addressed to the committee.
- The tenure of the members shall be two years.
- The quorum for the meeting shall be three including chairperson.
- The committee shall follow the principles of natural justice while considering the grievances of students.
- The committee shall send the report and recommendations to the Management within a period of 15 days of receiving the complaint.
- The following list of members constitutes the Women grievance redressal & POSH committee.

Table 10.8: Grievance Redressal Committee Members

S. No	Name of Faculty	Category	Designation
1	Dr. Sujatha Jamuna Anand	Principal	Chairman
2	Dr. S. Chitradevi	Professor	Member
3	Dr. L. Jimson	Assistant Professor	Member
4	Mrs. V. Nageswari	Assistant Professor	Member
5	Mrs. J. Delphin Cinthiya	Assistant Professor	Member
6	Dr. V. Anbarasan	Assistant Professor	Member
7	Ms. A. Nadera Banu	III–AI&DS	Student representative
8	Mr. RanjithSahoo	III–Mech	Student representative
9	Rev. Fr. Williams	NGO	Ombudsman

***Frequency of Meeting – Bi-Monthly in a Year.**

WOMEN EMPOWERMENT CELL

The Women Empowerment Cell has been active in the college since 2005, dedicated to empowering female students, enhancing understanding of issues related to women, and ensuring a safe campus for female students and faculty members. The cell aims to address womens issues and problems by creating awareness of their rights and duties. It provides a platform for women to share their experiences and views on their societal status and suggest ways to improve and empower themselves. Focused on the intellectual and social upliftment of female students, the cell facilitates women's empowerment through guest lectures, seminars, awareness programs, and other welfare activities. The responsibilities of the Women Empowerment Cell include adhering to the mandatory guidelines and directions of Anna University, Chennai, regarding security arrangements for female students and staff at our institution.

Objectives

- To promote a culture of respect and equality for the female gender.
- To conduct seminars, and workshops to impart knowledge of opportunities and tools available and train the women.
- To create a conducive counselling environment for the female gender to share their problems.

Initiatives

- Educating the teaching and non-teaching staff and students towards gender sensitization.
- Counselling services.
- Provision of opportunities and programs for the female gender to be mentally and emotionally empowered to promote their growth as individuals in their own right.
- Conducting various competitions to encourage their artistic talents for creative thinking
- Gender Audit.

Table 10.9: Women Empowerment Cell Members

Sl. No	Name	Category/Role in the Committee	Designation
1	Dr. Sujatha Jamuna Anand	Ex-Officio Member	Principal
2	Rev. Sr. M. K. Teresa	Management	Correspondent
3	Dr. Immaculate Geetha	Member Secretary	Professor, S & H
4	Dr. K.G. Revathi	Member	Dean- Student Affairs
5	Dr. R. Senthil Rama	Member	HOD/EEE

***Frequency of Meeting – Twice in a Year.**

DISCIPLINE COMMITTEE

Functions of Discipline and Welfare Committee

The main functions of the Discipline and Welfare Committee are as follows,

- Indiscipline in the College campus and hostel premises.
- Complaints of ragging.
- Malpractices in the Examinations
- Complaints of eve-teasing and sexual harassment.
- Any other activity that may damage the discipline and harmony of the College.
- To visit periodically the campus of the College, including the hostels to recommend improvements in amenities and maintenance of students and facilities.

Table 10.10: Discipline Committee Members

S. No	Name	Category/Role in the Committee	Designation
1	Dr. Nirmal Singh N	Member	Dean-Academics
2	Dr. Denslin Brabin D. R	Member	HoD-CSE
3	Dr. Sujatha Jamuna Anand	Ex-Office Member	Principal
4	Dr. Kavitha Dhas M	Member	Senior Faculty
5	Dr. Anbarasan V	Member	Student Counsellor (Staff)
6	Dr. Senthil Rama R	Member	Lady Faculty Member
7	Ms. Anitha A	Member	Warden/Deputy Warden of Girls Hostel
8	Mr. Anto Pathrose	Member	Warden/Deputy Warden of Boys Hostel

***Frequency of Meeting – Bi-Monthly in a Year.**

ANTI-RAGGING COMMITTEE

- Primary responsibility for curbing ragging.
- Ragging adversely impacts the standards of higher education.
- Enrolment in academic pursuits or campus life should not immunize any adult citizen from the penal provisions of the laws of the land.
- Behavioural patterns among students, particularly potential raggers, need to be measured against ragging must deter its recurrence.

Table 10.11: Anti-Ragging Committee Members

Sl. No	Name	Category	Present Designation / Occupation
1	Dr. Sujatha Jamuna Anand	Chairman	Principal
2	Mr. Jayachandran V	Member	Police Department
3	Ms. Thasildhar G	Member	Revenue/ Taluk /Civil Officer
4	Ms. Viji Dali G	Member	Official of NGO
5	Mr. Christopher Ravi S	Member	Representatives of Parents
6	Mrs. Johnsirani R	Member	Representatives of Parents
7	Mr. Freedon Demi C	Member	Representatives of Students
8	Ms. Arudevi C	Member	Representatives of Students
9	Mr. Kumar I	Member	Representatives of Non-Teaching

***Frequency of Meeting – Bi-Monthly in a Year.**

HOSTEL AND TRANSPORT COMMITTEE

The Hostel and Transport Committee at DMICE ensures a safe, comfortable, and efficient living and commuting experience for students. The hostel facilities provide a well-maintained, secure, and hygienic environment, fostering academic and personal growth. Round-the-clock security, Wi-Fi, medical assistance, and nutritious meals contribute to a homely atmosphere. The committee regularly inspects hostel amenities, addressing student concerns promptly.

For transportation, the committee oversees a fleet of well-maintained buses covering key locations, ensuring punctual and safe travel. Strict adherence to safety protocols and periodic vehicle maintenance enhances reliability. The transport services cater to both students and faculty, facilitating smooth academic operations. Regular feedback and route optimization improve efficiency. The committee remains committed to continuous enhancement, aligning with NBA quality standards.

Table 10.12: Hostel Committee Members

S. No	Name	Category	Designation
1	Mr. Anto Pathrose	Member	Boys Hostel Warden
2	Dr. N. Nirmal Singh	Internal Member	Dean Academics
3	Mr. D. Jeba Kingsley	Internal Member	Assistant Professor
3	Miss. A. Anitha	Member	Girls Hostel Warden
4	Mrs. Stella Mary	Internal Member	Assistant Professor
5	Mrs. J. Mary Varsha	Internal Member	Assistant Professor

SC/ST COMMITTEE

The SC/ST Committee ensures inclusivity and equal opportunities for students from Scheduled Castes (SC) and Scheduled Tribes (ST). It addresses grievances, promotes awareness of government policies, and organizes support programs. The committee fosters a discrimination-free campus environment. Regular meetings and initiatives enhance student welfare and academic growth.

Table 10.13: SC/ST Committee

Sl. No	Name	Category	Designation
1	Mr. K. S. Kamaraj	Member	Assistant Professor
2	Ms. Abisha	Member	Student

3	Mr. Victor	Member	Student
4	Mr. Krishnamoorthy N	Member	Assistant Professor
5	Dr. Anbarasan V	Member	Assistant Professor

COMPLAINTS CUM REDRESSAL COMMITTEE

The Complaints cum Redressal Committee ensures a fair and transparent mechanism for addressing grievances within the institution. It handles complaints related to academic, administrative, and student welfare issues, ensuring timely resolution. The committee follows a structured process for investigating and addressing concerns in accordance with institutional policies. Regular meetings are conducted to review grievances and suggest improvements. The committee promotes a harmonious and student-friendly environment by upholding justice and accountability.

