# INSTITUTIONAL ASSESSMENT AND ACCREDITATION
## (Effective from July 2017)

## Accreditation - (Cycle - 1)

## PEER TEAM REPORT ON

# INSTITUTIONAL ACCREDITATION OF MARATHWADA INSTITUTE OF TECHNOLOGY, CIDCO, AURANGABAD, MAHARASHTRA

## AURANGABAD
**Maharashtra**
**431003**

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**
**An Autonomous Institution of the University Grants Commission**
**P.O. Box No. 1075, Nagarbhavi, Bengaluru - 560 072, INDIA**

| Section I:GENERAL INFORMATION | |
|---|---|
| 1.Name & Address of the institution: | MARATHWADA INSTITUTE OF TECHNOLOGY, CIDCO, AURANGABAD, MAHARASHTRA<br>AURANGABAD<br>Maharashtra<br>431003 |
| 2.Year of Establishment | 2001 |
| 3.Current Academic Activities at the Institution(Numbers): | |
| Faculties/Schools: | 2 |
| Departments/Centres: | 4 |
| Programmes/Course offered: | 9 |
| Permanent Faculty Members: | 26 |
| Permanent Support Staff: | 4 |
| Students: | 505 |
| 4.Three major features in the institutional Context (Asperceived by the Peer Team): | 1. • Committed Management, faculty and staff<br>2. • Good infrastructure facility<br>3. • Institution making all possible efforts to provide education to the students coming from rural areas |
| 5.Dates of visit of the Peer Team (A detailed visit schedule may be included as Annexure): | From : 10-12-2019<br>To : 11-12-2019 |
| 6.Composition of Peer Team which undertook the on site visit: | |

| | Name | Designation & Organisation Name |
|---|---|---|
| Chairperson | DR. POULOSE JACOB KIZHAKEATTATHU | FormerPro-Vice Chancellor,COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY |
| Member Co-ordinator: | DR. RHYMEND UTHARIARAJ VAIDYANATHAN | Professor,ANNA UNIVERSITY |
| Member: | DR. K VIJAYA KUMAR REDDY | Professor,JNT UNIVERSITY |
| NAAC Co - ordinator: | Dr. Priya N | |

## Section II: CRITERION WISE ANALYSIS

Observations (Strengths and/or Weaknesses) on each qualitative metrices of the key Indicator under the respective criterion(This will be a qualitative analysis of descriptive nature aimed at critical analysis presenting strength and weakness of HEI under each criteria)

| Criterion1 - Curricular Aspects (Key Indicator and Qualitative Metrices(QlM) in Criterion1) | |
|---|---|
| 1.1 | Curricular Planning and Implementation |
| 1.1.1 QlM | The institution ensures effective curriculum delivery through a well planned and documented process |
| 1.2 | Academic Flexibility |
| 1.3 | Curriculum Enrichment |
| 1.3.1 QlM | Institution integrates cross- cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum |
| 1.4 | Feedback System |

| Qualitative analysis of Criterion 1 |
|---|
| MARATHWADA INSTITUTE OF TECHNOLOGY is affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad and adopts the curriculum provided by the University. The Institute follows CBCS system for some programmes in which student can opt for courses of their choice from the available option provided under elective courses category. Academic calendar is prepared in the beginning of the semester and followed. The course file prepared by the concerned faculty for a particular course contains the syllabus, session plan, lecture notes, question bank, previous semester university question papers, sample assessment test papers, attendance and assessment records etc. The teaching plan is monitored by the Head of the Department.  The curriculum is covered through theory as well as practical classes. Being an affiliated college, there is limited flexibility in curriculum enhancements. One faculty member involved in University BoS. One value added programme is  conducted to fill the gaps in the curriculum; however more focus is needed to be given by all the departments. The college hasgood infrastructure for their academic needs. Progress of learning is assessed through internal tests followed by an end-semester examination conducted by the University. Formal feedback mechanism on curriculum from the stake holders collected; need to be analyzed in a much focused way. Facilities for online lectures , learning management system like Google Class room for curriculum delivery may be introduced. Laboratory classes need to be organized more systematically so that students know the value of experiments in practical field.

