



SELF STUDY REPORT

FOR

2nd CYCLE OF ACCREDITATION

MARATHWADA MITRA MANDALS COLLEGE OF ENGINEERING

MARATHWADA MITRA MANDALS COLLEGE OF ENGINEERING, SURVEY
NO. 18, PLOT NO. 5/3, NEAR VANDEVI TEMPLE, KARVENAGAR, PUNE 411052

411052

www.mmcoe.edu.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

The trust "Marathwada Mitra Mandal, Pune" was established in 1967 by Hon. Late Shri. Shankarraoji Chavan, Former Home Minister, Govt. of India. The motto of MM trust is "Yethe Bahutanche Hit" (Welfare of masses). Marathwada Mitra Mandal's College of Engineering (MMCOE) established in A. Y. 2006-07, is one feather in the cap of Marathwada Mitra Mandal Trust, which is a registered society and a self-financed institution. MMCOE is permanently affiliated to Savitribai Phule Pune University, Pune and approved by the All-India Council for Technical Education, New Delhi and Director of Technical Education, Maharashtra State. The institute offers 06 UG (Computer, Mechanical, Electrical, E&TC, IT, AI&DS), 02 PG (Computer Engineering and MBA) programmes and Ph.D. in Computer Engineering. MMCOE imparts quality engineering education and promotes technological research to generate technical personnel in various areas of engineering and technology. The institute maintains the high standards for academic, personality development and overall grooming of the students which has resulted in achieving 'A' grade by NAAC in the first cycle, the "Best College Award" by SPPU and NBA accreditation for two programmes. MMCOE is located at hill top encompassing a sprawling area of 3.98 acres, with actual built-up area of 20398 Sq. m. The institute continues to be the most preferred destination for the students of the state and various parts of the country. Currently 2700+ students are enrolled in the various courses. MMCOE boasts to provide students with excellent academic ambience, good infrastructure, innovative teaching-learning aids, research facilities, incubation support, training opportunities and nurturing entrepreneurship skills. MMCOE is the first self-financed engineering institute who has taken initiative and established a Foundation for Make it Happen Center for Invention, Innovation and Incubation (FMCIH) in joint collaboration of Tata Technologies, Science and Technology Park, SPPU and Marathwada Mitra Mandal, Pune to promote the culture of research, innovation and entrepreneurship in students of MMCOE. It also strengthens and effectively practices the Outcomes Based Education (OBE).

Vision

"To aspire for the welfare of society through excellence in science and technology."

Mission

Our Mission is to:

- Mould young talent for higher endeavours.
- Meet the challenges of globalization.
- Commit for social progress with values and ethics.
- Orient faculty and students for research and development.
- Emphasize excellence in all disciplines.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Supportive management
- Strong team of dynamic & well qualified faculty members
- Faculty retention ratio is good
- Faculty have good exposure towards interaction with the outside world: Reviewers, Session Chairs, Syllabus & Paper Setters, Examiners etc.
- Strong Industry Connect
- Overseas placement at Japan
- FE Student enrollment is good in Comp., IT, AIDS & E&TC; DSE student enrollment is good in all branches
- Strong Alumni network
- Accredited by NAAC
- Mechanical & Electrical department accredited by NBA
- Higher studies of students in foreign universities
- Postgraduate and PhD Research Centre in Computer Engineering Department
- Active participation of students in co-curricular and extra curricular activities
- Excellent facility for Invention, Innovation and Incubation through FMCIII
- Rigorous Academics with advanced ICT tools
- Use of OBE philosophy
- Success rate of students is good
- Adequate and well-maintained infrastructure for Curricular, Co-curricular and Extracurricular activities
- Recognized as 'GPU Education Centre' of NVIDIA, Nodal Centre for Virtual Labs., Spoken tutorial, Remote centre of IIT Bombay
- Active professional bodies, student associations, students Clubs like ACM, ACES, CSI, ISTE, GDSC, IEEE, ISHRAE, ASHRAE, ISACA, ITSA, CESA, MESA, EESA, BETA, IT tech club, GDSC, Zenith Astronomy etc.

Institutional Weakness

- Less of funded research projects
- Less quality research publications
- Very less consultancy projects
- Less placements of hard branches
- Less Succession ratio
- Adjunct/Visiting Faculty
- Less community services
- International Collaborations
- Branding & Publicity

Institutional Opportunity

- Collaboration with Industries, National/ International bodies
- Innovation and funded projects
- Regional recognition
- More number of FDPs /STTPS, National/International Level conferences
- NBA Accreditation of all departments
- NAAC Accreditation with A+

- Academic Autonomy
- Interdisciplinary projects
- Industry grade certification courses in latest technologies
- Strengthening interaction with Alumni to facilitate better connectivity with the industry
- Developing state of art laboratories in association with Industries
- More Patents and Copyrights
- Undertake significant industry consultancies
- 100% admissions with quality input
- Quality of research publications
- To engage in more community services
- 100 % Placements
- 100% student internships
- Faculty and student exchange program with foreign universities

Institutional Challenge

- Global competition for admissions
- Cope up with changing technology
- Decline in interest of candidates in Engineering
- Inculcation of entrepreneurship skills in students
- Student attendance of final year
- Placement of students in core industries

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

- Marathwada Mitramandal's College of Engineering (MMCOE) started in 2006 and has been affiliated to Savitribai Phule Pune University (SPPU) since its inception. The University is well known for its excellence in education.
- All programs follow the Institution's quality policy for effective implementation of Outcome Based Education.
- Senior faculty members from the institution are involved in planning, execution, and implementation of SPPU curriculum. Faculty members are involved in framing the industry relevant syllabus and organizing faculty development programs for its effective implementation for all faculty members under SPPU.
- The experienced faculty members are involved in University examinations paper setting as a team member as well as subject chairman. The faculty members contribute actively in paper assessment at different common assessment centers under SPPU.
- Institution provides academic flexibility by offering project-based learning, audit courses, elective courses, internships, mini-projects, and final year projects.
- Institution has organized various add-on courses, online certificate courses, seminars, workshops, skill

development courses in the emerging fields for improving the employability of students across all the departments.

· In the current curriculum, University has given more emphasis on cross-cutting issues related to human values, professional ethics, environment, and sustainability through different audit courses.

· The National Service Scheme (NSS) has organized various awareness programs on gender equality, computer literacy, hygiene, and women empowerment for the nearby villagers. The blood donation camp is organized for helping the needy people. Social programs such as grocery, cloth, and utensil donation to orphanages and the economically weaker class of the society are regularly organized to inculcate the social values in students.

· In every semester, feedback is taken from all the stakeholders such as students, employers, parents, and alumni. After analyzing the feedback, corrective actions are taken. During COVID-19 pandemic situation, Information and Communication Technology (ICT) was widely used for teaching learning. The effectiveness of the ICT was measured through ICT feedback and appropriate actions were taken for its improvement.

Teaching-learning and Evaluation

The Marathwada MitraMandal's College of Engineering offers a structured system for the all-round development of students coming from diverse fields and localities. The SE, TE, BE admissions are done at college level as per the guidelines of Savitribai Phule Pune University (SPPU). FE admissions process is conducted by DTE government of Maharashtra. As the college is affiliated to SPPU, the syllabus is provided by the University Board of Studies. The college follows the institute planner prepared in-lined with SPPU calendar. The institute planner, department academic calendar is well prepared at the start of each semester for smooth conduction of academics. Orientation sessions for students and teachers are conducted in the beginning of the year to introduce the programme. The institute has a well-qualified, experienced faculty members. Teaching plans, internal evaluation process is well prepared by the course coordinators and explained to the students class-wise in the introduction session. The first session helps students to learn about the courses, objectives and outcomes. Various teaching methodologies are used in the conduction of course by the course coordinators. The recent ICT tools are used by faculty members to conduct activities like tests, quiz, seminars etc. Internal tests are conducted at course level by respective course coordinators. The external TH/OR/PR examinations are conducted as per the schedule of SPPU. Mechanism of internal and external assessment is transparent and the grievance redressal system is in place. The end semester results analysis is done by the committee appointed by respective programs. Various student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences of students using ICT tools. Students get exposure through various co-curricular and extracurricular activities. Course Outcomes (COs) for all courses and Programme Outcomes (POs) for all Programme offered by the institution are stated and displayed on website. A well-defined process for attainment of COs and POs is available. The COs and POs are evaluated using various internal and external attainment tools. Student's input is taken through various surveys and feedback. The feedback and surveys are used for improvement in the overall working.

Research, Innovations and Extension

During the last few years, the use of technology in learning has grown rapidly all over the world. Contrary to

the common opinion, the need for group skills and social interaction skills increases during the wave of digitalization.

MMCOE has good research and development with innovations from 2007. Our research involves planning and setting realistic objectives. The research is based on the following innovative areas like governance support in terms of grant, management to support research, personal qualities of research leaders and managers. Every department has Center of Excellence for the faculty and students to encourage them to take up research & developmental activities by utilizing the resources beyond the curriculum.

The institute has created an ecosystem for Research and Innovation by taking initiative for creation & dissemination of knowledge and establishing state of the art infrastructure.

Faculty and students attend; faculty conducts workshops, conferences, and webinars, to provide an opportunity to explore current topics, hands-on training, and practical applications.

Our research policies focus on encouraging collaborations with other higher engineering institutions/Industries and Incubation Units at the international and national level.

To promote students for higher education, an International Collaboration Cell is set and a number of activities for collaborations are carried. MMCOE Entrepreneurship cell strives to identify, nurture and support budding entrepreneurs by conducting workshops, expert sessions and success stories.

MMCOE's ultimate goal is to contribute to the betterment of society in addition to doing well for ourselves. This is accomplished through raising awareness, participating actively in government-organized drives, and many other things through extension activity.

Infrastructure and Learning Resources

In MMCOE, sufficient facilities for optimum use to enhance and maintain good quality academics as well as co-curricular activities on the campus are provided. To facilitate students teaching as well as non-teaching (supporting) staff., three constituents of the Teaching Learning process is a continuing process which makes the quality of campus life better and better to each of them.

The Institution follows all the norms specified by AICTE, New Delhi and Savitribai Phule Pune University (SPPU) to provide the infrastructure to facilitate effective teaching and learning to the students of all the streams.

The infrastructure comprises well-furnished classrooms, Library, Canteen, Hostel, Gym, Power supply systems, Water supply etc. Virtual lab facility of IIT Bombay also is available. Campus intranet has paved way to provide seamless access to e-journals, online lecture streaming and application software. Entire campus is Wi-Fi enabled with 600 MBPS leased lines with 30 access points at strategic points.. The website provides access to official information of the college.

The college ensures 24 hours security through security guards and surveillance cameras.

The institute encourages cultural and sports activities that stimulate growth, development and retention of students in a contemporary and safe environment, enhancing fitness and wellness, social interaction and leadership opportunities.

The Central Library of the College is well furnished in accordance with the AICTE norms. The college has a voluminous library which caters to the needs of students, research scholars and faculty. The Library resources have been completely Bar Coded and automated. A digital library with 10 dedicated computers are made available for online access of teaching learning material. UPS and generator provides reliability of uninterrupted power supply throughout the campus. Firewall is installed to prevent illegal access to the internet. Biometric attendance (facial recognition) system has been effectively implemented in the institution for college staff. The campus has 24x7 CCTV surveillance. The Classrooms, seminar/conference halls, are equipped with LCD Projectors with all accessories. The institute faculty members have been using smart boards and Google Class Room platforms with an in-built recording facility.

Student Support and Progression

The college provides students with access to grants and scholarships from both government and non-government organizations, including the State Government Minority Scholarship, the AICTE Pragati Scholarship Scheme for Girl Students, and the Central Government Minority Scholarship.

The institution has taken the initiative to develop capacity-building and skills-enhancement programmes for our students. These programmes include personal counseling, yoga day celebrations, HIV awareness camps, soft skills by CRD cells, language and communication skills, language enhancement courses, and workshops.

The organization provides a range of career counseling and competitive examination preparation sessions, including General Aptitude Tips & Tricks, Gate Scholarship, Resume Building and Techniques to Secure Internships.