Table 10.14: Complaints Cum Redressal Committee Members

Sl. No	Category	Name	Designation
1	Chairperson	Dr. Sujata	Principal
2	Member	Dr. K. G. Revathi	Dean / Student Affairs
3	Member	Mrs. M. Maheswari	Associate Professor
4	Member	Dr. K. Kalai Kumar	Associate Professor
5	Student Representative	Mr. Fedric	IV Year / CSE
6	Student Representative	Ms. Mahalakshmi	IV Year / ECE

***Frequency of Meeting – Every Month in a Year.**

SERVICE RULES

1. PREAMBLE:

1.1. These rules shall be called the DMI College of Engineering, Chennai “Service, Conduct and Leave Rules" (Governing the conditions of service of Teaching and Non-Teaching staff)

1.2. The rules shall come into force from immediate effect.

2. DEFINITION

2.1. College

College means DMI College of Engineering Chennai, established and managed by Society of Daughters of Mary Immaculate & Collaborators.

2.2. Management

Management means the Society of Daughters of Mary Immaculate & Collaborators represented by the Chairman and President.

2.3. Governing Body

Governing Body means the Governing Body of DMI College of Engineering Chennai which has been constituted in accordance with the provisions laid down in this respect by All India Council of Technical Education.

2.4. University

University means Anna University, Chennai - 600025.

2.5. Principal

Principal of the college is the head of the institution authorized by the Management to discharge the duties and responsibilities of the Principal.

2.6. Employee

Employee includes all employees, without exception performing whatsoever function assigned to him/her and is in the whole or part time employment of the College, whether such employment is probationary, temporary, and permanent.

2.7. Teaching Staff

The teaching staff comprise of the following categories.

- Principal
- Deans
- Head of the Department
- Professor
- Associate Professor
- Assistant Professor
- Any other category of post declared so by the Executive Body.

2.8. Non-Teaching Staff

Non - Teaching staff means those categories of staff, that are not categorized under the teaching staff shall be deemed to be non-teaching staff.

2.9. Competent Authority

(a) Chairman/President of the Executive Body in case of Principal

(b) Principal in case of other employees.

2.10. Duty

An employee is considered to be on "duty" for the purpose of service benefits:

- When the employee is discharging the duties of the post to which he/she is appointed or is undergoing training prescribed for the post.
- When the employee is absent from duty on authorized holidays or permitted vacation, or when availing of leave other than extraordinary leave sanctioned by the competent authority.
- When the employee is attending conferences, seminars, or workshops duly permitted by the competent authority.
- When the employee is attending to the work assigned to him/her by the competent authority within the institution.

2.11. Leave

Leave means leave, granted by the appropriate authority to an employee, to which he/she is eligible.

2.12. Pay

Pay means Basic Pay in the time scale or Basic Pay with Dearness Allowance and other Allowances as the case may be.

2.13. Year

Year means Calendar Year/Financial Year/Academic Year as the case may be.

3. APPOINTMENT SELECTION AND PROBATION

3.1. Appointments

The President/ Principal is the competent authority to appoint any employee based on the recommendations of the selection board. The appointment orders shall be issued by the Management.

3.2. Qualifications

The qualifications, age, experience etc., shall be as per AICTE / UGC norms in respect of teaching and non-teaching staff.

3.3. General Procedure of Recruitment (Appointment Rules)

3.3.1. All posts at the Institute shall normally and, as far as possible, be filled by advertisement; but the Governing Body shall have the exclusive power to decide, either on its own or on the recommendations of the Principal, that a particular post be filled by invitation or by promotion from amongst the members of the staff of the College.

All appointments on the staff of the College shall be made only by the Governing Body of the College, through its Chairman or authorized by the Governing Body.

The manpower requirement shall be ascertained based on the desirable norms prescribed by AICTE/University or the appropriate authority from time to time. Additional posts may also be created, as required, for the extension of specific projects and or research and development activities.

3.3.2 The Selection Committee shall include

a. **In the case of recruitment of the Head of the College**

- The Chairman/ President
- The Correspondent
- An Educationist
- The Principal from other Institutions

b. **In the case of recruitment of teaching faculty**

- The Correspondent
- The Principal
- The Head of the Departments of the college,
- A Subject expert/Industrial Expert.

c. **In the case of recruitment of clerical staff/lab assistants**

- The Correspondent
- The Principal
- The Head of the Departments of the college.

d. **In case of recruitment of Maintenance Staff**

- The Correspondent
- The Principal

3.3.3 Selection Procedures

- The following procedure is followed in the selection of faculty members in various departments.
- Heads of Departments (HODs) forward the staff requirement details to the Principal, considering additional workload or staff leaving the institution.
- After consolidating the requirements from various departments, the Principal, with the concurrence of the Correspondent, arranges for publishing advertisements.
- The applications received from candidates are scrutinized by the Heads of Departments. Applicants who meet the qualifications and experience requirements are called for an interview.
- The selection process consists of three stages.
- Screening test.
- Personal interview on technical and general aspects by the Staff Selection Committee
- Final interview by the Principal and Correspondent.
- Appointment orders are issued to the selected candidates after approval by the Governing Council (GC) and receipt of their joining letters.

3.3.4 Conditions of Appointment

- Staff members are entitled to leave as per the institutions rules. They will be subject to the institutions regulations, including those on conduct, discipline, administrative orders, and other directives from DMI College of Engineering that may come into force from time to time.
- Staff members are required to bring their certificates supporting education, professional qualifications, experience, date of birth, and a relieving letter from their immediate past employer, along with one set of copies and one passport-size photograph for records at the time of reporting for verification.

- Staff members are expected to work with high standards, initiative, efficiency, and economy. They will diligently and faithfully apply themselves to the work assigned to them and follow the directions given by their superiors.
- Staff members will be responsible for the safekeeping and return of all college property in their use, custody, or charge, in good condition. The college reserves the right to assess and recover damages for any lost property.
- The general details of duties and responsibilities for staff members will be provided separately by the Principal or Correspondent as needed.
- Staff appointments are contingent on the staff members being declared and remaining medically fit. If they are found medically unfit to continue, they will lose their job. Staff members are expected to serve a minimum of two years; however, unsatisfactory performance may result in termination with one months notice.
- Staff members wishing to leave the institution must provide three months advance notice before the end of the academic year. Acceptance of three months salary in lieu of notice is at the managements discretion. They are expected not to leave during the middle of the academic year.
- Staff members will devote their entire time to their assigned work and will not undertake any other work or business, whether for honorarium or remuneration. Any contravention may result in termination.
- In addition to teaching, staff members are required to actively participate in the colleges development processes, including seminars, workshops, research, publications, fostering the Institute-Industry Interface, and other academic activities. They should also take on additional responsibilities assigned by the Principal, Correspondent, and Chairman as needed.
- Staff members shall not disclose any information regarding the institutions activities, official matters, or any other information without specific authorization from the management.
- If a staff member is found smoking or under the influence of alcohol on campus, the management reserves the right to take appropriate action, and any such action taken shall bind the employee.
- Every employee is expected to conduct themselves under the law of the land. In case of any issue arising out of a violation of such law, the institute will not be responsible in any manner.
- As a token of their acceptance, staff members must sign the duplicate copy of the appointment letter and return it to the Management.