  As a part of course enrichment, the college conducts few guest lectures and seminars. However, more expert lectures from different organizations/ Institutions are to be arranged so as to transform the students into skill oriented . The Institution  has given preference to balance the gender equality by taking various academic, co-curricular and extracurricular activities with equal participation and opportunities to both boys and girls. Equal opportunities are provided to both genders in terms of employment. Women faculty and students are encouraged to participate in the events focusing on women empowerment and promotion of leadership qualities. The efforts are made by the college to integrate cross cutting issues related to Gender, Environment issues are evident. A Course on Environment and Sustainability is  added into  the curriculum by the University. |

| Criterion2 - Teaching-learning and Evaluation (Key Indicator and Qualitative Metrices(QlM) in Criterion2) | |
|---|---|
| 2.1 | Student Enrollment and Profile |
| 2.2 | Catering to Student Diversity |
| 2.2.1 QlM | The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners |
| 2.3 | Teaching- Learning Process |
| 2.3.1 QlM | Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences |
| 2.3.4 QlM | Innovation and creativity in teaching-learning |
| 2.4 | Teacher Profile and Quality |
| 2.5 | Evaluation Process and Reforms |
| 2.5.1 QlM | Reforms in Continuous Internal Evaluation(CIE) system at the institutional level |
| 2.5.2 QlM | Mechanism of internal assessment is transparent and robust in terms of frequency and variety |
| 2.5.3 QlM | Mechanism to deal with examination related grievances is transparent, time-bound and efficient |
| 2.5.4 QlM | The institution adheres to the academic calendar for the conduct of CIE |
| 2.6 | Student Performance and Learning Outcomes |
| 2.6.1 QlM | Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students |
| 2.6.2 QlM | Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution |
| 2.7 | Student Satisfaction Survey |

| Qualitative analysis of Criterion 2 |
|---|
| The Institution admits students for various under-graduate and post-graduate programmes namely BCA(Management Science), B.Sc.(CS/IT), B.Sc.(Automobile Technology/Workshop Technology/Refrigerator and Air Conditioning), B.Voc.(Automobile Technology/Industrial Automation/Farm Equipment and Machinery). M.Sc.(CS/IT).The Institution conducts orientation program for all the newly admitted students. Bridge course on Mathematics for BCA program may be initiated. Slow learners are identified by their performances in internal tests and support is provided. The slow learners are motivated to reach particular academic goals through additional teaching hours to clear the doubts or re-explaining the difficult concepts.In case of advanced learners, special appraisals were given by encouraging them to participate in various activities like seminars, workshops, and literary competitions. The mentors individually counsel the students. A Teacher Guardian scheme is also practised. It would be appropriate to give some more focus towards this.

For enhancing learning experience and independent learning, the college provides a library having adequate books and journals. The walk-in to library is very low. Campus is enabled with Wi-Fi facility. There is a need for a language lab, and considering the background of the students, there should be rigorous training on soft-skill development. The college need to organize more technical symposium, seminars, workshops and project competition.

Innovative methods for teaching and learning is limited. But more initiatives like open book exams, on-line |

tests, MOOCs, Virtual labs, Flipped class rooms, Micro-modules for Post-Graduates students, etc. need to carried out. Consistent focus is needed by all faculty members of all the departments.

In terms of Continuous Internal Evaluation system, the college adheres to the regulations framed by the affiliating university. The students are made aware of examination procedure and evaluation system.

The internal evaluation is done periodically. After evaluation, the answer scripts of the internal examinations are returned to the students for the verification and avoiding the discrepancies.

The redressal of grievance related to examinations is addressed in different levels. For the end semester examination results, there is a provision of recounting, revaluation and challenge evaluation at the University Level. The students are informed and guided for the same.

The College strictly adheres to the academic calendar for the conduct of internal examinations prescribed by the University.

Course outcomes are given by the University in the student hand book and are well discussed by the faculty in the class rooms and submitted as a part of the course file. The outcomes are also measured and analysed. Knowledge acquiring of students through interdisciplinary subjects through open electives are limited.

The attainments of program outcomes, course outcomes are evaluated by the direct assessment of examination results. However, analysis of attainment of program outcomes needs to be carried out in a much focused way.