The institution has Grievance Redressal Cell, Internal Complaints Committee/ Women's Grievance Redressal Cell and Anti ragging committee to handle timely redressal of students grievances including sexual harassment and ragging cases. Students are briefed about misconduct and necessary action during the induction program as well as at the time of commencement of the academic year. The Anti-Ragging Policies are posted on campus and hostel notice boards. CCTV cameras are installed throughout the campus to keep watch on any fraudulent activity and to monitor these activities. MMCOE grievance redressal portal is available for online submission of grievances.

Companies that regularly request campus placements at the college include TAK Co. Ltd, Persistent, Cognizant, Xoriant, IBG FINCON, Infosys, Ford Motor India, Wipro etc. Few of the students prefer for higher education.

Our students have excelled in the sports field at national and international levels. Various cultural activities are carried out for overall development of students. These activities include ENSEMBLE Annual Social Gathering, Shabdahuti, Viveksangam, Geeta Jivan Shashtra etc.

The Alumni Association of Marathwada MitraMandal's College of Engineering was registered on 5/1/2012 to develop a strong bond between the alumni, institution and the students. Alumni members contribute to a variety of activities, including technical seminars, webinars, guest lectures, mentors for events, and judges for various technical activities.

Governance, Leadership and Management

Institution has formulated several policies and strategies in line with vision and mission. It has a well-defined Standard operating procedure (SOP). It has formulated procedures for academic and administrative activities that are implemented on a regular basis.

Institution takes efforts to attain outcomes of set objectives through effective leadership. It builds participative culture in the institution and creates ownership amongst stakeholders. Quality education in the institution is the success of teamwork and continuous efforts taken by all the stakeholders. Institution has perspective plan that focuses on overall development of students and faculty members. Top management, Principal and faculty members are playing an important role in the design and implementation of quality policy and development plans. For decentralization of work, various committees are formed and for activities related to administration, academics, student affairs and R&D.

Institution follows best practices for quality improvement related to effective teaching-learning, industry interaction and R&D. Institution always focuses on professional development of teaching and non-teaching staff members in terms of technical and personal training. Self-appraisal system is implemented at the institution level that guides for an effective teaching-learning process to all the teachers. Institution regularly monitors effective and efficient use of available financial resources. Internal and external audits are carried out to verify actual expenses.

Quality Assurance at all levels is always on priority. Quality Assurance policies are designed, implemented and reviewed by the Internal Quality Assurance Cell (IQAC). Quality assurance focuses on smooth and effective functioning of academics and administrative activities.

Institutional Values and Best Practices

Marathwada Mitra Mandal Trust has its motto "Welfare of Masses". So, all the staff members of our institute work hard to fulfill its motto and always motivate our students to be responsible citizens and help society in technical and social aspects. The institute maintains a healthy working environment for staff and students so that there is no gender discrimination. This is revealed from the facts that many of our departments and Committees are headed by lady faculties and we have more than 50% lady staff in our institute. The institution believes in the equality of all cultures and traditions as evidence we celebrate a variety of national/international days and festivals on our campus. We have also taken initiatives for energy conservation, and water conservation by installing solar water heaters and a rainwater harvesting plant at our campus. Our institute has also conducted the green audit, environmental audit, and energy audit of our institute building and campus. The institution has maintained its best practices and every year focuses on getting it better and better. The institution

has many good practices out of which two best practices are 'Professional Skills exposure to students' and 'Industry Institute Interaction. The evidence of the success of these two best practices highlights the improvement in the activities carried out by the institute to maintain the practice as a best practice of our institute. The institute's distinctiveness can be witnessed by its center "Foundation for Make It Happen Center for Invention, Innovation & Incubation" (FMCIH), and financial support provided by the institute for various student activities and fee waiver schemes.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	MARATHWADA MITRA MANDALS COLLEGE OF ENGINEERING
Address	Marathwada Mitra Mandals College of Engineering, Survey No. 18, Plot No. 5/3, Near Vandevi Temple, Karvenagar, Pune 411052
City	Pune
State	Maharashtra
Pin	411052
Website	www.mmcoe.edu.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	V. N. Gohokar	020-25479811	9604673600	-	principal@mmcoe.edu.in
IQAC / CIQA coordinator	A. A. Agarkar	020-25479812	9822903916	-	iqac@mmcoe.edu.in

Status of the Institution	
Institution Status	Private and Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	
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State	University name	Document
Maharashtra	Savitribai Phule Pune University	View Document

Details of UGC recognition		
Under Section	Date	View Document
2f of UGC	03-03-2021	View Document
12B of UGC	03-03-2021	View Document

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)				
Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	View Document	02-06-2022	12	Extension for Approval is attached

Recognitions	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	No

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Marathwada Mitra Mandals College of Engineering, Survey No. 18, Plot No. 5/3, Near Vandevi Temple, Karvenagar, Pune 411052	Urban	3.98	20398

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Computer Engineering	48	Higher Secondary Certificate	English	120	120
UG	BE,Electronics And Telecommunication Engineering	48	Higher Secondary Certificate	English	120	120
UG	BE,Information Technology	48	Higher Secondary Certificate	English	60	60
UG	BE,Mechanical Engineering	48	Higher Secondary Certificate	English	120	110
UG	BE,Electrical Engineering	48	Higher Secondary Certificate	English	60	60
UG	BE,Artificial Intelligence And Data Science	48	Higher Secondary Certificate	English	60	59
PG	ME,Computer Engineering	24	Bachelor of Engineering	English	18	4
PG	MBA,Master In Business Administration	24	Bachelors Degree	English	60	60
Doctoral (Ph.D)	PhD or DPhil,Computer Engineering	36	Master of Engineering	English	8	3

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	15				24				120			
Recruited	5	2	0	7	6	12	0	18	45	75	0	120
Yet to Recruit	8				6				0			
Sanctioned by the Management/Society or Other Authorized Bodies	0				0				5			
Recruited	0	0	0	0	0	0	0	0	2	3	0	5
Yet to Recruit	0				0				0			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				27
Recruited	12	15	0	27
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				0
Recruited	0	0	0	0
Yet to Recruit				0

Technical Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				29
Recruited	22	7	0	29
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				0
Recruited	0	0	0	0
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	5	2	0	5	10	0	3	7	0	32
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	1	0	16	27	0	44
UG	0	0	0	0	0	0	0	0	0	0

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	1	1	0	4	4	0	10
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	24	40	0	64
UG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties					
Number of Visiting/Guest Faculty engaged with the college?	Male		Female		Total
	5	1	0	6	

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	1949	32	0	0	1981
	Female	692	12	0	0	704
	Others	0	0	0	0	0
PG	Male	83	0	0	0	83
	Female	59	0	0	0	59
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	1	0	0	0	1
	Female	2	0	0	0	2
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years					
Category		Year 1	Year 2	Year 3	Year 4
SC	Male	159	149	129	139
	Female	67	73	65	75
	Others	0	0	0	0
ST	Male	9	5	4	6
	Female	6	2	2	1
	Others	0	0	0	0
OBC	Male	395	396	372	363
	Female	156	154	168	163
	Others	0	0	0	0
General	Male	1002	970	884	914
	Female	360	391	411	487
	Others	0	0	0	0
Others	Male	432	373	298	220
	Female	154	161	126	114
	Others	0	0	0	0
Total		2740	2674	2459	2482

Institutional preparedness for NEP

<p>1. Multidisciplinary/interdisciplinary:</p>	<p>In view of NEP 2020, MMCOE has taken steps towards the multidisciplinary/interdisciplinary courses. Courses such as Humanity and social science, business communication skills are conducted for the students. Interdisciplinary projects to solve social problems are developed by the students as part of project based learning and final year projects. MMCOE has various student clubs at Institute level such as IEEE, ISTE, GDSC, IEL, ACM, Robocon, BAJA SAEINDIA, SUPRA SAEINDIA, SAE NIS Efficycle, and SAEINDIA Aeromodelling. Students of all departments including Electrical Engineering, Mechanical Engineering, Electronics and Telecommunication Engineering, Information</p>
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	<p>Technology, Computer Engineering and Artificial Intelligence & Data Science are actively participating in the activities. Students learn the interdisciplinary concepts and apply the knowledge to develop the interdisciplinary projects, as the part of student club activities. Students are participating in national and international level project competitions and won the prizes as well.</p>
2. Academic bank of credits (ABC):	<p>MMCOE is affiliated to Savitribai Phule Pune University (SPPU) and has the credit based system. Faculties are actively participating in the syllabus designing of their courses at University level. For assessment of the courses, faculties define the assessment tools and design the assignments, tests, quizzes for assessment of the students.</p>
3. Skill development:	<p>MMCOE has designed the skill development programs (SDP) in various domains. Each department conducts the Skill development programs in which students of all departments can participate and get training of their interest. “Make It Happen: Center for Invention, Innovation & Incubation” (FMCIII) make students deployable by providing high-end and Industry specific training designed and delivered by Tata Technologies Ltd. and other Industry partners (Joint Certification from TTL, STP, and MMM). MMCOE provides strong mentorship to those who want to invent new products, services, and processes and to those who want to set up their own companies. These are assisted by Tata Technologies Ltd. and Science & Technology Park experts.</p>
4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):	<p>MMCOE has “Vagyadnya Abhivyakti Gat”, the student club for various activities in Marathi, Hindi and other languages. Various programs are arranged through the club to inculcate Indian culture. ‘C Major’ is a music club of MMCOE, established in the year 2020. The sole vision of the club is to connect the divine through rhythms and ragas. The club has performed various activities on occasions, festivals throughout the year.</p>
5. Focus on Outcome based education (OBE):	<p>MMCOE has well defined Program Outcomes (PO), Program Specific Outcomes (PSO) and Program Education Objectives (PEO). The POs, PSOs and PEOs are satisfied through the teaching-learning process and the additional programs conducted at the Institute. All courses conducted at the Institute have</p>

	<p>well defined Course Outcomes (CO) which is mapped to POs and PSOs. Each department has a Program Assessment Committee (PAC). Before commencement of the semester, PAC analyzes the CO-PO mapping of the courses and defines the curriculum gaps. Various activities are planned and conducted to cover the curriculum gaps. During the semester, various assessment tools such as unit tests, assignment, quizzes, etc. are used to analyze the attainment of POs and PSOs. External assessment tools are also considered to compute the final attainment of POs and PSOs. Thus, the Institute follows a well-defined OBE system.</p>
6. Distance education/online education:	<p>The Institute was having classroom teaching in offline mode. During pandemic, the system has adopted the change from classroom teaching to blended learning. Google drive, Google classrooms are effectively used for course conduction and evaluation process. Each course contents are available on Google classroom including academic calendar, syllabus, PPTs and notes. The assessments of the courses are done through online assignments, quizzes. The MCQ tests are conducted using Moodle platform. Online sessions are conducted and recorded on Google meet. Various student activities are conducted online using Google meet.</p>

Institutional Initiatives for Electoral Literacy

1. Whether Electoral Literacy Club (ELC) has been set up in the College?	Yes, we have submitted an application to the Pune District Election Office's for the Electoral Literacy Club (ELC). They are assessing an institution's eligibility to set up an ELC.
2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs are representative in character?	Yes, the Institute has appointed faculty coordinator Mr. Santosh S. Raut and student coordinator Mr. Ujjwal K. Ahire to lead the Electoral Literacy Club.
3. What innovative programmes and initiatives undertaken by the ELCs? These may include voluntary contribution by the students in electoral processes-participation in voter registration of students and communities where they come from, assisting district election administration in conduct of	At Marathwada Mitra Mandal Engineering College Karvenagar, the students of Electoral Literacy Club (ELC) carried out the voter registration drive with great enthusiasm, in which students participated with great enthusiasm and 120 new voters were registered.