3.4. Probation and Confirmation

- Staff members will be placed under probation for one year from the date of joining. During the probation period, if their attendance, conduct, or work progress is not satisfactory, the employees service may be terminated. The employees appointment will be confirmed after the successful completion of the one-year probation period.
- If an employee wishes to be relieved during the probation period, they must provide three months notice in writing or three months salary, including all allowances, unless the Management grants a relaxation under special circumstances.

3.5. Termination of Service

- If an employee intends to resign after confirmation, they must provide three months notice in writing or three months salary, including all allowances.
- The Management has the power to relax the notice period or salary payment in special circumstances.

3.6. Retirement

Every employee of the College shall retire upon attaining the age of superannuation as provided by regulatory bodies like the AICTE and as enforced from time to time. Extension or re-employment may be granted according to such provisions, at the discretion of the Governing Body, on terms and conditions it deems fit.

4. PROMOTION POLICY FOR FACULTY MEMBERS

4.1. Experience

Experience refers to teaching experience in AICTE-approved engineering institutions. The experience gained by working in companies or industries may also be considered, either partially or fully, by the Management Committee in exceptional cases. This consideration depends on the quality and relevance of the experience to teaching, the nature of the job, the designation or post held, and the reputation of the company or industry at a national or international level. Experience gained in underperforming or poorly reputed companies or industries shall not be considered for any kind of equivalence.

4.2 Promotion

- Every eligible individual is considered for promotion based on departmental requirements by AICTE norms.
- The Staff Selection Committee, comprising the Correspondent, Principal, Heads of Departments, and expert members, reviews their profiles for promotion.

5. STAFF RESPONSIBILITIES

5.1. General Code of Conduct

- Every employee shall adhere to the following code of conduct, which is not exhaustive.
- All faculty members are expected to comply with the institutions rules as updated from time to time.
- Faculty members are required to attend the staff assembly at 7:45 am daily in the College Reception Hall.
- Faculty should arrive at least 15 minutes before classes begin and remain available for student queries after class hours to the extent possible. They should leave the college premises only after ensuring all students have left the classrooms.
- Faculty must be present in the classroom 5 minutes before the scheduled lecture and should only leave after being relieved by another faculty member.
- Faculty members are encouraged to enhance their knowledge through participation in Faculty Development Programs (FDPs), seminars, workshops, and conferences, subject to obtaining necessary permissions from the Principal/HOD. Staff assignments are subject to management discretion as per regulations in force.
- Faculty members are expected to contribute to scholarly publications such as textbooks and research papers in reputable international or Indian journals/conferences.
- Performance evaluation includes self-development through guiding projects and securing project funding.
- Faculty members must continuously upgrade their academic preparation to effectively meet teaching challenges and requirements, thereby benefiting the student community at large. They are also expected to positively influence student personality development and actively engage in assigned or personally interested extracurricular activities.
- All employees must maintain courteous behavior in their interactions with colleagues, students, and the public.
- Employees are expected to demonstrate ideals of national integration, displaying love and concern without discrimination based on caste, creed, or community. Violation of this principle will result in strict disciplinary action, including suspension or termination.
- Feedback from students, both formal and informal, will be collected and provided to faculty members for continuous improvement.
- English is the designated language for communication in both classrooms and on campus.
- Faculty members must avoid any form of groupism. Engaging in such activities will lead to disciplinary proceedings.
- Consumption or distribution of alcohol, drugs, or any intoxicants, including smoking, is strictly prohibited on college premises.
- Faculty must adhere to a formal dress code daily.
- All faculty are required to attend department assemblies with students in the auditorium.
- Cell phone usage is strictly prohibited during working hours within the campus.
- Faculty members should maintain impartiality and cordiality towards students, avoiding overly familiar relationships that may lead to classroom indiscipline.
- Faculty should obtain prior permission from the HOD/Principal before leaving campus during working hours.

5.2. Conduct in the Department

- Teaching loads will be assigned by the HOD based on the faculty member's expertise.
- Once a subject is assigned to a faculty member, they should prepare the lecture along with a lesson plan.
- The lesson plan and course file must be approved by the HOD/Principal. The course file includes a preface, timetable, lesson plan, previous year university question papers, notes, handouts, OHP sheets, test/exam question papers, and three model answer scripts for each test/exam, along with assignments if applicable.
- The faculty members logbook must be regularly updated and available for inspection by the HOD/Principal.
- In addition to teaching, faculty members should undertake additional responsibilities as assigned by the HOD/Principal in academic, co-curricular, or extracurricular activities.
- Every faculty member must deliver a seminar on some topic at least once each semester to other faculty members.
- Faculty members are responsible for maintaining students attendance records. The roll numbers of absentees should be noted daily in the Master Attendance Register maintained in the department immediately after class/laboratory hours.
- When requesting leave, faculty members must obtain prior approval and ensure suitable alternate arrangements are made for class/lab supervision. In emergencies, the HOD or the next senior faculty member must be informed with proposed alternative arrangements.
- Faculty members must keep all files related to their additional responsibilities updated and be prepared for inspection by the HOD/Principal.

5.3. Classroom Teaching

- Faculty members should aim for 100% results in their subjects and plan accordingly.
- Advance preparation for classes is essential to achieve this goal.
- Ideally, faculty members should recap the previous lecture for the first 5 minutes and effectively utilize the remaining 50 minutes for delivering the lecture.
- Use slides/PPTs for complex diagrams and lengthy derivations.
- Utilize practical examples to illustrate concepts effectively.
- Provide relevant website addresses related to the topic for further reference.
- Introduce a few topics and advanced concepts beyond the syllabus to enrich students learning.
- Refer to additional books beyond textbooks and prepare detailed lecture notes as teaching aids. Notes should not be dictated during class.
- Encourage and positively respond to student questions. If unable to provide an immediate answer, commit to addressing it in the next class.
- Conduct regular short tests and ask questions to assess teaching effectiveness and adapt as needed.
- Analyze test results to identify slower learners and provide additional coaching to improve overall university results.
- Revision and coaching classes are crucial for effective exam preparation.
- Record topics covered in each period in the logbook and have them periodically signed by the HoD.
- The faculty member should take care of academically backward students and pay special attention to their needs in special classes.
- In problem oriented subjects, regular tutorials have to be conducted. The tutorial problems have to be handed over to the students at least one week in advance of actual class.
- The faculty member shall give possible 2-mark questions with answers for each unit.
- The faculty member should make himself/herself available for doubt clearance.
- The faculty member should motivate the students and bring out the creativity/originality in the students.
- The faculty member should regularly visit library and read the latest Journals/Magazines in his/her speciality and keep oneself abreast of the latest advancements.
- Quick reference material should be circulated for all the units before the model examinations.

5.4. Laboratory

- Faculty members must be inside the lab 15 minutes before the start of lab classes.
- The faculty member conducting practicals must personally perform experiments and ensure satisfactory results before assigning them to students.
- Additional experiments should be provided whenever possible to further clarify concepts for students.
- Lab observations and records must be corrected immediately after the class.
- Lab classes should follow this structure: 30 minutes for observation, 90 minutes for conducting experiments, and 30 minutes for result verification and viva.
- The lab manual should be updated by the respective faculty member in accordance with the revised syllabus.

