INSTITUTIONAL ASSESSMENT AND ACCREDITATION
(Effective from July 2017)

Accreditation - (Cycle - 1)

PEER TEAM REPORT ON

INSTITUTIONAL ACCREDITATION OF
MAR ATHANASIUS COLLEGE OF ENGINEERING, KOTHAMANGALAM
C-11596

Kothamangalam
Kerala
686666

Section I:GENERAL INFORMATION		
1.Name & Address of the institution:	MAR ATHANASIUS COLLEGE OF ENGINEERING, KOTHAMANGALAM Kothamangalam Kerala 686666	
2.Year of Establishment	1961	
3.Current Academic Activities at the Institution(Numbers):		
Faculties/Schools:		
Departments/Centres:	6	
Programmes/Course offered:	15	
Permanent Faculty Members:	150	
Permanent Support Staff:	124	
Students:	2705	
4.Three major features in the institutional Context (Asperceived by the Peer Team):	1. Benevolent Fund 2. Maintaining natural terrain 3. Transformed a rural area into an educational hub	
5.Dates of visit of the Peer Team (A detailed visit schedule may be included as Annexure):	From : 19-01-2023 To : 20-01-2023	
6.Composition of Peer Team which undertook the on site visit:		
	Name	Designation & Organisation Name
Chairperson	DR. ANAND BHALERAO	Vice Chancellor,Central University of Rajasthan
Member Co-ordinator:	DR. MAHESH CHANDRA	Dean,BIT Mesra Ranchi
Member:	DR. SUDHEER PREM KUMAR BELLAM	Professor,Jawaharlal Nehru Technological University Hyderabad
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**
1.1.2 QlM	**The institution adheres to the academic calendar including for the conduct of CIE**
1.2	Academic Flexibility
1.3	Curriculum Enrichment
1.3.1 QlM	**Institution integrates crosscutting issues relevant to Professional Ethics ,Gender, Human Values ,Environment and Sustainability into the Curriculum**
1.4	Feedback System

Qualitative analysis of Criterion 1
Institute is affiliated to APJ Abdul Kalam Technological University and follows curriculum of the university. The institution adheres to the academic calendar including for the conduct of CIE, tutorials and lab work **.** Institute also follows OBE, however, the inculcation of OBE among all faculty members is not up to the mark. Academic calendar based on that of university is prepared and followed. Faculty prepares course plan accordingly. Elective, Add on and skill development courses are made available for students. Internship is not mandatory to students. Curriculum implementation is taken care of by course committees, academic audits and feedback from students. Methodology of division and further implementation of actions for weak and advance learners may be improved. institute offers courses like Professional Ethics, Sustainable Engineering, Constitution of India, Life Skills, Energy Management, Environmental Engineering, Environment Health and Safety, Disaster Management etc. in the curriculum. Human values are introduced to students by means various outreach programmes. To promote the ethical conduct, institute has policy . However, awareness about it shall be increased.

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 and organises special Programmes 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**
2.3.2 QlM	**Teachers use ICT enabled tools for effective teaching-learning process.**
2.4	Teacher Profile and Quality
2.5	Evaluation Process and Reforms
2.5.1 QlM	**Mechanism of internal assessment is transparent and robust in terms of frequency and mode**
2.5.2 QlM	**Mechanism to deal with internal/external examination related grievances is transparent, time- bound and efficient**
2.6	Student Performance and Learning Outcomes
2.6.1 QlM	**Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.**
2.6.2 QlM	**Attainment of programme outcomes and course outcomes are evaluated by the institution.**
2.7	Student Satisfaction Survey

Qualitative analysis of Criterion 2

Students are admitted as per the Goverement and University rules and admission procedure through Engineering Entrance Test for UG programmes and through GATE Examination for PG programs. Infromation about admissions and prospectious is availabe on institute's website.

On the basis of entry level qualifying marks, internal assessment institute assesses the learning levels of students and organizes special activities for slow learners and advanced learners.

Remedial classes are conducted for slow learners and counselling by faculty Mentors mentoring is offered to slow learners. Advanced learners are asked to do courses through SWAYAM, NPTEL but more opportunities to be given to improve communication and technical skills.

Training for competitive examinations such as Civil services is made available for students. Attempt has been made to improve teaching-learning process by way of orientation , aculty development programs, industrial visits, internships, group discussions, annual cultural fests, seminars, and conferences etc.