<p>poll, voter awareness campaigns, promotion of ethical voting, enhancing participation of the under privileged sections of society especially transgender, commercial sex workers, disabled persons, senior citizens, etc.</p>	
<p>4. Any socially relevant projects/initiatives taken by College in electoral related issues especially research projects, surveys, awareness drives, creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes, etc.</p>	<p>Yes. We are undertaking projects related to electoral process which will be beneficial for online voting.</p>
<p>5. Extent of students above 18 years who are yet to be enrolled as voters in the electoral roll and efforts by ELCs as well as efforts by the College to institutionalize mechanisms to register eligible students as voters.</p>	<p>There were 120 new voters registered at the college thanks to the efforts of the Electoral Literacy Club (ELC) students, who had the support of the majority of the students present.</p>

Extended Profile

1 Students

1.1

Number of students year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
2740	2674	2459	2482	2480

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

2 Teachers

2.1

Number of teaching staff / full time teachers during the last five years (Without repeat count):

Response: 322

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

2.2

Number of teaching staff / full time teachers year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
159	159	121	121	121

3 Institution

3.1

Expenditure excluding salary component year wise during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
561.62	245.70	425.27	657.54	339.25

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curricular Planning and Implementation

1.1.1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

Response:

The institution plans and monitors the activities for effective implementation of outcome-based education as per SPPU academic calendar.

Process for Effective Curriculum Planning:

- The institution is affiliated to SPPU and follows the curriculum prescribed by it.
- The teaching load is distributed among all faculty members as per norms considering their area of interest and experience before starting the semester.
- Academic planning starts with the preparation of an Institute and department calendars by referring to the calendar published by SPPU.
- Before the commencement of the semester, the academic preparation is done by the faculty members. It includes teaching plans, course files, lab manuals, question banks, and assignments.
- The prescribed curriculum is mapped with the AICTE model curriculum to find the gaps which are bridged up by delivering the contents beyond syllabus. The gaps are addressed by conducting virtual lab experiments, expert talks, industry visits, projects, internships etc.

Process for Effective Curriculum Delivery:

- Course wise Google classrooms are created for sharing the academic resources with the students. Institution provides well maintained class rooms with a smart board, LCD projector, and internet connectivity for effective curriculum delivery.
- NPTEL videos, contents from online courses and webinars are used by faculty members for effective curriculum delivery.
- Each department assigns a teacher guardian (mentor) for a batch of students. Performance and attendance of all students is regularly communicated to parents through mentors.
- Each department regularly evaluates students through a continuous assessment system using class tests, practical, orals, assignments, tutorials, surprise tests, quizzes, group discussions etc.

- Unit wise tests are conducted after completion of every unit for each course and corrective measures are taken to improve the score for weak learners
- During pandemic, online tests such as unit tests, mock tests, in-semester examinations, and preliminary examinations were conducted through Moodle platform where questions are shuffled to avoid malpractices.
- Subject teacher monitors the performance of each student and conducts remedial classes for improvement in slow learners.
- Institution has formed various institutional and departmental functional committees to focus on specific areas such as academic monitoring, time table, internal examinations, results, technical events etc.
- Academic audits of all courses are conducted thrice in a semester and reports are submitted to HODs, Dean Academics and Principal for information and necessary corrective action.
- ICT feedback and course end surveys are conducted for attainment of course outcomes and program outcomes and corrective actions are taken to fulfill it
- Institution encourages and sponsors faculty members to organize and attend faculty development programs for enriching their subject knowledge, to enhance interaction among peer group at university and industry level
- Institution has various collegiate clubs to keep pace with recent advancements in the specific domains.
- Library is kept open for all students after institution hours for reading books, journals and issuing books, 24 hours during examination period.
- Due to COVID-19 pandemic situation, lectures were conducted online using the Google meet platform. All the lectures were recorded and made available to students on the google drive for better understanding of the course.

File Description	Document
Provide Link for Additional information	View Document

1.2 Academic Flexibility

1.2.1 Number of Add on /Certificate/Value added programs offered during the last five years

Response: 79

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

1.2.2 Percentage of students enrolled in Certificate/ Add-on/Value added programs as against the total number of students during the last five years

Response: 48.07

1.2.2.1 Number of students enrolled in subject related Certificate/ Add-on/Value added programs year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
1772	1448	1346	1347	257

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

1.3 Curriculum Enrichment

1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Response:

The syllabus for different programs includes courses related to professional ethics, gender equality, human values for building best character in the students, environment, and sustainability into the curriculum for the benefit of society.

Professional Ethics:

- **‘Professional Ethics and Etiquettes’** is introduced in Computer Engineering to learn the importance of ethics for social and business etiquettes.
- **‘Ethical Practices for Engineers’** course in Electrical Engineering is added as an audit course to create health awareness, safety, and welfare of the public.
- **‘Principles of Human Resource Management’** is covered in Electronics and Telecommunication Engineering to improve personality development for better employment opportunities and human values.

- **Leadership and Personality Development**’ is introduced in Information Technology to develop interpersonal skills, effective goal-oriented leadership qualities with moral values.

Gender Issues:

- National Service Scheme (NSS) is regularly organizing expert lectures from renowned professionals to imbibe gender equality among all students.
- Boys and girls are participating in NSS activities such as residential camp to Manerwadi village, curricular and extracurricular activities.
- Equal representation of girls and boys in different committees like student council, sports, cultural, NSS etc.is maintained.

Human Values:

- *The National Cadet Corps (NCC)* unit is celebrating Navy Day, Air Force Day for creating awareness about National integrity and human values among students.
- NSS regularly organizes programs such as Swachta Abhiyan, street act plays, blood donations etc. for the benefit of society.
- During COVID-19 pandemic situation, the Institute hostel was a quarantine center and medical treatment was provided for affected people.
- During COVID-19 lockdowns, daily 200 to 250 meals were provided free of cost to needy people in the society.
- The course *‘Industrial Psychology and Organizational Behavior’* is added in Mechanical Engineering to study human values.

Environment and Sustainability:

- Mechanical Engineering students are learning *Energy Engineering, Solar and Wind Energy, Renewable Energy Technologies* which covers Environment and Sustainability.
- Computer Engineering students are selecting *‘Sustainable Energy Systems’* courses to create awareness about renewable energy sources and technologies.
- *‘Energy Resources, Economics and Environment’* course is introduced in Electronics and Telecommunication Engineering which focuses on different types of nonconventional energy sources for a sustainable environment.
- *‘Green and Unconventional Energy’* is added in Information Technology to understand the importance of energy and basic infrastructures for the economic development of the country.

- The e-waste is collected in the institution and properly dismantled.

Internships:

In the current curriculum, internships are made compulsory across all the programs to provide opportunities for students to get familiar with various modern tools, technologies in industries and to nurture professional and societal ethics to create awareness about social, economic, and administrative activities in industries.

Project Based Learning is added in the curriculum to inculcate independent and group learning wherein the students are developing theoretical, simulation and experimental models for different societal, environmental, and industrial applications.

File Description	Document
Provide Link for Additional information	View Document

1.3.2 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)

Response: 93.8

1.3.2.1 Number of students undertaking project work/field work / internships

Response: 2570

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

1.4 Feedback System

1.4.1 Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website (Yes or No)

Response: Yes

File Description	Document
Upload supporting document	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Enrolment percentage

Response: 81.33

2.1.1.1 Number of students admitted year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
498	431	510	560	514

2.1.1.2 Number of sanctioned seats year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
618	618	618	618	618

File Description

Document

Upload supporting document

[View Document](#)

Institutional data in the prescribed format

[View Document](#)

2.1.2 Percentage of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years (Exclusive of supernumerary seats)

Response: 69.54

2.1.2.1 Number of actual students admitted from the reserved categories year - wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
165	142	212	202	215

2.1.2.2 Number of seats earmarked for reserved category as per GOI/ State Govt rule year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
270	265	298	260	253

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

2.2 Student Teacher Ratio

2.2.1 Student – Full time Teacher Ratio (Data for the latest completed academic year)

Response: 17.23

2.3 Teaching- Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences using ICT tools

Response:

Marathwada MitraMandal's College of Engineering provides an effective platform for students to develop latest skills, gain knowledge, to learn ethics and values to shape their career in the correct manner. All the departments implement student centric activities which foster the creative abilities of the students and provide them a platform to develop their problem-solving skills and ensure participative learning. The institute organizes annual technical event, Dexterity in which students showcase their technical skills through various technical activities. Faculty members take efforts in making the learning activity more interactive by adopting the following student-centric methods.

Experiential Learning: Each department conducts various activities to enrich experiential learning. The institution motivates and facilitates the following experiential learning practices to enhance creativity and cognitive levels of the students –

1. Internship -Students get hands on training while working in the company.
2. Courses on various technologies with Coursera, NPTEL, Spoken tutorial, Eduskills, Microsoft etc.
3. Recommend project development on latest technologies by the students.
4. Industrial Visits to provide real-world exposure.
5. Participation in the events such as Hackathons, SUPRA, BAJA, Efficycle, Robocon etc. where students acquire experience of working on some real-life problems.

6. Virtual Lab. of IITB.

Participatory Learning: In this type of learning, students participate in various activities such as seminar, poster presentation, projects, workshops etc. Students are encouraged to participate in activities where they learn and apply their specialized technical/management skills, such as,

A. Curricular

- 1.Seminar Presentation – Students presents seminar on cutting edge technologies.
- 2.Paper Presentation/publication - Students present/publish papers based on their BE project work in conferences and journals.

B. Co-Curricular

1. Annual Technical Event (Dexterity) – Organized every year for all the students where technical events are conducted at national level. ?
2. Professional Bodies: The profession bodies like CSI, ISTE, IEEE, ACM, IETE, ASHRAE, ISHRAE, SAE INDIA etc. provides platform to take part in various activities.
3. Student Associations: The student associations like ACES, MESA, ITSA, BETA and EESA provides platform to learn management and leadership skills by organizing, coordinating various activities.
4. Student Clubs: The students clubs like Google Developers Club, IT Tech club, Zenith astronomy club, Rotaract club, Wagyajna AbhivyaktiGat conduct several events to develop leadership qualities and interpersonal skills.

C. Extra-Curricular

1. Annual Cultural Program (Ensemble) – Organized every year for all the students of the college to provide platform to showcase their talent in of singing, dance, drama etc.
2. Extension Activities - Through student associations, NSS, NCC students take part in extension activities to provide services to society.

Problem-solving methods: Students are involved in various problem problem-solving methods through,

1. Final year Project development
2. Mini Project Development
3. Project based learning
4. Programming/Quiz Competition

ICT tools like Google Classroom, Google Drive, Moodle etc. are used to create, communicate, circulate, store and manage information. College facilitates various ICT tools like interactive digital whiteboards, laptop/computers, LCD projectors, wired internet facility, Wifi for learning in the class room/laboratories.

File Description	Document
Provide Link for Additional information	View Document

2.4 Teacher Profile and Quality

2.4.1 Percentage of full-time teachers against sanctioned posts during the last five years

Response: 100

2.4.1.1 Number of Sanctioned posts / required positions for teaching staff/ full time teachers year wise during the last five years:

2021-22	2020-21	2019-20	2018-19	2017-18
159	159	121	121	121

File Description	Document
Upload supporting document	View Document

2.4.2 Percentage of full time teachers with NET/SET/SLET/ Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

Response: 17.91

2.4.2.1 Number of full time teachers with NET/SET/SLET/Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
40	26	22	19	15

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

2.5 Evaluation Process and Reforms

2.5.1 Mechanism of internal/ external assessment is transparent and the grievance redressal system is time- bound and efficient

Response:

Marathwada MitraMandal's College of Engineering have effective policies for conduction of internal/external examinations. There is complete transparency in the internal/external assessment. The grievances redressal mechanism is in-place and completely transparent.

The various policies of the internal/external examinations are as below.

Internal Assessment

- The internal assessment is done through unit test, assignment, Continuous Assessment System (CAS), project reviews, seminar review etc.
- Unit tests/Assignments are conducted unit wise and evaluation is done by the course coordinator. Questions are prepared as per Blooms Taxonomy Levels.
- Remedial action is taken for failed and absent students in the form of retest/assignment.
- Term-work evaluation is based on Continuous Assessment System(CAS) and mock OR/PR examination.
- Department internal examination coordinator maintains record of unit tests attendance & results summary sheet for all courses.
- The corrected answer papers of the students are distributed to them for the verification by the students and any grievance is redressed immediately.
- Performance of the students is assessed for every experiment which includes regularity & punctuality, understanding and preparation, participation in conduction of experiment and post experiment skills.
- The project, seminar evaluation is done by review committee along with the project guides.