5.5. Test/Exam

- When setting question papers, faculty members should also prepare detailed answers and marking schemes, submitting them to the HOD for approval.
- During invigilation, faculty members should continuously patrol the exam room and avoid prolonged sitting in one place. They must closely monitor to prevent any malpractice during exams.
- If any malpractice is observed, faculty members should promptly inform the University Representative/Chief Superintendent (Class Coordinator and relevant HOD for Internal Assessment Test/Model Examination).
- Test papers must be corrected within three days of the examination date, with marks submitted to the HOD along with any necessary remarks for forwarding to the Principal.
- Faculty members should maintain fairness and impartiality when awarding internal marks.
- Faculty members should not decline university assignments such as investigations, evaluations, and participation in orientation programs.
- Faculty members are expected to be available for university duties or internal duties during vacation periods.

5.6. Student-Faculty Relations

- Faculty members should maintain good control over student behaviour.
- Upon entering the class, faculty members should promptly take attendance. Habitual latecomers should be counselled personally, and if the behaviour persists, directed to meet with the class coordinator/HOD.
- Faculty members should handle student insubordination tactfully.
- While being firm, faculty members should avoid harshness and refrain from using words that may hurt students feelings.

6. PROVIDENT FUND AND OTHER BENEFITS

6.1. Provident Fund

An employee becomes eligible for enrollment into the Provident Fund scheme after completing their probation period, as per the Provident Fund Act.

6.2. Other Benefits

- Fee concessions/scholarships will be provided to employees dependents.
- Employees are eligible for enrollment in the ESI (Employee State Insurance) and Medical Insurance scheme after completing their probation period.
- Staff members can avail of benefits such as free transport and subsidized meals at the College mess.

7. LEAVE RULES

7.1. General Rules

- Every employee is entitled to 12 days of Casual Leave per year.

- Accumulation of leave is not permitted.
- Leave Application: Applications must be submitted on the prescribed form well in advance and approved before leave can be taken. Faculty members should arrange internal adjustments among colleagues to ensure continuous student engagement.
- Leave cannot commence without prior sanction. Mere submission of an application does not authorize leave. Unauthorized leave may result in disciplinary action and penalties.
- Engaging in alternate employment or business for personal gain is prohibited and constitutes an offense.
- Leave requests will not be sanctioned over the phone except in cases of emergencies or sudden illness, which must be promptly regularized in writing upon return.
- All leave applications forwarded to the Principal for approval must include recommendations from the HOD.
- Leave will be granted in accordance with existing leave rules.
- Vacation leave, On Duty leave, or personal leave cannot be availed during the notice period.

7.2. Kinds of Leave

Provisions exist for the following types of leave

7.2.1. Casual Leave (CL)

- Each employee is entitled to 1 day of Casual Leave per month, up to a maximum of 12 days per calendar year.
- Casual Leave cannot be carried forward to the next academic year and lapses thereafter.
- No compensatory leave will be granted if an employee is on leave during an institution-declared holiday.
- Late arrival on three occasions in a month result in a deduction of half a day of Casual Leave.

7.2.2. Restricted Holidays (RH)

- The Institute will declare a list of restricted holidays. Employees may avail themselves of any one day from the total RHs declared in a full academic year.
- Restricted Holidays cannot be accumulated and lapse at the end of the year.

7.2.3. Medical Leave (ML)

- Medical leave may be granted in case of employee sickness (not for dependents).
- A medical certificate from a doctor is required for absences of three days or more.

7.2.4. Leave Without Pay (LWP)

- There is no provision for the grant of Leave Without Pay.
- In exceptional circumstances beyond ones control, LWP may be granted at the discretion of the Director.
- Absence without sanctioned leave is considered indiscipline and does not fall under this category.
- LWP must be sanctioned in advance like any other leave.

7.2.5. Duty Leave / On Duty (OD) Leave

- OD Leave may be granted for activities that bring recognition to the College or are required for University work.
- OD cannot be availed without prior approval from the Principal and does not allow for post facto approval.
- Normally restricted to a maximum of ten days per academic year, but may be extended with competent authority approval.
- Conditions include a written request from the competent authority and acceptance of the paper for presentation.
- Examples include delivering academic lectures, attending University/College assignments during holidays, presenting research papers, or attending Quality Improvement Programs (QIPs) with Principal authorization.
- Other special cases may be considered on merit by Management based on Principals recommendation.
    1. **Maternity Leave (ML)**

- Women employees with more than one year of service are eligible for maternity leave.
- A valid medical certificate from a competent doctor must accompany the leave application.
- Maternity leave can be granted for up to 3 months (for a maximum of two children). One months salary will be paid upon return to duty.

7.2.7. Marriage Leave (MGL)

- Confirmed staff are entitled to one weeks leave (including Saturday and Sunday) if their marriage falls on working days.
- Employees may also receive a marriage gift from management.

7.2.8. Permission (P)

- Emergency permission for one hour in the morning or evening may be granted if notified before working hours.
- A maximum of two such permissions will be granted per month.

10.1.3 Decentralization in working and grievanceredressal mechanism (10) Institute Marks : 10.00

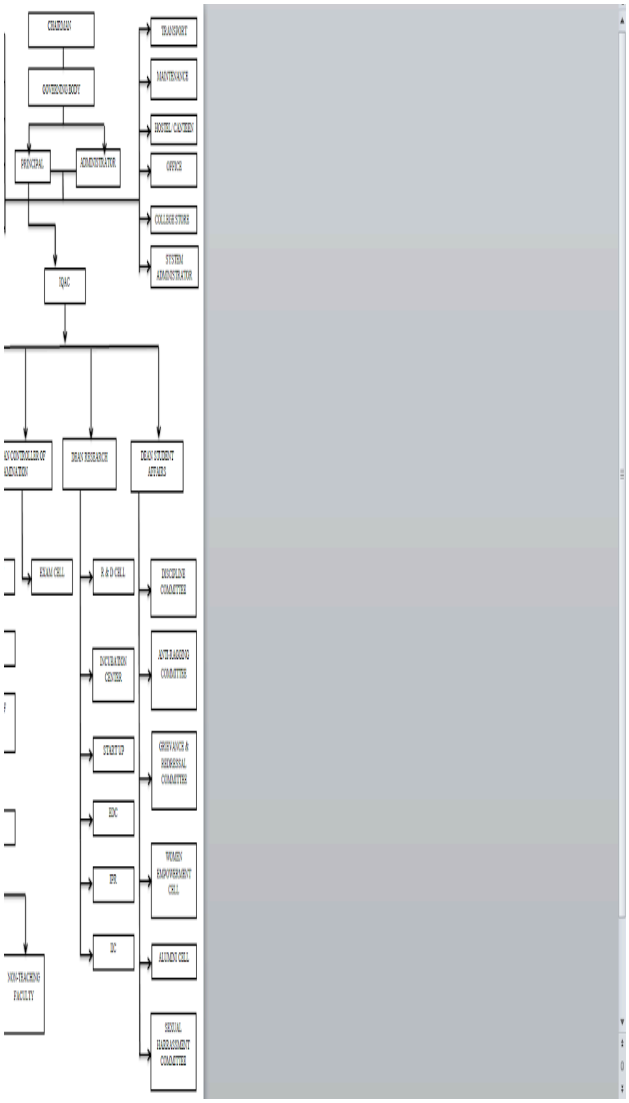


Figure: 10.2 Organization Chart

Decentralization

- The Governing Council meets annually to establish general guidelines.
- The Principal has full academic freedom to manage the institution within these guidelines.
- IQAC monitors and ensures the maintenance of academic quality in the college.
- Deans and Heads of Departments (HODs) are entrusted with authority and responsibility for student and faculty development.
- Weekly meetings between Deans, HODs and the Principal address various institutional, departmental, and student-related matters.
- Developments are discussed, and decisions are made accordingly.
- Each department plans its non-recurring and recurring expenditures, submitting budgets for approval. HODs oversee various purchases through the purchase committee.