| Criterion3 - Research, Innovations and Extension (Key Indicator and Qualitative Metrices(QlM) in Criterion3) | |
|---|---|
| 3.1 | Resource Mobilization for Research |
| 3.2 | Innovation Ecosystem |
| 3.2.1 QlM | Institution has created an ecosystem for innovations including incubation centre and other initiatives for creation and transfer of knowledge |
| 3.3 | Research Publications and Awards |
| 3.4 | Extension Activities |
| 3.4.1 QlM | Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years |
| 3.5 | Collaboration |

| Qualitative analysis of Criterion 3 |
|---|
| The Entrepreneurship Development Cell of the institution provides short-term training and creates vocational and technical training among students. However it needs to be strengthened for such activities is noted as marginal. Some projects have been initiated in automobile technology to motivate the students in practical training. However, migrating these activities to form an effective incubation centre is the need of the hour. <br><br> The Institution always strives to strengthen the social perspectives by conducting various programs, activities and camps through NSS cell. The college has NSS unit of 150 volunteers. The students participate in programs like chitte-pimpalgaon, Pan Ranjangoan, Jambaliwadi, AIDS awareness program, Drugs Awareness program and tree plantation program. The students and staff of college participate in organizing programs to bring awareness among the public in neighbourhood areas on social issues like blood donation camp, health check-up camp. |

| Criterion4 - Infrastructure and Learning Resources (Key Indicator and Qualitative Metrices(QlM) in Criterion4) | |
|---|---|
| 4.1 | Physical Facilities |
| 4.1.1 QlM | The institution has adequate facilities for teaching- learning. viz., classrooms, laboratories, computing equipment, etc. |
| 4.1.2 QlM | The institution has adequate facilities for sports, games (indoor, outdoor),gymnasium, yoga centre etc., and cultural activities |
| 4.2 | Library as a Learning Resource |
| 4.2.1 QlM | Library is automated using Integrated Library Management System  (ILMS) |
| 4.2.2 QlM | Collection of rare books, manuscripts, special reports or any other knowledge resources for library enrichment |
| 4.3 | IT Infrastructure |
| 4.3.1 QlM | Institution frequently updates its IT facilities including Wi-Fi |
| 4.4 | Maintenance of Campus Infrastructure |
| 4.4.2 QlM | There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. |

| Qualitative analysis of Criterion 4 |
|---|

The college  has adequate infrastructure facilities for teaching-learning process. The college has enough class rooms, equipped with teaching aids, like LCD projectors and Wi-Fi enabled facilities. Further, every Department maintains separate  computing facilities and small collection of books in each department.  The college has provided with seminar halls for the departmental activities. Efforts have been taken  to provide learning centric environment inside the class rooms. Research laboratory facilities to inculcate research among the students need to be established in PG department.  UPS and Generators provided for uninterrupted power supply to the major equipments. However it has to be extended to all laboratories.  Sufficient number of laboratories available according to the curriculum of the university. Additional laboratories for value–added education to promote state-of-art-technology need to be further established. The laboratories may be utilized for mini projects and practicing beyond curriculum activities.

The institute has a few facilities for indoor and outdoor games. Students participate in few sports and games at inter collegiate levels. Yoga training cell is active. Students participate cultural activities in different levels and won few medals and prizes. A gymnasium facility  for physical fitness is to be made available for the students.

The college has acentral library. The average number of walk-in per day is low. Integrated Library Management system and OPAC system available. E-resources of University library and MIT Group Institutions are remotely shared.  The library has very limited collection of rare books which need to be improved.

The institution provides IT services like Campus networking using the wired and Wi-Fi connectivity. The institution provides 10 Mbps bandwidth and a secured network by implementing Institutional IT security policies. Sufficient numbers of computers are provided to the departments and administration. Full access is provided to email, the Internet, departmental Intranets and other online sources of services.

All infrastructural facilities are optimally used by the Institution. The maintenance of all the laboratory

equipment's are carried out by in-house hardware engineering, electrician, and technical support staff. The in-house cell looks after repairing and maintenance of the campus facilities including building, classrooms, laboratories, generators with the help of a Maintenance cell under the control of the Management. The cleanliness of the campus is good.

| Criterion5 - Student Support and Progression (Key Indicator and Qualitative Metrices(QlM) in Criterion5) | |
|---|---|
| 5.1 | Student Support |
| 5.2 | Student Progression |
| 5.3 | Student Participation and Activities |
| 5.3.2 QlM | Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution |
| 5.4 | Alumni Engagement |
| 5.4.1 QlM | The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years |

| Qualitative analysis of Criterion 5 |
|---|
| The College has a student council system where the students are involved in few activities. Different student bodies are created to motivate the leader-ship skills. It is evident that the college encourages the Co-curricular and extra-curricular activities. The students organizes many cultural events through which students express their talents and take part in cultural activities. A system is needed to be evolved and implemented to monitor the academic progress of the students. <br><br> The Alumni Association is yet to be registered. The alumni meets informally and helps in connecting the student's fraternity, organizing social events and helping in placement opportunities. The Alumni visit the institution and deliver Guest lectures and seminars for the students in their areas. The feed backs of Alumni helps to grow the institution in a positive direction. No financial contribution from the alumni during the last five years. |