External Assessment

- Theory/OR/PR examinations are conducted by the Savitribai Phule Pune University (SPPU). The marks allocated for each subject are as per the syllabus structure.
- SPPU prepares and shares examination schedules to affiliated colleges.
- Theory examination paper setting & evaluation is done through the subject chairman, paper setters

and examiners appointed by SPPU.

- University appoints subject wise external examiner in association with internal examiner for conduction OR/PR examination.

Redressal of grievances

- Grievances regarding internal assessment are resolved immediately by the respective course coordinators.
- The Institute appoints a senior supervisor for smooth conduction of theory examinations of SPPU.
- The grievances regarding SPPU examinations are resolved with the help of Chief Examination Officer (CEO).
- The grievances regarding SPPU examinations discussed with the Principal and forwarded to the SPPU examination section.
- The queries related to results, corrections in mark sheets, certificate related issued are forwarded to SPPU through the CEO.
- Students are allowed to apply for revaluation, recounting by paying necessary processing fee to university if they are not satisfied with the university evaluation.

File Description	Document
Provide Link for Additional information	View Document

2.6 Student Performance and Learning Outcomes

2.6.1 Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated

Response:

Marathwada MitraMandal's College of Engineering working with the objective of Outcome Based Education (OBE). As a part of compliance of OBE, Program Outcomes (POs), Program Specific Outcomes (PSOs), Course Outcomes (COs) are prepared. As given by NBA, the twelve engineering graduate attributes are referred as Program Outcomes (POs). Program Specific Outcomes (PSOs) are framed by the respective programs in-lined with vision and mission of the program. Course Outcomes (COs) are defined for every course by respective course coordinators.

Program Outcomes (POs): It represent the knowledge, skills and attitudes the students should have at the time of completion of their respective engineering program.

Course Outcomes (COs): It gives the resultant knowledge and skills the student acquires at the end of each course. It defines the cognitive processes a course provides. The course outcomes are defined as per the contents (units) of the each course. Generally four to six course outcomes are defined for each course. The course outcomes are provided by the SPPU along with the syllabus. As per the requirement course outcomes are modified and re-framed by the course coordinators. Course Outcomes are communicated to the students during the introduction class itself. During the discussion of the course, the outcomes of the course are also focused.

Program Specific Outcomes (PSOs): These are what the students should be able to achieve at the time of graduation. Each program have defined two to three program specific outcomes.

Dissemination

- The Vision, Mission, COs, POs and PSOs, PEOs are displayed on the Institute website (www.mmcoe.edu.in).
- It is also displayed at prominent locations of the campus for staff, students and public view.
- It is communicated to employers and alumni.
- It is communicated to parents during the Parent Teacher Meeting (PTM).
- It is attached in the course files, lab. manuals, journals, seminar reports and project reports etc.

CO-PO Evaluation

- The course coordinator prepares a matrix of CO-PO & CO-PSO mapping.
- The justification of CO-PO & CO-PSO mapping is also provided.
- The tools for attainment of CO are defined for each course.
- The attainment of CO, PO, PSO is calculated by using various tools.
- Tools for direct attainment
 - Internal Assessment Tools: Unit test, assignments, TW etc.
 - External Assessment Tools: Insem examination, Endsem examination, OR/PR examination.
- Indirect attainment of PO and PSO is also calculated based on various surveys and feedback.

File Description	Document
Provide Link for Additional information	View Document

2.6.2 Pass percentage of Students during last five years

Response: 95.97

2.6.2.1 Number of final year students who passed the university examination year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
715	737	691	616	601

2.6.2.2 Number of final year students who appeared for the university examination year-wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
750	744	695	672	640

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.44

File Description	Document
Upload database of all students on roll	View Document

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the last five years (INR in Lakhs)

Response: 31

3.1.1.1 Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
10.00	0	15.00	3.00	3.00

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

Response:

In any successful academic institution, one of the core building blocks is the research that happens at the institution. Recognizing the importance of the same, The institute has created an ecosystem for Research and Innovation by taking initiative for creation & dissemination of knowledge and establishing state of the art infrastructure. MMCOE believes in inculcating innovation among students by contributing to the nation's development which results in the creation of solutions for current techno-social problems.

The various initiatives taken by the institute for overall development of students and faculty include Innovation center, funding schemes, Professional society memberships, collaborations, Research experts and faculty mentors, Entrepreneurship cell, International collaboration cell and opportunities of different research projects in a variety of domains.

The various initiatives taken by the Institution for creation and transfer of knowledge are as follows:

- **Foundation for Make it Happen Center for Invention Innovation Incubation (FMCHH) :**

FMCIH is a State of the art Joint Collaboration of Tata Technologies, Science and Technology Park and Marathwada Mitra Mandal, Pune for promoting innovation & entrepreneurship activities. The center is spread over 12,000 sq feet with an investment of over Rs. 30 Crores out of which Rs. 16.5 Crores by Tata Technologies Ltd. for Manufacturing Facilities, High-end Softwares, Hardwares, Display Units etc.

MCIH has initiated various activities like incubation support, start-up initiatives & training programs. Provide customized co-working spaces to young entrepreneurs and incubate them.

Research And Development Cell:

One of the most important ventures of the institute, in which project funding schemes are offered to encourage faculty to undertake research projects, Intellectual property rights (IPR) and technology management- patents, copyrights, and design registration.

- **International Collaboration Cell (ICC):**

The cell was established with the purpose of establishing a channel of collaboration between the institute and various other entities such as international organizations, diverse universities in international territories etc. Through these activities students get exposed to international environments for higher studies, job opportunities and better prospects through seminars, International alumni meet ,etc.

- **Centre of Excellences :**

Every department has a Centre of Excellences for the faculty and students to encourage them to take up research & developmental activities by utilizing the existing resources. The institute also has created an exclusive Center of Excellence in collaboration with AICTE-ISTE-EduSkill.

- **Professional chapters, Technical Clubs and Student Association:**

Experiential learning, life-skills needed in today's globalized society are imparted through several means as internships, industry projects and professional chapters. Student's technical clubs / associations such as ITSA, BETA, MESA, EESA, ACES, AESA, ITech club, C.O.D.E., AEROCLUB provide a platform to students for developing their professional skills. Student chapters are IEEE, CSI, ISTE, ACM, IEI, GDSC, SAEINDIA, ISHRAE, ASHRAE.

- **Entrepreneurship cell :**

The ED cell strives to identify, nurture and support budding entrepreneurs by conducting workshops, expert sessions and success stories

- **Industry Collaborations:**

Armed with the will to do good and the technical know-hows, the students of the institution, guided by industry experts. Institution has a successful tie-up with CISCO and other for certificate courses, training, and internships.

File Description	Document
Provide Link for Additional information	View Document

3.2.2 Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years

Response: 152

3.2.2.1 Total number of workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
29	26	42	32	23

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

3.3 Research Publications and Awards

3.3.1 Number of research papers published per teacher in the Journals notified on UGC care list during the last five years

Response: 0.97

3.3.1.1 Number of research papers in the Journals notified on UGC CARE list year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
85	65	71	68	22

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

Response: 0.25

3.3.2.1 Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
18	19	10	21	11

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

3.4 Extension Activities

3.4.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.

Response:

As the great saying goes, "Alone we can do so little; together we can do so much". The power of social work is immense. The prospect of helping the needy, empowering them and instilling hope in them is something that is immeasurable. It is aptly encapsulated in the motto of our college, "Yethe Bahutanche Hit (Welfare of Masses)".

MMCOE has been keen in inculcating social awareness in students through curriculum and extension activities. MMCOE organizes blood donation camps, education awareness programmes, gender equality programs to create awareness of inhabitants.

The college actively runs National Service Scheme (NSS), National Cadet Corps (NCC) and Adhar club. Through these units and clubs, the college undertakes various extension activities in the neighborhood community, sensitizing students to social issues. During pandemic conditions, distribution of sanitizer, masks, tablets and grocery etc was carried out to help society's needy families. NSS volunteers address social issues which include cleanliness, tree plantation, water conservation, traffic and road safety etc. and they are also instrumental for celebration of traditional

and cultural activities. Students make a lot of decisions in the 11th and 12th grade class. From working towards their dream career to deciding the course of their life, the Adhar club helps students in selecting academic careers by conducting crash courses on python programming language, web development and conducting bifocal subject classes. World sparrow day is celebrated to raise awareness by hanging nests at different locations for survival of these species for maintaining natural harmony.

In today's rapidly advancing world, we see various problems pop up due to human interference in natural cycles. To combat one such problem at the local level, our institution, built on the ideals of sustainable development, is investing in the concept of Zero-Carbon footprints. For the demonstration and inculcation of safety values in the conduction of work, the institute has also helped Zilla Parishad primary school and a local temple by creating awareness of electrical safety and demonstrating the accurate and safe ways to establish the electric grids and wirings.

The active participation in all activities helps students in overall holistic development. It helps students in developing leadership qualities, ideal of social services, develop a passion and brotherhood towards community and build community relationship. It also helps in cultivating the hidden personality of students and creating awareness among students. It aids students to develop social, analytical, personal, manageable, leadership skills.

File Description	Document
Provide Link for Additional information	View Document

3.4.2 Awards and recognitions received for extension activities from government / government recognised bodies

Response:

It is imperative to give back to the community and make a positive impact on it. Our ultimate goal should be to contribute to the betterment of society in addition to doing well for ourselves. This can be accomplished through raising awareness, participating actively in government-organized drives, and many other things. Our college strives to examine all aspects of problems and provide solutions for them.

The faculty at our college understands the value of social work in addressing and resolving the problems that have recently become more widespread. During the Maharashtra government's Industry, Energy and Labor department's Electricity and Safety Week, one of our faculty members received recognition for his remarkable efforts in raising awareness.

During the pandemic, our college made significant efforts to raise awareness about COVID-19 by conducting seminars and hosting vaccination drives. The NSS expressed their appreciation for our work. Additionally, we volunteered for the Swaccha Wari, Swasth Wari, Nirmal Wari, Harit Wari, organized by Savitribai Phule Pune University, NSS & BSD. We received the PARYAVARN -SWACCHATA DOOT Appreciation Certificate for our service. Additionally, our college has also been recognized for our efforts in tree plantation. We participated in a plantation drive held in and

around the college campus for which we were given a certificate of appreciation by the NSS.

As an institution, we firmly believe in the adage "Safe blood saves lives." We hold a blood donation drive every year, and several of our faculty members and students have received recognition for their selfless blood donations. The blood drive will be held at the G. Gholap Memorial Blood Bank & Thalassemia Center location. We educate the pupils about blood donation and motivate them to sign up.

For our college, student fitness is of utmost importance. The Ministry of Youth Affairs and Sports has awarded us with a certificate of appreciation for successfully hosting FIT INDIA PRABHATPHERI-2020 for fitness campaign.

Our college has donated food and goods to needy schools and daycare centers as part of our social work on numerous occasions. The Mauli Care Center has expressed gratitude for our gifts made to them during the Pandemic.

Our students attended a brief value-added training on "Human Rights, the Indian Judiciary System, and the Constitution of India" offered by Tech Trainers and Tester, Pune, as part of SPPU NSS, three of our faculties, received certificates for their successful participation in the Olympiad/Workshop on Human Rights, the Indian Judiciary System, and the Indian Constitution.

Our college's co-curricular activities give our students a platform to voice their opinions on a range of societal topics. We held a competition at the Institute level for posters, poems, and quotes on the topic of "Infection, prevention, and control of novel coronavirus (COVID-19) basic precautions and use of personal protective equipment" in conjunction with the NSS.

One of the pupils, Jay Rawal, is a proud and active National Cadet Corps (NCC) member, and he participated in the parade that passed through New Delhi as part of the Republic Day processions.

File Description	Document
Provide Link for Additional information	View Document

3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., (including the programmes such as Swachh Bharat, AIDS awareness, Gender issues etc. and/or those organised in collaboration with industry, community and NGOs) during the last five years

Response: 92

3.4.3.1 Number of extension and outreach Programs conducted in collaboration with industry, community, and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
19	12	20	25	16

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

3.5 Collaboration

3.5.1 Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.