PRINCIPAL

The Principal is the academic and administrative head of the institution and all staff report to him directly or indirectly through the Department Head appointed by him. He represents the institution to the outside world and is responsible for elevating the image of the institution by planning, controlling and monitoring every activity of the Institution.

Duties And Responsibilities

- Implementing the Vision & Mission of the Institution
- Identifying long range & short range goals for every year
- Preparing a road map for achieving the goals
- Planning & implementing Image Building of the Institution
- Developing Infrastructure as per the requirements of AICTE, Anna University and NBA
- Consolidating annual budget proposals received from departments & presenting the same in the governing council for approval and sanction
- Consolidating faculty requirements for the academic year and complete the recruitment process one month before the commencement of the semester
- Developing Norms & Standards for promotion, Increments, Incentives and make them transparent to all concerned
- Appointing conveners of various committees for the academic year by 15th may and collect the action plan/schedule by 30th may
- Realizing the academic calendar/action plan based on inputs from the University, departments & conveners of various committees
- Constituting committees & nominate conveners for all college programmes as and when required
- Maintaining a file for each faculty as a record of personal information and professional achievements
- Convening the HOD meeting, once in 15 days with a predefined agenda & communicating the minutes to all concerned. Also, a staff meeting to be conducted at the beginning of the semester
- Reviewing the reports of Class Committee Meetings, Staff meetings of Departments and any other committee meetings (academic & non-academic) held in the Institution and the subsequent follow-up actions
- Reviewing the results and taking appropriate measures along with HODs to enhance the percentage of result

- The principal is the signing authority of all correspondences with approving and affiliating bodies, Government agencies, vendors act
- In the absence of the Principal, one of the Vice Principals is nominated by the Principal will act as the in-charge
- To act as development head in all the image-building process.
- To prepare the road map to put up the centre of excellence, incubation centre and all the technical bodies and activities.

IQAC

- Coordinate the accreditation of all institute programs periodically by agencies like NBA and NAAC.
- Constitute the Internal Quality Assurance Cell (IQAC) as per UGC/NAAC guidelines, in consultation with the Principal, Deans, and HoDs.
- Prepare proposals for AICTE and UGC approvals, setting clear targets and deadlines.
- Lead IQAC activities to ensure quality across all areas of institute operations.
- Develop a vision document for the institute by engaging key stakeholders and faculty members at all levels.
- Collect and analyze feedback from students, internal stakeholders, industries, and parents; conduct exit surveys for outgoing batches and tracer studies for alumni.
- Regularly update feedback formats and questionnaires for internal and external stakeholders.
- Design faculty assessment schemes and recommend awards for outstanding performance.
- Initiate departmental and institutional grading processes and analyze and declare results.
- Periodically revisit and update the institute's Vision and Mission statements.
- Benchmark institute processes and systems against best practices.
- Conduct periodic external academic and process audits.
- Prepare and publish the annual Internal Quality Assurance Report.
- Conduct employability surveys and provide feedback to departments for improvements.
- Plan soft skills training programs based on survey findings, in coordination with the Dean of academics and the Dean of student affairs.
- Prepare proposals for the continuation of Autonomy in collaboration with the Dean of Academics.
- Ensure timely implementation of Outcome-Based Education (OBE) across all programs.
- Undertake any additional responsibilities assigned by the Principal.

DEANS

Dean- Academics

- Plan and oversee the academic affairs of the institution.
- Publish the Academic Calendar.
- Identify training needs for staff and students.
- Ensure an effective teaching-learning process.
- Compile and present semester-wise and annual academic performance reports to the Academic Council and Board of Governors (BoG), assisted by the Controller of Examinations.
- Ensure compliance with NBA standards and prepare the necessary documentation.
- Conduct periodic monitoring of academic processes.
- Assign academic responsibilities to faculty members.
- Evaluate and analyze financial statements and assist the Principal in preparing the budget, addressing program-wise and department-wise financial needs and trends.
- Manage external communications with regulatory bodies such as UGC, AICTE, and other organizations, in coordination with the Principal and relevant Deans.
- Assist the Principal in developing alliances and associations with various stakeholders, and coordinate with departments to schedule meeting agendas and ensure compliance with deliverables.
- Represent the institute at meetings with internal and external stakeholders, as directed by the Principal.
- Assist with faculty/staff recruitment, promotions, and compliance with statutory requirements.
- Perform any other duties assigned by the principal in the institutes interest.

Dean- Training and Placement

- Develop and execute the placement strategy.
- Develop and maintain a corporate database, and communicate with industries to optimize placements.
- Conduct pre-employment assessment tests for campus-eligible students.
- Maintain a student resume bank and organize development programs focused on aptitude and soft skills.
- Develop and maintain effective communication with stakeholders, corporate partners, campus-eligible students, and institute authorities.
- Schedule, plan, coordinate, and execute the campus recruitment process based on the prevailing hiring scenario.
- Roll out and monitor the campus recruitment process in coordination with the Training and Placement (T&P) committee.
- Ensure smooth completion of student selection and joining formalities in coordination with employers.
- Assist in publishing job, placement, and internship opportunities through newsletters and other communications.
- Provide accurate data and maintain records regarding student placements.
- Attend corporate meetings and seminars for professional development.
- Organize on-campus and off-campus placement interviews.
- Arrange industry visits and training programs for students throughout the academic year.
- Coordinate expert lectures on technical and general topics for students.
- Oversee training programs for both technical and non-technical staff.
- Maintain the database of alumni, including those recruited or pursuing higher studies, for future communication and updates.
- Perform any additional duties assigned by the Principal in the interest of the institute.

Dean – Student Affairs

- Organize student counselling and act as a liaison between students and other stakeholders.
- Maintain, monitor, and enforce disciplinary policies related to students and faculty.
- Recommend students for institutional opportunities such as fellowships, scholarships, medals, and prizes, and establish regulations for their awards.
- Assist in maintaining discipline and work ethos across departments, and supervise faculty discipline and commitment.
- Coordinate with presidents of student societies and clubs regarding extracurricular activities.
- Ensure proper conduct of co-curricular and extracurricular activities through respective in-charges.
- Oversee amenities such as the canteen, transport, and clubs through respective in-charges.
- Address and resolve student suggestions and complaints.
- Coordinate with counsellors for SC/ST students and other support services.
- Collaborate with NCC, NSS, anti-ragging squad, Grievance Redressal Cell, Student Exchange Program Cell, and Equal Opportunity Cell.
- Implement and support the goals set by the Principal and Management.
- Perform any other duties assigned by the Principal.