| Criterion6 - Governance, Leadership and Management (Key Indicator and Qualitative Metrices(QlM) in Criterion6) | |
|---|---|
| 6.1 | Institutional Vision and Leadership |
| 6.1.1 QlM | The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the institution |
| 6.1.2 QlM | The institution practices decentralization and participative management |
| 6.2 | Strategy Development and Deployment |
| 6.2.1 QlM | Perspective/Strategic plan and Deployment documents are available in the institution |
| 6.2.2 QlM | Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism |
| 6.2.4 QlM | Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions |
| 6.3 | Faculty Empowerment Strategies |
| 6.3.1 QlM | The institution has effective welfare measures for teaching and non-teaching staff |
| 6.3.5 QlM | Institution has Performance Appraisal System for teaching and non-teaching staff |
| 6.4 | Financial Management and Resource Mobilization |
| 6.4.1 QlM | Institution conducts internal and external financial audits regularly |
| 6.4.3 QlM | Institutional strategies for mobilisation of funds and the optimal utilisation of resources |
| 6.5 | Internal Quality Assurance System |
| 6.5.1 QlM | Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes |
| 6.5.2 QlM | The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms |
| 6.5.5 QlM | Incremental improvements made during the preceding five years *(in case of first cycle)*<br><br>Post accreditation quality initiatives *(second and subsequent cycles)* |

| Qualitative analysis of Criterion 6 |
|---|

The College has a committed management having strong focus on growth and development of the institution.

Some of the Faculty members participating in various academic and administrative systems. Decentralized and participative management need to be addressed in a focused way.

The institution need to workout strategic plan for the growth of the institution. Action plans need to be initiated for improving the existing facilities, promoting   R&D, developing state of art facilities by means of laboratories, library resources, class rooms, etc.

Organisation structure of the institution is adequately defined. Governing council meets yearly. Service rules, recruitment, and promotional policies are transparent to staff and faculty members. Grievance redressal cells for faculty, staff and students are in place.

The Institute encourages the participation of students in various activities. Different cells are formed and are playing active role.

The Institution has policies for the welfare of the students, teachers, and supporting staff for schemes such as group insurance and medical facility. The employees of the institutes yet to be covered of the PF act.

The performance appraisal system is in place. The faculty members receives few awards and rewards based on the performances.Facultymembers are encouraged to undergo periodic training / development programs for their career development. However more efforts are required in this regard.

The institute has the provision of internal audit as well as external audit conducted by the CA nominated by the management committee.

The Institute is mainly dependent on the tuition fee of the students. The college needs to focus on resource generation through consultancy, sponsored project, testing and conduct of short-term courses etc,. There is a need for the source mobilization from other sources. The strategy for financial resources mobilisation needs more attention

The Institute has created IQAC cell and taking steps for effective implementation. Few activities have been taken through IQAC and completed. Long term quality improvement initiatives need to be identified. Formal action plan not yet made available. Academic activities are administered by the IQAC.

IQAC of the Institution reviews, analyses and suggest suitable action for improvements based on University results. The course outcomes and program outcomes are collected and need to be analysed in a focused way.

The institution is working hard to achieve the goals in past several years. There is very marginal growth in laboratories, resultsand placements. However focused approaches need to evolved and attended.

| Criterion7 - Institutional Values and Best Practices (Key Indicator and Qualitative Metrices(QlM) in Criterion7) | |
|---|---|
| 7.1 | Institutional Values and Social Responsibilities |
| 7.1.2 QlM | 1. Institution shows gender sensitivity in providing facilities such as: <br><br> 1. Safety and Security <br><br> 2. Counselling <br><br> 3. Common Room |
| 7.1.5 QlM | Waste Management steps including: <br> • Solid waste management <br> • Liquid waste management <br> • E-waste  management |
| 7.1.6 QlM | Rain water harvesting structures and utilization in the campus |
| 7.1.7 QlM | Green Practices <br> • Students, staff using <br> a) Bicycles <br> b) Public Transport <br> c) Pedestrian friendly roads <br> • Plastic-free campus <br> • Paperless office <br> • Green landscaping with trees and plants |
| 7.1.18 QlM | Institution organizes national festivals and birth / death anniversaries of the great Indian personalities |
| 7.1.19 QlM | The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions |
| 7.2 | Best Practices |
| 7.2.1 QlM | Describe at least two institutional best practices (as per NAAC Format) |
| 7.3 | Institutional Distinctiveness |
| 7.3.1 QlM | Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust |

| Qualitative analysis of Criterion 7 |
|---|

The Institution  is supervised by CCTV cameras in the main places. Common rooms to the students exists, however needs to be better equipped. Women Grievance  Cell, Anti-ragging cell, Internal complaint committee  exist to empower and safe guard the rights of female staff members as well as the students.