Response: 915

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 Availability of adequate infrastructure and physical facilities viz., classrooms, laboratories, ICT facilities, cultural activities, gymnasium, yoga centre etc. in the institution

Response:

An adequate infrastructure is provided at MMCOE as per the norms specified by AICTE, New Delhi and Savitribai Phule Pune University (SPPU) to provide the infrastructure to facilitate effective teaching and learning to the students of all the streams. Modernisation and updating of infrastructure resources is carried out from time to time even over and above the norms of AICTE and SPPU for effective teaching and learning. The Institution provides modern infrastructure like smart classrooms, updated laboratories, library with reading room, hostel, 24 x 7 internet facilities for students and staff in the campus. The Institution continuously upgrades infrastructural facilities according to changes in the syllabus provided by the Savitribai Phule Pune University (SPPU).

Classrooms are provided with LCD Projectors, furnitures. The tube-lights, fans etc are inspected regularly by attendants and department staff. The laboratories are well maintained and updated. The performance of equipment is monitored on a regular basis and the stock verification committee takes care of verification of instruments, its record in dead stock register and right-off of the equipment before the beginning of each semester of an academic year.

Library has a well maintained accession register. Cleanliness is maintained in the library. Damaged books are sent for re-binding. Digital library is also maintained.

The institute has a system administrator who takes care of maintenance of computer systems. As per the curriculum requirement, the upgradation of software is done regularly.

Cultural activities help students to build an all-rounder personality and improve their psychological as well as physical health. Overall development of students is enhanced through cultural activities which are carried out at college level through different clubs e.g. 'Vagyajna' club is for literature activities, Annual Magazine, 'Mandiyalee', Annual cultural festival, 'Ensemble' which provides platform for students to exhibit their skills in singing (solo/ group), acting (street play, skit) 'C Major' is music club.

Sports activities i.e. indoor and outdoor, gymnasium, yoga centre is also run in campus and a large number of students utilise these facilities on regular basis. A big number of students participate on zonal, university, state, National and international level and also earn accolades for the institute. The Institution has adequate facilities for cultural activities, sports as well as for indoor, outdoor games and yoga centre. Seminar hall is used as a yoga centre. Area provided for the Seminar hall is 132 sq. m. Director of physical education looks after all sports activities in the college.

The institution has provided enough space for outdoor games at a playground of 60 m x 50m. This ground is used for various games such as cricket, football, volleyball, kabaddi etc. Basketball ground area is 25 m x 13 m. For indoor games, 40 sq.m. and for gymnasium 30 sq.m space is provided.

File Description	Document
Provide Link for Additional information	View Document

4.1.2 Percentage of expenditure, excluding salary for infrastructure augmentation during last five years (INR in Lakhs)

Response: 38.41

4.1.2.1 Expenditure for infrastructure augmentation, excluding salary during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
262.78	56.95	52.88	394.00	89.78

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS), subscription to e-resources, amount spent on purchase of books, journals and per day usage of library

Response:

Library management system that is used in our library is 'SLIM-21' Library Management Software which consists of a cataloguing system, circulation system, acquisition system and serial control system. The library management system helps in tracking the subscription period and renewal dates of the serial.

The Online Public Access Catalog tool is provided to explore library resources. Various search options available are General Search wherein Users can search the library resources using Title, Author, Publication, Keywords and Classification number. Advanced Search facilitates search through various combinations such as Title, Author, Publication, Keywords, Classification number. Also Accession Search which is Quick search of books can be done by using accession numbers. History of users and library resources: It is the main concern for tracking the library resources. OPAC link is shared on the college website under facilities page. The details of the library management software are as follows : SLIM - 21, version 2.9.12. Nature of automation (fully or partially) : Fully Automated with bar code technology, Version : version 3.6 and Year of Automation : 2011

The contract for operational guidance and support is renewed every year. A good number of books are purchased every year as per the rec received from faculty and requirements from students.

Subscriptions of e-resources are renewed annually. The e-resources available with our Institute library are IEEE ASPP, J-Gate Science and Technology, J-Gate Science and humanities and DELNET.

The institute has also tie up with Jayakar Library (University of Pune) and ARAI Library.

The monthly usage report for e-resources is generated through the same software i.e. IEEE, Delnet, J-Gate usage report (in statistical and graphical form). There is a provision to get the usage reports monthly.

A register is maintained at the library entrance wherein students/ faculty sign at the time of entry and exit, too. This system ensures the security of books as well as the individual. Three classrooms are dedicated to the reading room in the close vicinity of the library.

File Description	Document
Provide Link for Additional information	View Document

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection

Response:

The components of IT infrastructure are made up of interdependent elements, and the two core groups of components are hardware and software. Hardware uses software—like an operating system—to work. And likewise, an operating system manages system resources and hardware. Operating systems also make connections between software applications and physical resources using networking components. Hardware components include Desktop computers, Servers, Data centers, Hubs, Routers, Switches, Facilities.

Institute has 808 computers on the campus. All computers have updated windows licensed copies of operating systems. In addition to regular use, computers used in laboratories, a separate dedicated lab called Thin Client lab with sixty computers and a Thin Client server is also available on campus. Sufficient number of computers is allocated to all departments with necessary software and hardware configuration.

The speed of data can also be manually adjusted as per requirement of a specific department for bifurcation of bandwidth and management.

Software components can include Operating systems, Web servers. Network are comprised of switches, routers, hubs and servers. All computers are well maintained and LAN connected through a dedicated leased line. WAN facility is also available at college as well as hostel premises free of cost for all. Wi-fi facility is provided to all departments by installing sufficient number of access points. All computers are connected to a broadband internet connection having speed (500 MBPS).Switches connect network devices on local area networks (LAN) like routers, servers and other switches. Routers allow devices on different LANs to communicate and move packets between networks. Hubs connect multiple networking devices to act as a single component. Server core hardware component needed for IT infrastructure is a server. These

are essentially computers that allow multiple users to access and share resources. Server room/data center house multiple servers in rooms called server room or data centers. A central server room is maintained to look after connectivity of all computers and cyber security related issues. Data are the core of most networks.

Licensed firewall in all the systems help to secure computers from any malware and restrict access to unwanted sites to students.

Sufficient number of Surveillance cameras throughout the campus help to maintain a safe and secure atmosphere in campus.

Face recognition system is used to record the daily attendance of all the staff members. ERP is used for admission process and will be utilised by teaching faculty for maintaining record of classes

File Description	Document
Provide Link for Additional information	View Document

4.3.2 Student – Computer ratio (Data for the latest completed academic year)

Response: 3.39

4.3.2.1 Number of computers available for students usage during the latest completed academic year:

Response: 808

File Description	Document
Upload supporting document	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years (INR in Lakhs)

Response: 41.14

4.4.1.1 Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year wise during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
199.32	122.43	233.8	200.26	161.31

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Percentage of students benefited by scholarships and freeships provided by the Government and Non-Government agencies during last five years

Response: 58.43

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government and Non-Government agencies year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
1663	1548	1424	1442	1422

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.1.2 Capacity building and skills enhancement initiatives taken by the institution include the following

1. Soft skills
2. Language and communication skills
3. Life skills (Yoga, physical fitness, health and hygiene)
4. ICT/computing skills

Response: A. All of the above

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.1.3 Percentage of students benefitted by guidance for competitive examinations and career counseling offered by the Institution during the last five years

Response: 41.36

5.1.3.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
1380	1469	850	949	660

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.1.4 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

1. Implementation of guidelines of statutory/regulatory bodies
2. Organisation wide awareness and undertakings on policies with zero tolerance
3. Mechanisms for submission of online/offline students' grievances
4. Timely redressal of the grievances through appropriate committees

Response: A. All of the above

File Description	Document
Upload supporting document	View Document

5.2 Student Progression

5.2.1 Percentage of placement of outgoing students and students progressing to higher education during the last five years

Response: 57.98

5.2.1.1 Number of outgoing students placed and / or progressed to higher education year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
465	449	420	306	308

5.2.1.2 Number of outgoing students year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
715	737	691	616	601

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.2.2 Percentage of students qualifying in state/national/ international level examinations during the last five years (eg: JAM/CLAT/GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 97

5.2.2.1 Number of students qualifying in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ Judicial Services/Public Prosecution services/All India Bar Exams/State government examinations) year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
54	10	14	9	10

5.2.2.2 Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government examinations) year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
55	10	14	9	12

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.3 Student Participation and Activities

5.3.1 Number of awards/medals for outstanding performance in sports/ cultural activities at University / state/ national / international level (award for a team event should be counted as one) during the last five years

Response: 50

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at

national/international level (award for a team event should be counted as one) year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
19	05	11	07	08

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.3.2 Average number of sports and cultural programs in which students of the Institution participated during last five years (organised by the institution/other institutions)

Response: 27

5.3.2.1 Number of sports and cultural programs in which students of the Institution participated year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
29	32	24	23	27

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.4 Alumni Engagement

5.4.1 There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

Response:

The Alumni Association of Marathwada Mitra Mandal's College of Engineering was registered on 5/1/2012 to develop a strong bond between the alumni, institution and the students.

The formation of an alumni association contributes to the development and strengthening of long-term relationships with our alumni, the Institute, and current students. The alumni association will promote participation in campus activities and utilise alumni members knowledge and expertise to assist current

students. Alumni members contribute to a variety of activities, including technical seminars, webinars, guest lectures, mentors for events, and judges for various technical activities.

Every year, the college hosts an Alumni Annual Meeting to encourage interaction among management, faculty members, and alumni. During the meeting, department coordinators inquired about recent industry trends as well as solicited feedback on the scope of improvements in infrastructure, research labs, sponsored projects, and internships.

The alumni association's governing body members have initiated a scholarship programme for students from the weaker sections. The Alumni Association is awarding scholarships worth Rs. 5000 to ten students from various branches. One of the alumni from Electronics and Telecommunication Engineering is distributing Rs. 10,000 to needy students from the same department.

File Description	Document
Provide Link for Additional information	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance and leadership is in accordance with vision and mission of the institution and it is visible in various institutional practices such as decentralization and participation in the institutional governance

Response:

VISION OF THE INSTITUTION

To aspire for the welfare of society through excellence in science and technology.

MISSION OF THE INSTITUTION

Our Mission is to

- **Mould young talent for higher endeavours.**
- **Meet the challenges of globalization.**
- **Commit for social progress with values and ethics.**
- **Orient faculty and students for research and development.**
- **Emphasize excellence in all disciplines.**

The vision and Mission of the institution is disseminated in various places such as all the departments and in Principal's office

For fulfillment of stated vision and mission various committees are formed which are headed by deans . Decentralization of work through these committees ensures effective execution of all the activities. Internal Quality Assurance Cell (IQAC) provides guidelines and maintains quality in all aspects of these activities.

The leading team of the institution consists of inspired individuals who are very proactive and energetic for the overall development of the institution.

- **The Governing Body of the Institute has members nominated by trust, nominees from affiliating university, industry, education, and nominees from State Government. The body also includes faculty members of the institution and the Principal. The Governing Body gives directions to the institute and provides approvals to the institution related policies and activities. The frequency of Governing Body meetings is twice a year.**

- **Institutional principles are reflected in its Vision, Mission, and Quality Policy. Institution dynamically anticipates organizational changes needed by tracking the expectations of stakeholders for their overall growth. It follows a structured approach for ensuring that changes are smoothly and successfully implemented. Management and board of trustees is a blend of eminent industrialists and academicians**
- **The College Development Committee (CDC) provides guidelines for effective implementation of academic and administrative activities**
- **Planning and Review Committee (PRC) comprises HoDs , Deans and IQAC The function of this committee is to take review of conducted activities.The committee is given decision making authority.**
- **The major decisions are taken in a participative manner. Faculty members are involved in execution of planned activities and assigned academic and administrative responsibilities**
- **Academic, Co-curricular and Extracurricular activities are conducted for student’s overall growth and excellence in all disciplines. This helps students to be globally competent and creates social awareness amongst them. The decentralized work culture is encouraged for well planned and smooth functioning of all the activities at different levels in the institution**

For grooming research culture, each department has a center of excellence in respective domains.

The Institution has a Corporate Relation Division (CRD) which provides students training in a structured form that helps to grab opportunities related to domestic as well as overseas in and off campus placements, higher education, entrepreneurship ,private and Government sector.