Dean- Research

- Facilitate research scholars through the entire PhD process, from admission to thesis submission, in coordination with HoDs.
- Enhance research activities by motivating faculty, overseeing funded projects (AICTE, DST, UGC), and maintaining relevant office records.
- Develop and implement R&D strategies, policies, and goals aligned with NIRF and other ranking standards.
- Create support schemes for faculty, students, and researchers to achieve R&D goals effectively, focusing on originality and significance.
- Disseminate information about funded R&D projects and encourage quality proposal submissions with guidance.
- Coordinate with Institute leadership, Deans, and HoDs to promote research excellence.
- Develop strategies to increase internal revenue through consultancy and research, ensuring financial stability.
- Review consultancy proposals, assign them to relevant faculty experts, and form committees to prioritize them as needed.
- Approve and coordinate honorarium distribution for consulting faculty and staff according to institute policies.
- Regularly review and update the Institute's R&D guidelines and honorarium norms.
- Collaborate with the Dean of Academics to monitor PhD scholars progress.
- Engage with organizations, industries, and research labs to explore and approve collaborative research opportunities and MoUs.
- Build interdisciplinary research networks across technological domains.
- Encourage intellectual property protection and organize IPR awareness events.
- Develop policies to support faculty and students in R&D activities, including conferences, memberships, and research funding.
- Establish metrics to quantify research activities and prepare annual R&D reports.
- Promote technology-enabled startups and entrepreneurial initiatives.
- Support the creation of project studios, maker spaces, and innovative labs.
- Manage the R&D budget, ensuring proper allocation and usage.
- Perform any additional duties assigned by the Principal.

Controller Of Examinations

- Oversee the effective functioning of the Examination branch and report to the Principal.
- Prepare and propose examination regulations and rules for approval.
- Plan and arrange for the conduct of examinations, evaluation, and declaration of results in advance.
- Delegate and supervise responsibilities within the Examination branch.
- Coordinate with Heads of Departments (HODs) to ensure smooth operation of the examination system.
- Adhere to academic regulations and calendars.
- Maintain confidentiality of all examination-related matters.
- Secure examination data with proper backup on the server.
- Handle malpractice cases according to established procedures.
- Ensure timely issuance of grade cards to candidates.
- Document all financial transactions related to examinations.
- Address issues related to examination reforms.
- Safeguard all-important examination registers and records.
- Organize Results Committee meetings to facilitate timely declaration of results.
- Ensure results are declared within 2-4 weeks after examinations.
- Serve as the Member Secretary of Examination Committees.
- Perform additional duties as assigned by the Principal.

Head of the Department

- Review syllabus coverage, monitor teaching progress, and ensure the maintenance of laboratory resources.
- Implement college policies and procedures within the department.
- Ensure effective teaching and learning, and propose suitable methods for student assessments.
- Create a conducive academic environment and monitor student growth.
- Counsel students and organize parent-teacher meetings.
- Analyze student feedback, take corrective measures, and motivate faculty for improved performance.
- Recommend outstanding faculty for recognition to higher authorities.
- Submit staff appraisal reports to the Principal.
- Oversee the maintenance and inventory of equipment, furniture, and departmental resources.
- Conduct annual verification of departmental labs and stores, preparing lists for write-offs and obsolescence removal.
- Enhance faculty skills through Career Development Programs and encourage participation in FDPs at premier institutions.
- Build connections with industries, professional bodies, and alumni for department growth.
- Foster collaborations with industry for labs, internships, co-teaching initiatives, and sponsored research.
- Motivate faculty to engage in outreach activities that benefit the department, students, and society.
- Support professional development through participation in FDPs, conferences, and skill development programs.
- Design and implement a departmental co-curricular activity calendar in line with the academic calendar.
- Encourage students to pursue higher studies or entrepreneurship.
- Plan industrial tours, training sessions, and bridge courses, coordinating with industries for permissions and MOUs.
- Prepare and manage the departmental budget with input from faculty, ensuring effective utilization.
- Organize departmental seminars, workshops, and conferences annually.
- Streamline documentation for accreditation and quality processes like ISO, NBA, and NAAC.
- Manage recruitment for vacant teaching positions within the department.
- Request and coordinate procurement of books and resources for the department library.
- Prepare a departmental newsletter each semester summarizing activities and achievements.
- Compile the annual progress report of the department with relevant data for institute-wide reports.
- Maintain comprehensive records of departmental activities and achievements.
- Perform additional duties assigned by the Principal.

GRIEVANCE REDRESSAL COMMITTEE CELL

An exclusive department, led by the Principal and supported by a team of faculty members, is dedicated to addressing student grievances.

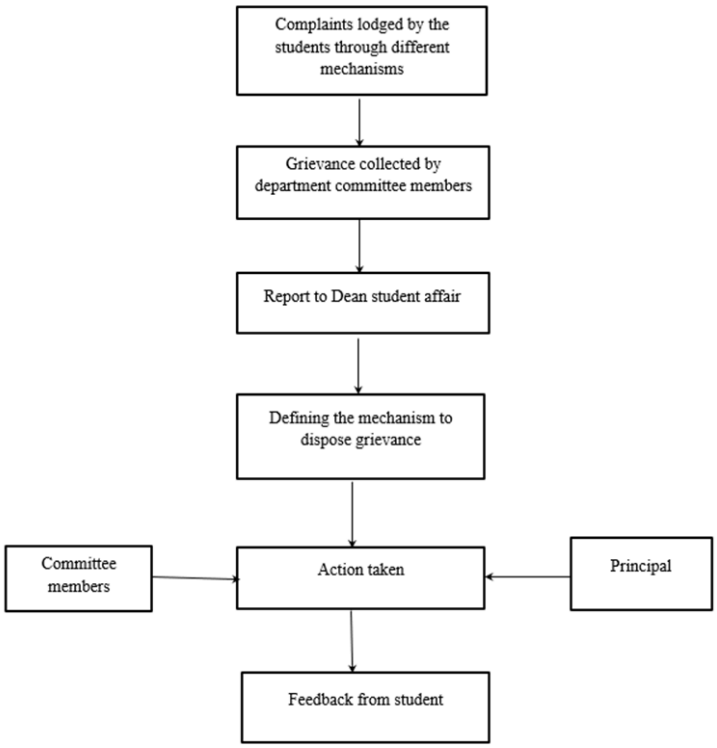


Figure 10.4: Grievance Disposal Mechanism

- Grievances of students related to academics and personal grievances of students within campus and hostel may be addressed to the committee.
- The tenure of the members shall be two years.
- The quorum for the meeting shall be three including chairperson.
- The committee shall follow the principles of natural justice while considering the grievances of students.
- The committee shall send the report and recommendations to the Management within a period of 15 days of receiving the complaint.
- The following list of members constitutes the Women grievance redressal & POSH committee.

Table 10.15: Grievance Redressal Committee Members

S. No	Name of Faculty	Category	Designation
1	Dr. Sujatha Jamuna Anand	Principal	Chairman
2	Dr. S. Chitradevi	Professor	Member
3	Dr. L. Jimson	Assistant Professor	Member
4	Mrs. V. Nageswari	Assistant Professor	Member
5	Mrs. J. Delphin Cinthiya	Assistant Professor	Member
6	Dr. V. Anbarasan	Assistant Professor	Member
7	Ms. A. Nadera Banu	III–AI&DS	Student representative
8	Mr. RanjithSahoo	III–Mech	Student representative
9	Rev. Fr. Williams	NGO	Ombudsman

***Frequency of Meeting – Bi-Monthly in a Year.**

Function of the Grievance Redressal Cell

- Helps students by providing solutions to address their grievances.
- Ensures that all staff members act responsibly when handling student's issues.
- Acts as an intermediary between students and departments to resolve academic and administrative problems.