The use of ICT in teaching faculty was limited to use of overhead projectors. Four interactive boards are available in the institute.   There are total 177 faculty members appointed as per the State Govt. norms, out of which 25 are deputed under QIP. There are 38 faculty members with Ph.D. qualifications. The cadre ratio is shown to be balanced but some more senior faculty in the core engineering disciplines keeping in view of the PG programs and Research work is need to be improved. In few of the departments research scholars are available as per the University directions as Research Centers.

In the Institute the evaluation process framed by the affiliating university is followed and OBE is adopted by

the Institute since 2012 onwards. The Internal assessment is conducted as per affiliating university guidelines, this includes two internal assessments and this will be done in closed book written format. In the university examination the results of final semester are above 95%, and the overall average percentage of pass is 92%.

The Institution deals the examination related grievances in a transparent manner, time bound and efficient through the Exam Cell.

Performance of end semester examination for Direct assessment in attainment of COs and POs is not effecively included due to affiliating status of the institute.

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 and has initiatives for creation and transfer of knowledge**
3.3	Research Publications and Awards
3.4	Extension Activities
3.4.1 QlM	**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.**
3.5	Collaboration

Qualitative analysis of Criterion 3
Institute organizes interaction of students with entrepreneurs, workshops, participation of students in idea competitions, for awareness about innovations. Institute has incubation cell , Fab lab and IOT labs to nurture the ideas of students and promoting to transferring it into products. One patent is awarded and three are filed with Indian Patent Office. Initiative towards startups activities also noticed, however, needs improvement. Institute has adapted 5 villages under Unnat Bharat Abhiyan. The pedagogical transformations in these villagesmay be assessed.. NSS wing of the institute carries extension activities. Research publications in standard databases are minimal. Publications per faculty per year is less than one.

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 infrastructure and physical facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc.**
4.1.2 QlM	**The Institution has adequate facilities for cultural activities, sports, games (indoor, outdoor), gymnasium, yoga centre etc.**
4.2	Library as a Learning Resource
4.2.1 QlM	**Library is automated using Integrated Library Management System (ILMS)**
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

Institution is having land of 62 acres of land and 30109 sq.m. of built-up area to cater the needs of existing academic programmes. Institute has also adquate number of class rooms and laboratories with required equipments for all academic purposes. Institute has hostels for boys and girls with mess facility. However, there are no faculty quarters.

Other facilities such as sports ground, gym, canteen, swimming tank Medical Doctor facility is available on the campus. However,three facilities are common and are in sharing with other institutes available in the campus. Swimming tank facility is available on payment basis. Medical facility need improvements.

Institute has made transportation facility available for students and faculty with two buses , however, charges for the same are high.

The Institute central Library has total floor area of 840 sq.m. with adequate number of books. Howvwer the most of the books were text books and no reference books were observed. large number of Books of old edition were observed. E books and en journals are available. Random verification of use of books reveails minimal use of books. Hard copies of National and International Journals are subscribed in a limited number and it needs to be improved.

 Students have access to NPTEL and MOOCs for academic improvement and diversity. Digital Library with 13 systems are available and the facilities need to be improved. NIMBUS open-source software is being used in library and KOHA is used for library management functions. Reprographic facilities are available in the library. More international journals and text books and reference books from standard publishers should be added to the library. It is observed that the library timings are from 8am to 6 pm and need to be further extended.

Campus is with WI FI facilty and Internet facility of 100 MBPS leased connection availble. All the laboratories are LAN connected. Total number of computers available for students in the campus are 676. Proper power backup using electrical generators is available. Operating systems, word processing, statistical,

and antivirus software are licensed. Some other domain specific soft wares are also available.

The Institute is fully under cctv surveillance. Parking lots are available on institute campus for students, faculty, staff, and visitors. Maintenance staff, electricians, and technicians are employed for the purpose of maintaining the building and ensuring proper functioning of the campus.

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	**Institution facilitates students' representation and engagement in various administrative, co-curricular and extracurricular activities following duly established processes and norms (student council, students representation on various bodies)**
5.4	Alumni Engagement
5.4.1 QlM	**There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services**

Qualitative analysis of Criterion 5

Being government aided institute, concern scholarships are made availabe for the benefit of students. The Institution has a mechanism for timely redressal of student grievances including sexual harassment and ragging cases. Apart from academic activities, students are encouraged to participate in many co-curricular activities to showcase their talents. Students representation in administrative bodies is mentioned.

Students have qualified various competitive examinations as well as bagged awards during last five years. Students participates in various activities of professional societies such as IEEE, ISTE, IEDC, IETE, ASME The training and placement cell also have two representatives from each class to interact with fellow students.

The Editorial Board headed by the student magazine editor publishes a college magazine annually. Dance club, music club, quiz club, film club, divaat club and debate club are the clubs run by students from all departments.