File Description	Document
Provide Link for Additional information	View Document

6.2 Strategy Development and Deployment

6.2.1 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, deployment of institutional Strategic/ perspective/development plan etc

Response:

Institution focuses on providing quality education for the welfare of students. Institution has formulated different policies related to academics and administration and has a well defined strategic plan. Continuous review of the policies is taken by the members of the Governing body and College Development Committee and Planning and Review committee (PRC). Regular meetings of these committees are conducted to decide the strategic action plan for smooth functioning and the same are communicated to the staff members of the institution. Review meetings set objectives and

action plans for academic and administrative activities as well as financial needs and its utilization.

Decentralization, participative management and decision making is followed through IQAC, College Development Committee and the Principal.

Policies formulated by the institution incorporate strategic planning and execution strategy of the same. It includes different policies such as Academic, HR, R & D, faculty recruitment and training. HR policy is well defined for smooth execution of the administrative activities. Quality policy of the institution is deployed and reviewed through continual feedback from all stakeholders.

Management provides continuous support for timely infrastructure enhancement for the benefit of stakeholders. Institution has a Center of Excellence (CoE) in all the disciplines. This helps students and faculties for their growth in research work.

Training needs analysis of faculty and staff is carried out. Based on this analysis, Quality improvement strategies are implemented by imparting training to faculty and staff. Various activities are taken for Teaching and Learning, R & D, community engagement and human resource management.

Institution has established IQAC (Internal Quality Assurance Cell) to ensure quality and higher standards. IQAC is constituted by a team of representatives from Management, Local Societies, Industry, Faculty and Alumni. IQAC monitors all the activities and suggests quality improvement related to academics and administration. Institution follows a strategic approach for development and involves all stakeholders in deployment.

Academic planner and calendar are prepared at the start of every semester which includes a schedule of various activities.

A Programme Assessment Committee (PAC) and Department Advisory Board (DAB) is there in every department. The PAC and DAB periodically monitors department activities and suggest improvements to the program. The meetings of PAC and DAB are conducted once in a semester and once in a year respectively.

The department of Computer Engineering has a PG and PhD research center. Faculty members are motivated to do research work.

Students are also involved in various community engagement activities under NSS, NCC and student associations.

Institution believes in faculty retention and faculty upgradation. All the recruitments are done on the basis of qualification and rules as per AICTE norms.

Institution follows the practice of industry institution interaction. With this, students are benefited in industrial training and internships, invited talks, job opportunities etc.

The institution has signed a MoU with EduSkills, to promote skill development and training courses

for students and the faculty members.

File Description	Document
Provide Link for Additional information	View Document

6.2.2 Implementation of e-governance in areas of operation

1. Administration
2. Finance and Accounts
3. Student Admission and Support
4. Examination

Response: A. All of the above

File Description	Document
Upload supporting document	View Document

6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures and Performance Appraisal System for teaching and non-teaching staff

Response:

The institution makes sincere efforts to enhance the professional development of teaching and non-teaching staff members. Following welfare schemes are available for teaching and non-teaching staff:

- ? **Contributory provident fund and gratuity**
- ? **Medical leave and Earned Leave (applicable to eligible staff)**
- ? **Maternity leave (applicable to eligible staff)**
- ? **Appreciation on acquiring higher qualification**
- ? **Advance payment to staff member to meet their emergencies**
- ? **Birthday celebration of staff members**
- ? **Gymnasium facility and motivational sessions**
- ? **COVID Kawach policy during COVID-19 pandemic period**

? **Technical training sessions through FMCIII and Eduskills**

? **Group accident guard policy**

- **Provision of uniform , blazers and sweatshirt for teaching and non teaching members**

MMM's Sevakanchi Patsanstha Ltd.(Employees Credit Co-operative Society) The objective of this co-operative society is to provide helping hands to the needy employees of the Institution. It also encourages employees by felicitating them and their families for noteworthy achievements. Facilities provided by co-operative society:

? **Scholarships for education of employee's children**

? **Monetary help for medical purposes**

? **Group insurance for teaching and non teaching staff**

? **Loan facility up to Rs. 5,50,000/- within a day.**

? **In medical emergency cases or for higher education of children, loan of Rs. 75,000/- without interest is made available within a couple of hours.**

? **For laptop purchase, loan up to Rs 27,000/- without interest**

Co-operative society works positively for the welfare of the employees and their family members.

Appraisal system for teaching staff

The institution has adopted a performance-based appraisal system for teaching staff based on Revised 360° feedback and appraisal system of AICTE dated 1st March, 2019 known as PBAS. Main components of the appraisal system for overall 100 points is divided further into seven components as given under:

- **Teaching Learning process - 25 points**
- **Students' Feedback - 25 points**
- **Departmental activities - 20 points**
- **Institute level activities -10 points**
- **Professional Development- 5 points**
- **Contribution to society - 5 points**
- **ACR (Annual Confidential Report) - 10 points**

Appraisal system for non-teaching staff

The institution has adopted an appraisal system for non-teaching staff, similar to the performance based appraisal for teaching staff with modifications as per their work profile.

- **Students' Feedback -15 points**
- **Departmental activities - 25 points**
- **Feedback by Lab Incharge -10 points**
- **Feedback by the Subject teacher for assigned lab - 10 points**
- **Institute level activities -25 points**
- **Contribution to society - 5 points**
- **ACR (Annual Confidential Report) - 10 points**

Revised appraisal system for non-teaching staff

- **Feedback by Lab Incharge and Subject teacher for assigned lab -30 points**
- **Department and Institute level work assessment - 40 points**
- **Contribution to society -10 points**
- **ACR (Annual Confidential Report) - 20 points**
- **Points related to submission of Self Appraisal form**
- **The teaching and non-teaching staff are made aware of the above-mentioned points before appraisal**
- **At the end of the year, the staff member submits a self-appraisal form as per the schedule**
- **The self-appraisal form is submitted by all staff members who have completed a minimum one semester at MMCOE**
- **Assessment is done by respective Heads with further verification by Principal as mentioned above**
- **Staff members are counseled for improvement if the score is below 60.**

File Description	Document
Provide Link for Additional information	View Document

6.3.2 Percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

Response: 14.68

6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
8	9	14	39	30

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

6.3.3 Percentage of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during the last five years

Response: 33.57

6.3.3.1 Total number of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
61	56	80	64	67

6.3.3.2 Number of non-teaching staff year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
50	50	57	72	67

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution has strategies for mobilization and optimal utilization of resources and funds from various sources (government/ nongovernment organizations) and it conducts financial audits regularly (internal and external)

Response:

The major source of income for the institution is tuition and development fees from the students. The other sources of funds are schemes and grants received from university as well as government and non-government organizations. These can be utilized for purchases of sports equipment, conducting workshops-seminars & conferences, academic and administrative activities etc.

Institution has following procedure for utilization of financial resources effectively:

- **Institution has a well-defined budgeting system which includes regular expenses like staff payments and benefits, academic expenses, maintenance and expenses on other facilities like audit fees, library, hostel, canteen, sports, gym etc.**
- **Departmental annual budget is formulated as per revised syllabus requirements, planned co-curricular activities, research work etc. before the start of the financial year. Principal reviews the budget of all departments and forwards it to the management**
- **The management takes a review and allocates sufficient finance to carry out activities in the institution**
- **For purchase, a minimum of three quotations are called from vendors. Comparative statement is prepared with cost, quality and specification details. Purchase order is placed with the due consent of the management after negotiation meeting by purchase committee**
- **There is a systematic mechanism for release of payments for day to day expenses like payment for consumables, various bodies and salary**
- **Provision is also made for emergency expenditure as per the requirement**
- **The institution conducts internal and external financial audit as a regular practice every year with well-defined procedure with due permission and guidelines received by the management**
- **Institutional budget is prepared well in advance for the forthcoming financial year. This budget is allocated under different heads like lab equipment, consumables, furniture and**

fixtures, research and development, general / miscellaneous / any other items

- **Internal audit is an on-going continuous process in addition to the external audit to verify and certify the entire income and expenditure of the institution each year.**
- **The Accounting and Auditing Committee looks after the internal audit to verify that actual expenses are not exceeded the budgeted amount and it is presented to the certified Chartered Accountant.**

Institution carried out an internal audit by internal auditor Munde Shaha & Co. An external audit is also carried out in every financial year by Krishna Rawas and Associates.

File Description	Document
Provide Link for Additional information	View Document

6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes. It reviews teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals and records the incremental improvement in various activities

Response:

IQAC defines the quality benchmarks and parameters for various academic and administrative activities. It also promotes measures for quality enhancement through best practices.

The SWOC analysis of the Institute is carried out based on important parameters like admissions, placement, research, best practices and results of the institute. The benchmarking is done taking into consideration the overview of education, technology and regulatory scenarios. The focus is on enhancing the teaching-learning process and creating a learner-centric environment using various ICT tools like google classroom, moodle. The up-skilling of the faculty members is done through various skill development programs, training the trainer, certification courses, faculty development programs, workshops, seminars, conferences, and faculty orientation programs.

In order to enhance the students' attitude and participation, an exposure through experiential learning, participative learning and problem solving methodologies is given. The activities include internships, courses on various technologies via NPTEL, coursera, spoken tutorials, eduskills' courses, microsoft courses, virtual lab, flipped class/self learning, case studies, collaborative learning, role play and demonstration. Participative learning includes Hackathons, curricular activities, and extracurricular activities. Problem solving methodologies include final year project development, mini-project development, project based learning and programming/quiz competition.

The institute has a well defined teaching learning policy. Before the commencement of an academic year, an institute planner and accordingly the department academic calendar is prepared. The course file is prepared for each course and the contents are planned with the help of course plan and corresponding session plans. The internal and external tools of assessment are defined with the help of rubrics for theory, practical, seminar, project, PBL and audit courses. To ensure the quality of teaching learning process three academic audits are carried out for each course in a semester.

Central monitoring of various activities is carried out to maintain a well disciplined administration. Student data collection is done with the help of ERP. A yearly performance appraisal of staff is done at the end of one academic year. An academic and administrative audit (AAA) is conducted once in a year.

MMCOE follows “GO GREEN”, therefore, energy audit and Green audit is carried out.

The institute has a strong alumni connection. The alumni are involved in the teaching-learning process in the form of expert talks, contributions in PAC, DAB and project evaluations. Alumni also extend their contribution through placements and internships. Alumni meet is arranged for each year and feedbacks given by alumni are analyzed and actions are taken.

Stakeholders play an important role in the growth of the institute. The development activities are regularly shared with the stakeholders and the feedback is collected from time to time. Feedbacks include ICT feedback, expert feedback, industrial visit feedback, course end survey, and student satisfaction survey, graduate exit survey, alumni feedback, employer survey and parents feedback. Feedbacks are analyzed and the actions are taken.

IQAC conducts activities like workshop on strategic planning, workshop on team building, One day program for faculty induction, Academic and Administrative Audit, training need analysis for Non-teaching staff, training programs under EduSkills and training programs under FMCIII.

File Description	Document
Provide Link for Additional information	View Document

6.5.2 Quality assurance initiatives of the institution include:

1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements
2. Collaborative quality initiatives with other institution(s)/ membership of international networks
3. Participation in NIRF
4. any other quality audit/accreditation recognized by state, national or international agencies such as NAAC, NBA, ISO Certification etc

Response: A. All of the above

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Measures initiated by the Institution for the promotion of gender equity and Institutional initiatives to celebrate / organize national and international commemorative days, events and festivals during the last five years

Response:

The institute regularly puts efforts to maintain mental and physical well-being of its students, employees and other stakeholders. The institute maintains healthy working environment for staff and students so that there is no gender discrimination. Since foundation, the institute follows its motto “Welfare of Masses” and strives hard to maintain gender equality. This is revealed from the facts that many of our departments and committees are headed by lady faculties and we have more than 50% ladies staff in our institute. Students’ council has nearly 50% girl student representation. Also, the annual gathering ‘ENSEMBLE’ and a national level technical event ‘DEXTERITY’ many times are headed by girl student.

Gender sensitivity which is an inherent value in the cultural ethos of the institute is reflected from the following measures as well:

1. Safety and Security

- The discipline committee, anti - ragging committee, women's grievance redressal cell, security staff includes both male and female members.
- Separate hostel facility for boys and girls with male and female rectors.