Facilities Provided by the Cell

- Suggestion box is available in the college.
- Conference room where the grievance redressal committee can meet to discuss and review grievances.

Roles and Responsibilities of the Cell:

Coordinator

- Ensures the proper resolution of students academic and administrative issues.
- Facilitates communication between the students and departments to address grievances.
- Handles all grievances with discretion, maintaining confidentiality.
- Provides students with clear guidance to resolve their concerns.

Member

- Updates authorities about the number of grievances resolved and any pending cases.
- Informs departments about the grievance redressal system.
- Takes immediate action on grievances once they are received in writing.
- Facilitates communication between students and departments to address grievances.

10.1.4 Delegation of financial powers (10)

Institute Marks : 10.00

Financial powers are delegated to the Principal, Heads of Departments and relevant in-charges.

The Delegated financial power is as follows

Table 10.16: Delegation of Financial Powers

Sl. No	Financial funds allotted for	Amount Allotted	Mode of Transfer	Remarks
1	Principal	25000	Cash	Every Individual maintains a separate file
2	Head of the Department	10000	Cash	
3	Administrator	15000	Cash	
4	Examination Cell	5000	Cash	The allotted amount is revived after submitting the file
5	TPO	10000	Cash	

Utilization of financial powers for each of the assessment years

- All the above mentioned delegated financial power authorities maintain the separate file.
- The allotted amount is revived after submitting the file to the accounts department.

10.1.5 Transparency and availability of correct/unambiguous information in public domain (5)

Institute Marks : 5.00

Information on the policies, rules, processes is to be made available on web site

- The College ensures transparency & availability of correct information in our college website by URL http://www.dmice.ac.in (http://www.dmice.ac.in/) is available from which the latest information & happenings of the Institution can be accessed.
- Intranet facility is available, through which the information can be accessed across the institution.
- The norms, procedures, circulars & all other updated relevant information are available on the college website.
- The Vision and Mission statements are disseminated to all the stakeholders of the programs through faculty meetings, workshops, student induction programs, and parent meetings.

Dissemination of the information about students, faculty and staff

- Institute-specific information is made available through the institution’s website. www.dmice.ac.in
- Faculty and students achievements are made available in the institution’s website. www.dmice.ac.in
- A copy of the regulations handbook is distributed to every student at the time of admission or on the reopening day.
- The regulation handbook has the complete details of attendance requirements, procedure for internal assessment evaluation and eligibility for qualifying for the award of degree etc.
- The individual copy of the Academic Calendar with the list of holidays, schedule of tests and end-semester examinations is distributed to the students during the first week of the Academic year.
- The student attendance statement is displayed on the department notice board every month.

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30)

Total Marks 30.00

Summary of currentfinancial year’s budget and actual expenditure incurred(for the institution exclusively)in the three previous financial years :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY : (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 - CFY 2024-25

Total Income 134357079.00				Actual expenditure(till…): 121564504.00			Total No. Of Students 1510
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
127011640.00	0	0	7345439.00	109967080.00	11597424.00	0	80506.29

Table 2 - CFYm1 2023-24

Total Income 128468500.00				Actual expenditure(till…): 117173604.10			Total No. Of Students 1418
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
110101009.00	0	0	18367491.00	107507049.22	9666554.88	0	82633.01

Table 3 - CFYm2 2022-23

Total Income 124246183.92				Actual expenditure(till…): 110700397.09			Total No. Of Students 1369
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
102101893.00	0	0	22144290.92	96974856.09	13725541.00	0	80862.23

Table 4 - CFYm3 2021-22

Total Income 86243567.48				Actual expenditure(till…): 75340159.51			Total No. Of Students 1208
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
49190712.00	0	0	37052855.48	66148777.07	9191382.44	0	62367.68

Items	**Budgeted in 2024-25**	**Actual Expenses in 2024-25 till**	**Budgeted in 2023-24**	**Actual Expenses in 2023-24 till**	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**
Infrastructure Built-Up	0	0	0	0	0	0	0	0
Library	1005375.00	86120.00	1800000.00	1727751.88	1820000.00	1803979.00	229844.00	308703.00
Laboratory equipment	1239000.00	3295129.00	20000.00	15000.00	5053000.00	5004707.00	1450000.00	1438635.00
Laboratory consumables	3375750.00	1687423.00	900000.00	834928.00	850000.00	882615.00	340000.00	29156.00
Teaching and non-teaching staff salary	66764584.00	63534900.00	65400000.00	63806503.00	57900000.00	55738102.54	41819299.00	43168337.16
Maintenance and spares	11457067.90	11229836.00	20090000.00	20239173.00	17300000.00	17110265.41	9251644.00	9722676.59
R&D	4978500.00	739662.00	4922121.60	4871778.60	1700000.00	1394940.64	419918.00	427062.00
Training and Travel	2293135.00	890664.00	1600000.00	1276025.00	870000.00	815531.00	776186.00	173975.00
	8016555.00	7979138.00	6644100.00	6590479.00	7108000.00	6893755.00	483655.00	7042335.44
Others, specify	28017976.40	32121632.00	21328000.00	17811965.62	26955000.00	21056501.50	33261557.00	13029279.32
Total	**127147943.30**	**121564504.00**	**122704221.60**	**117173604.10**	**119556000.00**	**110700397.09**	**88032103.00**	**75340159.51**

10.2.1 Adequacy of budget allocation (10) Institute Marks : 10.00

The annual budget of DMI College of Engineering is formulated based on the specific needs and requirements of each department, considering factors such as student intake, laboratory and infrastructure development, and the adoption of the latest technologies. Each department prepares formal budget estimates, which are then reviewed in a Heads of Departments (HODs) meeting with the Principal.

Following deliberations, the departmental budgets may be revised before being forwarded to the Principal for the preparation of the final college-level budget. The finalized budget is then submitted to the Management for approval. The Management approves the proposed budget. The budget allocation and utilization over the past three years have been adequate, ensuring smooth academic and administrative operations while supporting institutional growth and development.

Financial year	Approved Budget In Lakhs (Rs.)	Adequate/Non-Adequate
2024-25	1271.48	Adequate
2023-24	1227.04	Adequate
2022-23	1195.56	Adequate
2021-22	880.32	Adequate

10.2.2 Utilization of allocated funds (15) Institute Marks : 15.00

The College Management allocates funds, and Department Heads are informed about the amount assigned to their budget proposals. Major activities such as construction, infrastructure upgrades, procurement and maintenance of shared utilities, and furniture purchases are directly managed by the College Management. Requests for lab equipment, upgrades to existing lab facilities, and consumable purchases are initiated by the respective departments, with funds released on a case-by-case basis by the colleges accounts office upon Management approval. Over the past three years, the budget has been used for staff salaries, infrastructure development, equipment purchases, consumables, contingencies, travel, and other expenses. Almost all of the funds allocated by the management have been efficiently utilized by the institution during this period.

Institute level-Utilization of the Budget (%)

Financial year	Budget Allocation In Lakhs (Rs.)	Actual Expenditure In Lakhs (Rs.)	Percentage of utilization
2024-25	1271.48	1215.65	95.61 %
2023-24	1227.04	1171.74	95.49 %
2022-23	1195.56	1107.00	92.59 %
2021-22	880.32	753.40	85.58 %

10.2.3 Availability of the audited statements on the institute's website (5) Institute Marks : 5.00

Yes.