Efforts are made for management of solid waste, liquid waste and e-waste. Efforts need to be made to meet the  power requirement by using the solar energy sources.

The system of rain water harvesting is effective and purposeful.

The college campus is free from plastic and polyethene. Around 25% of the staff and students use public transport. The Institution is surrounded by trees, shrubs and herbs. QR codding is done to all trees and shrubs in the campus.

The Institute organises national festivals like Independence day, Republic day and birth days of great personalities like Mahatma Gandhi, Jawaharlal Nehru, Indira Gandhi, APJ Abdul Kalam, Swami Vivekananda, Ambedkar etc., for the benefit of faculty and students of the college. The college also celebrates college day every year.

The Institute maintains transparency in its financial, academic and administrative activities. However a computerized approach is to be evolved and practiced. Effective implementation of ERP for the institution was not fully integrated.

Institute claims on Best institutional practices : (i) Counselling and mentoring of students and (ii) structured feed back mechanism on curriculum. However these needs to be attended much focused way.

The institution works hard in imparting students with ethical values to become great resource of pride for national and global needs.

| **Section III:OVERALL ANALYSIS**based on Institutional strengths.Weaknesses,Opportunities & Challenges(**SWOC**)(**up to 500 words**) |
|---|
| Strength |

**College Strengths include :**

Proactive and committed management for the growth and development of the College

Dedicated faculty members

Good infrastructure facility for academics

Cost effective residential facility to boys

Pollution free well connected campus

**Some of the Weaknesses of the College include:**

Senior and experienced faculty limited

Research publications and consultancy are meagre

Industrially connected activities are limited

Alumni Interaction and fund generation limited

Scope for augmentation of ICT tools in academic and administrative areas

**Opportunities of the College include:**

Utilizing alumni resources for undertaking projects and improving employability of students

Organizing national / regional level workshops, seminars and conferences for benefit of faculty and students

Utilizing expertise of nearby industries/ Institutions /R& D laboratories for collaborative programmes

Identifying local and regional technology needs and working for development of appropriate technologies

Acquire the status of Autonomous Institution

**The Challenges for the College include:**

Attracting higher ranking students in the college including other state

Developing innovative products/technologies for the benefit of society and nation at large

Attracting consultancy services for the resource generation

Getting financial support from funding agencies through sponsored projects

| Explore and offer cost-effective learning and better employability solutions |
| --- |

**Section IV:Recommendations for Quality Enhancement of the Institution**

(Please limit to **ten major ones** and use telegraphic language) (It is not necessary to indicate all the ten bullets)

- • Attracting more quality students and strive to improve pass percentage by use of innovative approach

- • Recruit and retain senior and middle level faculties and promote research

- • Alumni association need to be registered and further activated to harvest their potential

- • To improve the economic viability of the students, the institution may introduce the projects like "Earn while Learn", by initiating more start-up programs

- • Industrial experiences / exposure are recommended for faculty/ students

- • Establishment of incubation centre with Industry collaboration in a much focused way

- • Formulation of long-term perspective plan and strategic planning for the growth and development of the College

- • Permitting use of some newer ICT tools and mobile based teaching learning activities

- • Levels of laboratories and related experimentation to be raised substantially

- • Library resources to be augmented substantially including creation of e-book facility

**I have gone through the observations of the Peer Team as mentioned in this report**

**Signature of the Head of the Institution**

**Seal of the Institution**

| Sl.No | Name | | Signature with date |
|---|---|---|---|
| 1 | DR. POULOSE JACOB KIZHAKEATTATHU | Chairperson | |
| 2 | DR. RHYMEND UTHARIARAJ VAIDYANATHAN | Member Co-ordinator | |
| 3 | DR. K VIJAYA KUMAR REDDY | Member | |
| 4 | Dr. Priya N | NAAC Co - ordinator | |

**Place**

**Date**