1. Counseling

- The counselor is appointed by the institute to address the issues of male and female students.
- The counseling sessions on HIV-AIDS awareness, menstrual cycle, organ donation, yoga etc. are organized regularly.

1. Common Rooms - The institute has separate common room for boys’ and girls’ with required facilities.

The NSS, NCC, Sports and other co-curricular and extracurricular units of institute provide equal chance to all girl students to participate in all the activities conducted under these units.

The institute committedly celebrates many national and international days, events and festivals in

our campus to create awareness of patriotism, health & fitness and social responsibilities among all the students and staff. The Independence Day and Republic Day is celebrated every year to make proud and motivate all the students and staff for the development of our nation. Also, our institute commemorates a number of other national and international days so that students can learn about significant figures in our country's political, social, cultural, and scientific history. The Dean Student affairs, NSS, NCC, sports and cultural coordinators along with student representatives plan and execute the celebration of various events.

Festivals play a big role in Indian culture, serving as a platform for the expression of our beliefs and feelings. The institute believes in equality of all cultures and traditions as it is evident from the fact that students belonging to different caste, religion, regions are studying without any discrimination. Our motto "Welfare of Masses" signifies our commitment towards striving for the betterment and welfare of society. Shivaji Maharaj jayanti, Ganesh festival, Diwali and Khandenavmi are one of the major festival celebrations in the campus.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

7.1.2 The Institution has facilities and initiatives for

1. Alternate sources of energy and energy conservation measures
2. Management of the various types of degradable and nondegradable waste
3. Water conservation
4. Green campus initiatives
5. Disabled-friendly, barrier free environment

Response: A. 4 or All of the above

File Description	Document
Upload supporting document	View Document

7.1.3 Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit
2. Energy audit
3. Clean and green campus initiatives
4. Beyond the campus environmental promotion activities

Response: A. All of the above

File Description	Document
Upload supporting document	View Document

7.1.4 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic diversity and Sensitization of students and employees to the constitutional obligations: values, rights, duties and responsibilities of citizens (Within 500 words)

Response:

The institute organizes various programs under NSS, NCC, sports and cultural committees to educate students and staff about the constitutional obligation of citizens' values, rights, duties, and responsibilities. Along with flag hoisting celebrations on Republic and Independence Day, various activities as guest lecture on Constitution of India, Exam of Olympiad on Human Rights, Indian Judiciary System & the constitution of India and guest lecture for guidance on competitive exams are conducted. The institute participated in "NSS Wari Mahasankalpa Abhiyaan- Guinness World Record " organized by the NSS unit of SPPU and successfully distributed 16731 Neem saplings. Similarly, every year NSS unit of MMCOE solely organizes tree plantation events at nearby hills, forts and on campus also. During the pandemic period when college sessions were in online mode, knowing the importance of tree plantation, every staff and student was appealed to plant at least one plant near their home.

The Ganpati festival, Wari and Shiv Jayanti are celebrated enthusiastically in the Institution to introduce cultural rituals in the young generation. Sports week, treks, International Yoga Day, guest lecture on Disaster management, NSS winter camp, blood donation camp, swachata abhiyaan, NSS day, and awareness programs on HIV – AIDS & organ donation are arranged to realize the duties and responsibilities of citizens for building a healthy nation. On the day of “Ganpati Visarjan” and “Pandharpur Vari” our NSS students work as POLICE MITRA to help Traffic Police Department to control traffic in various areas of Pune. We also take part in events like road safety week, anti-drink and drive.

As responsible citizen staff and students of our institution have taken initiatives to help during natural disasters like flood or pandemic which include grocery and clothes Donation, Sanitizer distribution, face mask distribution and family survey program. All our staff donated One Day Salary in the month of September 2019 to Chief Minister Relief Fund Mumbai for the relief of people in Kolhapur, Sangli, Satara & Konkan Region due to floods. We also donated our one day salary in the month of August 2018 for Kerala Flood relief fund through Chief Minister Relief Fund Mumbai.

Every year, institute organizes ENSEMBLE (annual social gathering) and DEXTERITY (national level technical event) to encourage and help students for their overall development. Institute has its own code of conduct which the students need to follow from the day he/she is admitted to our institute. The document of code of conduct is available on our college website and it is thoroughly explained to all the students during the induction program.

The institute encourages our students to serve our nation by arranging expert sessions of eminent

personalities from various fields, such as defense, civil services, medical, entrepreneurs, and engineering.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

7.2 Best Practices

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual

Response:

Best Practice – I

1. Title of the Practice – ‘Professional skills exposure to students’

2. Objectives

To enhance the professional skills of students, to improve their employability and organize training programs, to motivate students for higher education and entrepreneurship so as to empower them with current industry needs and job requirements. This further enhances the knowledge which enables learners to think in terms of problem solving, making inferences, and drawing conclusions.

3. The Context

A various functional committees and student chapters are formed at the institute level, in which the functional head and a faculty representative from each department are actively working to achieve the objectives. Students organize/participate in several national/international events

4. The Practice

The efforts and initiatives undertaken are as follows:

- **The institute organizes project competitions, industrial visits, workshops, expert lectures, and skill development courses.**

- **Students enthusiastically participate/publish their ideas in National/International conferences and journals.**
- **Active memberships of professional bodies like ACM, IEEE, CSI, ISTE, SAEINDIA, ISHRAE, ASHRAE, IEL, QCFI, IAENG, ISRD etc. and participate in the national/international level events organized by these professional bodies.**
- **The teams of various student activities are formed by conducting aptitude/technical tests and interviews which participate in the national/international events like BAJA SAE International, BAJA SAEINDIA, SUPRA SAEINDIA, Formula Bharat, SAEINDIA NIS EffiCycle, Robocon, AeroDesign and Hackathon.**
- **The institute has formed various student associations such as ITSA, MESA, ACES, BETA, EESA and GDSC which includes a faculty and student members which plan and organize technical and non – technical (Social and Cultural) activities.**

5. Evidence of success

- **BAJA SAEINDIA competition - ‘Team Abhedya’ received first prize in Engineering Design worth Rs. 60,000/- in 2018, AIR 12th 2019, AIR 4th with 2nd Prize of Rs.40000/- in Suspension and Traction event in 2020, AIR 18th and 1st prize in Go Green Event worth Rs. 20000/-, in 2022.**
- **SAEINDIA NIS EffiCycle competition - Team ‘ACHILLES’ secured AIR 6th and prizes worth Rs. 60,000/- in 2019, AIR 4th in 2020, AIR 1st and Best CAE award in 2021.**
- **‘Team Rudra’ of Robocon got 100 out of 100 points in the first round of Robocon Competition 2020.**
- **Formula Student competition - ‘Team Abhedya Racers’ secured AIR 24th in 2018, AIR 14th with a runner up award in ACCELERATION worth Rs. 20,000/- in 2019 and AIR 08th in Formula Bharat 2022.**
- **Four students of IT Department have received best research paper award in ICETEMS-2021 conference.**
- **Mr. Vedant Joshi (Comp) selected as a ‘Ambassador for IEEE Xtreme 15.0’ at IEEE Pune section.**
- **ISTE student Chapter received "Best Student Chapter in Maharashtra and Goa Section award" in 2018-19.**
- **Students of Mechanical Department have Published Patent on “Design and Development of Liquid Food dispenser Assembly”.**
- **Madhura Barshikar, (E&TC) ranked among the top 7% at the International Astronomy and Astrophysics Competition conducted on 27/07/2020.**

6. Problems Encountered and Resources required

- **To maintain a balance between academic activities and technical event activities.**
- **The space available for on road testing of ATV and formula vehicles is very limited.**

Best Practice – II

1. Title of the Practice: ‘Industry Institute Interaction’

2. Objectives

- **To establish and maintain relationships with the corporate world through MoUs, Center of Excellence, sponsored projects, industrial visits, internships and in-plant training programs.**
- **To provide a good platform for placement and sponsorship for projects & various technical events, etc.**

3. The Context

The institution has taken the initiative to interact with various industries through the ‘Industry Institute Interaction Committee’ that maintains professional relations with industries. It opens up a fresh avenue for enthusiastic young minds and faculty members to develop skills across diverse areas, including managerial skills, social responsibilities and Industry liaison.

4. The Practice

The efforts and initiatives undertaken are as follows:

- **The Institute has established the ‘Foundation for Make It Happen Center for Invention, Innovation and Incubation (FMCIH)’. The FMCIH is established in collaboration with Tata Technologies Ltd. and Science & Technology Park which enables domain exploration through working principles, application and hands-on experience to make students**

deployable. It facilitates training, manufacturing, R&D activities, incubation center and many more.

- Interactive sessions by Industry experts are arranged through ‘Department Advisory Board’ meetings, skill development programs, faculty development programs, personality development programs, career counseling, technical competitions, project sponsorships, industry training programs, industrial visits, add on courses.
- The Institute has International linkages by availing membership of professional bodies and MoUs with various Industries.

5. Evidence of Success

- Mechanical department conducted FDP on “Zero Based Costing in Mechanical Engineering” from 21/02/2022 to 23/02/2022, Eight days workshop on “Applied Psychrometry & Heat Load Calculation” by Mr. Ranade.
- IT department conducted a demonstration session on Cloud Platform on 18/03/2021, One Week Workshop on ‘C-Programming’ on 14/10/2020 to 21/10/2020
- Department of E&TC organized regional finals of “e-Yantra Ideas Competition” (eYIC) & Industry Conclave in association with IIT Bombay on 28th & 29th February 2020.
- Department of Electrical Engineering has conducted an International webinar on ‘Entrepreneurship Development’ on 28/08/2020.
- Department of Computer Engineering has organized four day workshop on “Python and Data Science” in association with ATS, from 28/08/2019 to 31/08/2019.
- Orientation seminar regarding “Study Go Work Japan” was organized for all interested students on 09/09/2021 and 18/06/2021 in association with Hirameki Solutions.
- Mr. Kartik Shriniketan, a TE Computer Engineering student and team, has developed and deployed a project titled “Electricity: Bill Generator & Unit Calculator” in association with Animational.com.
- Ms. Sharanya Nair (COMP) placed in "DIVA CORPORATION" Tokyo, Japan.
- Department of Computer Engineering organized one week Short Term Training program (STTP) on “Data Analytics using Machine Learning for High Performance Computing” from 03/06/2019 to 07/06/2019.
- Following Table shows the total number of sponsored projects, MoU and Guest/Expert lectures and Industrial visits conducted in the last five years.

Sponsored BE Projects	MoUs Signed	Guest/Expert Lectures	Industrial Visits
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		Conducted	
272	68	357	102

6. Problems Encountered –

- Due to low packages in core industries students get diverted to the software field.
- Sponsored projects for final year students, industrial visits, and internships were challenging during corona pandemic period.
- It is a challenge to obtain paid internships in good industries.

File Description	Document
Best practices as hosted on the Institutional website	View Document
Any other relevant information	View Document

7.3 Institutional Distinctiveness

7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

Response:

Institute Distinctiveness:

‘Foundation for Make it Happen Center for Invention, Innovation and Incubation (FMCIII)’

The vision of the institute is to aspire for the welfare of society through excellence in science and technology, the institution consistently inspires students and provides a platform for technical skill development, multidisciplinary project development, entrepreneurship development, and ethical and human value development. In line with the motto of Marathwada Mitramandal Trust "Yethe Bahutanche Hit" (Welfare of Masses), the Marathwada Mitramandal's College of Engineering has taken a bold step forward in establishing the 'Foundation for Make It happen Center for Invention, Innovation and Incubation (FMCIII)' in 2018 by partnering with Tata Technologies Ltd. (TTL), a leading global engineering service provider and Science & Technology Park, Pune (STP), a leading technology business incubator. It is a Section 8 non-profit company registered under MCA with 80G and 12A certifications. It is located and functions on the campus of Marathwada Mitramandal's College of Engineering, Karvenagar, Pune. Dr. K. R. Patil, Professor in Mechanical Engineering Department is coordinator of FMCIII. The various activities of FMCIII are coordinated by the team members of institute.