URL: http://www.dmice.ac.in

10.3 Program Specific Budget Allocation, Utilization (30) Total Marks 30.00

Institute Marks :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY: (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 :: CFY 2024-25

4275231.29		Actual expenditure (till…): 4181528.30		Total No. Of Students 102
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
17,27,211.00	25,48,020.29	25,58,027.50	16,23,500.80	40995.38

Table 2 :: CFYm1 2023-24

2911212.16		Actual expenditure (till…): 2887744.33		Total No. Of Students 113
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
70,000.00	28,41,212.16	82,061.07	28,05,683.26	25555.26

Table 3 :: CFYm2 2022-23

2703100.00		Actual expenditure (till…): 2667076.41		Total No. Of Students 145
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
5,46,100.00	21,57,000.00	5,58,479.70	21,08,596.71	18393.63

Table 4 :: CFYm3 2021-22

1304813.40		Actual expenditure (till…): 1196097.66		Total No. Of Students 164
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
1,92,038.60	11,12,774.80	1,57,895.10	10,38,202.56	7293.28

Items	**Budgeted in 2024-25**	**Actual Expenses in 2024-25 till**	**Budgeted in 2023-24**	**Actual Expenses in 2023-24 till**	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**
Laboratory equipment	123900.00	329512.90	2000.00	1500.00	505300.00	500470.70	145000.00	143863.50
Software	0	0	0	0	0	0	0	0
Laboratory consumable	675150.00	337484.60	180000.00	166985.60	170000.00	176523.00	68000.00	5831.20
Maintenance and spares	1145706.79	1122983.60	2009000.00	2023917.30	1730000.00	1711026.54	925164.40	972267.66
R & D	497850.00	73966.20	492212.16	487177.86	170000.00	139494.06	41991.80	42706.20
Training and Travel	229313.50	89066.40	160000.00	127602.50	87000.00	81553.10	77618.60	17397.50
	1603311.00	2228514.60	68000.00	80561.07	40800.00	58009.00	47038.60	14031.60
Total	**4275231.29**	**4181528.30**	**2911212.16**	**2887744.33**	**2703100.00**	**2667076.40**	**1304813.40**	**1196097.66**

10.3.1 Adequacy of budget allocation (10)

Institute Marks : 10.00

Financial year	Approved Budget In Lakhs (Rs.)	Adequate/Non-Adequate
2024-25	42.75	Adequate
2023-24	29.11	Adequate
2022-23	27.03	Adequate
2021-22	13.05	Adequate

10.3.2 Utilization of allocated funds (20)

Institute Marks : 20.00

Department level-Utilization of the Budget (%)

Financial year	Budget Allocation In Lakhs (Rs.)	Actual Expenditure In Lakhs (Rs.)	Percentage of utilization
2024-25	42.75	41.82	97.81 %
2023-24	29.11	28.88	99.19 %
2022-23	27.03	26.67	98.67 %
2021-22	13.05	11.96	91.67 %

10.4 Library and Internet (20) Total Marks 20.00

10.4.1 Quality of learning resources (hard/soft) (10)

Institute Marks : 10.00

The central library is housed in an area of 1,371 sqm. with the reading space of 400

square feet. It has a seating capacity of 100. Library functions from 8.00am to 5.00 pm on all

working days and 8.00am to 3.00 pm on holidays.

10.4.1. Quality of Learning Resources (hard/soft)

Relevance of available learning resources including e-resources.

- The library holds a good stock of text books, popular reference books in the field of various disciplines of Engineering, Science & Humanity and Management which includes the books mentioned in the prescribed syllabus of the affiliating university.
- The library houses a digital library section, where e-books and resources like NPTEL Videos etc. are made available. A minimum of 50 students makes use of the facilities available in the digital library on daily basis.
- The library subscribed to IEL Online, DELNET Online journals in addition to Print Journals.

The details of the number of books on Engineering subjects available department-wise are

Table 10.22: Library Book Details

SL.NO.	DEPARTMENT	TITLES	VOLUME
1.	CSE	1915	8015
2.	ECE	1799	7880
3.	EEE	1741	5866
4.	IT	1299	5803
5.	MECH	1697	5320
6.	SCIENCE & HUMANITIES	920	3696
7.	MBA	924	3803
8.	AI&DS	62	310
9.	AL&ML	30	143
TOTAL		**10387**	**40836**

The library also houses popular technical journals and magazines in various disciplines of Engineering and Management with the purpose of furthering the knowledge of the students on the latest technological trends and innovations. The details of journals in subscription in Engineering and Management are listed in the Annexure.

Table 10.23: Print Journals Count

Sl. No.	Department	Journals (Print)	Year
1	CSE	6	2024–2025
2	ECE	5	2024–2025
3	EEE	6	2024–2025
4	IT	6	2024–2025
5	MECH	6	2024–2025
6	MBA	7	2024–2025

Table 10.24: Print e-Journals Count

Sl. No.	Year	Journal (e-journal)	Count
1	2022–2023	IEEE-E-JOURNAL	221
		DELNET E-JOURNAL	980
		SPRINGER NATURE E-JOURNAL	194
2	2023–2024	DELNET E-JOURNAL	1085
		SPRINGER NATURE E-JOURNAL	226
		ASME E-JOURNAL	33

3	2024–2025	DELNET E-JOURNAL	1120
		SPRINGER NATURE E-JOURNAL	254
		NATIONAL DIGITAL LIBRARY OF INDIA	636
		STATE DIGITAL LIBRARY OF INDIA	48

Access to the students

The students can have access to the learning materials available in the library either during their allotted period in a day or after 3.30 pm daily. The library functions up to 5 pm in the evening.

Support to students for self-learning activities

The students are provided with the learning materials such as video lectures on various engineering topics delivered by eminent academicians from the national institutes of excellence namely IITs and IISc through NPTEL.

The Library subscribed to IEL Online, DELNET Online journals in addition to Print Journals.

Each department maintains a hard disc containing these lectures and other study material for use by the students. The students are allowed to take copies of these resources in their devices. Apart from this the class notes and answers to the questions in the question bank and university questions are uploaded in the college portal.

10.4.2 Internet (10) Institute Marks : 10.00

Name of the Internet provider	Tata TeleServices
Available band width	500 mbps
WiFi availability	Yes
Internet access in labs, classrooms, library and offices of all Departments	Yes
Security arrangements	Yes (Firewall Installed)

Annexure I

(A) PROGRAM OUTCOME (POs)

Engineering Graduates will be able to:

1. **Engineering Knowledge :** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

PSO1	DESIGN AND MANUFACTURING SKILLS: Apply the knowledge of design and analysis, manufacturing and quality assurance in the field of automotive manufacturing, mechatronics and robotics.
PSO2	PROBLEM SOLVING ABILITIES: Apply the knowledge acquired in the domains of thermal, fluid and solid mechanics to solve the problem related to their equipment and evaluating the performance.
PSO3	MANAGERIAL SKILLS: Apply the managerial skills to work effectively in a team and in a society of following ethical and environmental practices.

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
DR SUJATHA JAMUNA
Name : ANAND
Designation : PRINCIPAL
Signature :

Seal of The Institution :

Place : CHENNAI
Date : 21-02-2025 11:47:02