In-line with Atmanirbhar Bharat (becoming self-reliant), there are enormous opportunities of indigenization and therefore start-ups are going to play a vital role. The FMCIII provides an ecosystem for enhancing skills among employable persons and identifying, promoting and supporting start-ups and budding entrepreneurs to successfully set up new enterprises. The center is equipped with all start-up related facilities and services to enable entrepreneurs to fulfill their objectives. The center is equipped with all the required facilities and support from mentors. This helps in establishing new start-ups with a hands-on approach and making people ready with the latest technologies required for Industry 4.0 and others.

Salient Features of FMCIII:

- **The center is spread over 12,000 sq feet with an investment of over Rs. 30 Crores out of which Rs. 16.5 Crores in kind is donated by Tata Technologies Ltd. for manufacturing facilities, high-end softwares, Hardwares, display units etc.**
- **Provides research facilities for industry and individuals.**
- **Makes students deployable by providing high-end & industry specific trainings designed and delivered by Tata Technologies Ltd. and other industry partners (Joint Certification from TTL, STP and MMM).**
- **Plug and play start-up incubator with overall support (including seed funding) with a capacity to incubate an average of 50+ industries at a time.**
- **Provides strong mentorship to those who want to invent new products, services and processes and to those who want to set up their own companies. These are assisted by experts from Tata Technologies Ltd. and Science &Technology Park.**
- **Promotes various (Technical/Non-technical, Bio/Fintech/Agri/Pharmacy) startups and provides customized Co-working Space for Individuals, Individual Cabins with team, Separate workspaces for Assembly & Manufacturing Units, Corporate Offices, Meeting Halls, Discussion rooms, War Room with the facilities of Guest house, Wi-Fi, Pantry, Genset Backup, Office boy, Reception and Security.**
- **Provides support for IPR and technology management – patents, copyrights, design registration, etc. and its commercialization.**
- **Creates a mechanism for access to raise capital for start-ups like seed money, angel investment, venture capital, private equity etc.**

The activities of FMCIII are carried out under four sub-centers as follows:

1. **Advanced Technology R & D Center- It has 10 High-end workstations and 87 Industry grade softwares to enable Engineers/ innovators to build complete solutions.**
2. **Advanced Manufacturing Center- It comprises of**

- **3D printer & 3D Scanner for re-engineering and upgradation**
- **Industrial robotic cell for Arc welding**
- **Vertical Milling Center (VMC)**
- **CNC Lathe Machine**

1. Domain Exploration Center- It comprises of

- **Sports Utility Vehicle (SUV) working model cut section with 30 assemblies**
- **Complete Electric Vehicle (EV) kit**
- **Electrical & Electronic Accessories**
- **Display units**

1. Incubation Center- Facilities in this center are

- **Access to Prototyping Lab**
- **Co-working space & Technology Guidance**
- **Mentorship for Incubation, Start-ups, and Accelerators**
- **Peer network & other assistance**

Outcomes of FMCIII:

Training Programs Organised:

Activities	Programs	Participants
Faculty Development Programs (FDP)	05	113
Training Programs for Students	19	254

Startups:

MMCOE Alumni Startups	05
MMIT Alumni Startups	02
Other Startups	35

Funds received from Apex Bodies:

Funding Agency	Amount Received (Rs.)
Startup India Seed Funding Scheme (SISFS)	01 Crore
DST Nidhi Prayas Scheme	10 Lakh
DST Nidhi EIR Scheme	3.6 Lakh
CSR Fund	10 Lakh
Total	1.236 Crore

Internships and Sponsored Projects provided by Startups:

Activities	No. of Students Benefited
Internships provided to students	84
Sponsored Projects	27

Placement:

Activities	No. of Students Placed
Placement provided by Startups	8
Placement provided after trainings	8

Events:

Sr. No.	Event Name	No. of participants
1	Industries meet	234
2	Investors interactions	15
3	Startup exhibition	455
4	Startup Guidance	96
5	Pitch deck support lecture by expert	15
6	Industry Visit	15

With the thrust of academic and technical excellence, the institute motivates and supports students to participate in various national and international competitions like BAJA SAE International, BAJA SAEINDIA, ROBOCON, SUPRA SAEINDIA, SAEINDIA NIS EffiCycle, Aero Design SAEINDIA, Hackathon etc. The consistent participation and evidences prove the distinctiveness of the institute across the globe. Students learn various skills like ethics, team building, technical,

presentation, project management and financial management. They also test their physical strength, experience healthy competition environment and global standards by participating in such globally recognized competitions. The institute not only encourages students to participate but also provides financial support.

Table shows the participation in various events by our students and the financial support provided by the institute from 2017 to 2022.

Sr. No.	Name of Event	Financial Support Provided by Institute (Rs.)
1	SAEINDIA Activities	4037373/-
2	Robocon	699712/-
3	AeroDesign	75221/-
4	Dexterity	1066781/-
5	Fee Waiver Scheme	3132939/-
6	Ensemble	3361881/-
7	GDSC	4950/-
Total		1,23,78,857/- (One Crore twenty three lakhs seventy eight thousand eight hundred and fifty seven)

File Description	Document
Any other relevant information	View Document
Appropriate web in the Institutional website	View Document

5. CONCLUSION

Additional Information :

- MMCOE is accredited with “A” Grade by NAAC (Cycle I)
- Departments of Electrical and Mechanical Engineering accredited by NBA
- Recipient of “Best College” award in 2019 by SPPU, Pune
- Foundation for Make it Happen Center for Invention, Innovation and Incubation (FMCI) in joint collaboration of Tata Technologies, Science and Technology Park, SPPU and Marathwada Mitra Mandal, Pune.
- MMCOE received Education Excellence Forum (EEF) by Confederation of Indian Industries
- MMCOE is recognized as the GPU education center by NVIDIA
- MMCOE is recognized as the Nodal Center for Virtual Labs, Spoken Tutorial, and Remote Center by IIT Bombay
- Strong liaison with industry through the membership of professional bodies like CII, MCCIA, CSI, IETE, ISTE, ISHRAE, DICCI, IGCC, SAEINDIA, ASHRAE, ACM, IEEE
- MMCOE recognized as Distinguished College by Computer Society of India
- MMCOE IEEE Student Branch received “The Emerging IEEE Student Branch 2021 award”
- MMCOE ISTE Student Chapter has been awarded as the Best Chapter in 2018
- MMCOE ISHRAE Student chapter received Best Student Chapter Award twice and Promising Student Chapter Award once
- MMCOE Students won first prize at Smart India Hackathon 2022 worth Rs. 1 Lac at National Level
- MMCOE Students won first prize at India Africa Hackathon 2022 worth Rs. 3 Lacs at International Level
- Team Abhedya from MMCOE won First Prize in Go Green Award in the BAJA at BAJA SAEINDIA 2021 event

Concluding Remarks :

As per the motto of the trust “Yethe Bahutanche Hit” (Welfare of masses), MMCOE has always strived to work towards benefit of the society. Within a short duration since its establishment, MMCOE has achieved several laurels on its name including NAAC and NBA Accreditation, Best College Award, recognition from institutes like NVIDIA, IIT Mumbai, CII, etc. MMCOE is proud to host a one of kind initiative for invention, innovation and incubation for the upcoming startups and promoting the entrepreneurship culture. The institute has a strong industry connect through several avenues like MoU, Faculty connect, and research collaboration. MMCOE students have been working with industry in the form of internships and sponsored projects for a long time. Apart from this, every programme has a “Center of Excellence” in the niche area for encouraging research and innovation culture. Various projects are developed in the Center of Excellence in association with industries. MMCOE has highly motivated and qualified faculty members including several PhDs.

The institute has a Global Connect Cell (GCC) (International Collaboration) which is the pioneer in connecting MMCOE to the global institutes for education, research and development. The cell connects MMCOE students with experts to provide international opportunities. Few of the activities includes seminars, MoU with “Celonis”, Germany, international alumni meet, visit to Australia for Education Conclave etc.

MMCOE has also taken an initiative for training the students in Japanese Language in association with

“Hirameki Solutions”, which has resulted in overseas placement at well-known industries like Mitsubishi Electric, YKK, DIVA Corporation, Daifuku Co., Ltd., etc. The institute has a strong alumni network which is evident through regular alumni interactions through several activities including judging Hackathons, Dexterity (technical competitions), guiding the students in terms of project development and placement preparations. Alumni are delivering sessions as per their expertise.

The NAAC accreditation has helped the institute to achieve several milestones till date and its reaccreditation will further motivate and guide it to scale to new heights and improve continuously in all dimensions to mark itself as a global brand in the academic and research community.

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																																								
2.1.2	<p>Percentage of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years (Exclusive of supernumerary seats)</p> <p><i>2.1.2.1. Number of actual students admitted from the reserved categories year - wise during the last five years</i></p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>195</td> <td>157</td> <td>266</td> <td>224</td> <td>224</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>165</td> <td>142</td> <td>212</td> <td>202</td> <td>215</td> </tr> </tbody> </table> <p><i>2.1.2.2. Number of seats earmarked for reserved category as per GOI/ State Govt rule year wise during the last five years</i></p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>270</td> <td>265</td> <td>298</td> <td>260</td> <td>253</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>270</td> <td>265</td> <td>298</td> <td>260</td> <td>253</td> </tr> </tbody> </table> <p>Remark : DVV has made the changes as any excess admission made in the categories to be considered as General Merit.</p>	2021-22	2020-21	2019-20	2018-19	2017-18	195	157	266	224	224	2021-22	2020-21	2019-20	2018-19	2017-18	165	142	212	202	215	2021-22	2020-21	2019-20	2018-19	2017-18	270	265	298	260	253	2021-22	2020-21	2019-20	2018-19	2017-18	270	265	298	260	253
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3.1.1	<p>Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the last five years (INR in Lakhs)</p> <p><i>3.1.1.1. Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)</i></p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>0</td> <td>15</td> <td>3</td> <td>3</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	2021-22	2020-21	2019-20	2018-19	2017-18	10	0	15	3	3	2021-22	2020-21	2019-20	2018-19	2017-18																									
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10	0	15	3	3																																					
2021-22	2020-21	2019-20	2018-19	2017-18																																					

10.00	0	15.00	3.00	3.00
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Remark : DVV has just converted the value into lakhs.

3.2.2 Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years

3.2.2.1. Total number of workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during last five years

Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18
44	34	48	47	30

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
29	26	42	32	23

Remark : DVV has made the changes as per considered Only workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship.

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

3.3.2.1. Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during last five years

Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18
19	20	11	24	12

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
18	19	10	21	11

3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., (including the programmes such as Swachh Bharat, AIDS awareness, Gender issues etc. and/or those organised in collaboration with industry, community and NGOs) during the last five years

3.4.3.1. Number of extension and outreach Programs conducted in collaboration with industry, community, and Non- Government Organizations through NSS/ NCC/ Red Cross/

YRC etc., year wise during the last five years

Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18
22	15	24	28	19

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
19	12	20	25	16

3.5.1 **Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.**

Answer before DVV Verification :

Answer After DVV Verification :915

Remark : DVV has made the changes as per HEI clarification.

4.1.2 **Percentage of expenditure, excluding salary for infrastructure augmentation during last five years (INR in Lakhs)**

4.1.2.1. **Expenditure for infrastructure augmentation, excluding salary during the last five years (INR in lakhs)**

Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18
262.78	56.95	52.88	394	89.78

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
262.78	56.95	52.88	394.00	89.78

Remark : DVV has converted the value into lakhs only.

5.3.1 **Number of awards/medals for outstanding performance in sports/ cultural activities at University / state/ national / international level (award for a team event should be counted as one) during the last five years**

5.3.1.1. **Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) year wise during the last five years**

Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18
27	12	33	28	10

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
19	05	11	07	08

Remark : DVV has excluded shared certificates of honour.

2.Extended Profile Deviations

ID	Extended Questions																				
1.2	<p>Number of teaching staff / full time teachers year wise during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>134</td> <td>172</td> <td>125</td> <td>121</td> <td>129</td> </tr> </tbody> </table> <p>Answer After DVV Verification:</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>159</td> <td>159</td> <td>121</td> <td>121</td> <td>121</td> </tr> </tbody> </table>	2021-22	2020-21	2019-20	2018-19	2017-18	134	172	125	121	129	2021-22	2020-21	2019-20	2018-19	2017-18	159	159	121	121	121
2021-22	2020-21	2019-20	2018-19	2017-18																	
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