Extracurricular activities are available to the students in the form of Sports, cultural, social activities. Institute has shooting range and other sports facilities. Students' social skills are also enhanced through community programs under Youth National Social Service, and Women Empowerment cell. Students have bagged awards/medals in sports/cultural activities at university/state/national level during the last five years. The bodies like anti ragging committee, Internal Complaint Committee, College Council, SC/ST Cell, Minority Cell has student representatives along with faculty member.

Alumni Association of the institute (MACEAA) is an active association with fifteen active chapters in India and abroad. International chapters are supporting Alumni Association financially for the schoarships. MACEAA in association with various alumni chapters and batches provide financial assistance, placements and awards to students of MACE every year.

Capacity building and skills enhancement initiatives such as soft skills, Language and communication skills needs enhancement for students. Institute needs to improve the facilities for competitive examinations, career counselling, Gate exam preparation.

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 and in tune with the vision and mission of the institution**
6.1.2 QlM	**The effective leadership is visible in various institutional practices such as decentralization and participative management**
6.2	Strategy Development and Deployment
6.2.1 QlM	**The institutional Strategic / Perspective plan is effectively deployed**
6.2.2 QlM	**The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment, service rules and procedures, etc.**
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	**Institutions 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 and recorded the incremental improvement in various activities** **(For first cycle - Incremental improvements made for the preceding five years with regard to quality** **For second and subsequent cycles - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives)**

Qualitative analysis of Criterion 6
The Board of Governors (BOG) play an active role in implementation of policies. Different departmental committees promote the execution of policies and decisions made by the Board of Governors. The institution annually takes care of modernization of the existing facilities, implementation of new ventures for R&D, expansion of infrastructure by means of laboratories, library resources, classrooms, meeting halls, and sporting provisions. Principal is in charge of coordinating different departments, administrative affairs along with different functions of various cells. The semester wise academic plan is formulated by Dean academics and IQAC after reviewing with the HODs, considering the academic calendar published by the KTU. U G Dean is

the coordinating authority for BTech (UG) student related academic activities at the Institute. Dean of Research is responsible for the registration of projects, PG student and PHD student related academic activities. Faculty in-charge of various Cells/Clubs/Forums monitors and streamline various activities under them. The central library & department library are available to caters needs of the staff and students.

IQAC manages various quality enhancement programmes for faculty and students on behalf of management. The semester-wise academic plan is formulated by the IQAC after reviewing with the Academic council. The scheduling of different departmental activities is laid out after discussion with the respective HODs. HODs discuss all academic and financial requirements with faculty meetings at department level. The principal carries out the evaluation of the reports from HODs and convey them to the Board of Governors for further action. Academic activities are decentralized, and decisions are taken based on discussion and deliberations in the class committee meetings, department meetings, faculty meetings, HODs' meetings with the principal. Towards the fulfilment of the mission, the college has Solar Energy plant to attain Energy Self-Sufficiency.

Many teachers have attended professional development Programmes during the last five years. Annually, the performance of teaching and non-teaching staff members is evaluated through a performance appraisal system. The institute follow satisfactory method for evaluating employee performance by taking into consideration academic performance and additional responsibilities. Statutory benefits provided to all the employees are PF, CL, Medical leave, study leave, maternity leave and Benevolent fund. Pension, gratuity, medical and loan facilities are also available to employees.

The institute is putting efforts for outcome based education but it needs further improvement. The IQAC monitors the process for measuring course outcomes and takes necessary corrective actions. All departments have tried the attainment of Course Outcomes (COs), the Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) but it needs further improvement and awareness among faculties. Preparation of course files also needs improvements.

Criterion7 - Institutional Values and Best Practices (Key Indicator and Qualitative Metrices(QlM) in Criterion7)	
7.1	Institutional Values and Social Responsibilities
7.1.1 QlM	**Measures initiated by the Institution for the promotion of gender equity during the last five years.**
7.1.3 QlM	**Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)** • **Solid waste management** • **Liquid waste management** • **Biomedical waste management** • **E-waste management** • **Waste recycling system** • **Hazardous chemicals and radioactive waste management**
7.1.8 QlM	**Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 500 words).**
7.1.9 QlM	**Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).**
7.1.11 QlM	**Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).**
7.2	Best Practices
7.2.1 QlM	**Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.**
7.3	Institutional Distinctiveness
7.3.1 QlM	**Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words**

Qualitative analysis of Criterion 7

The percentage of Women Faculty number is up to 59.30 percent and few faculty members are functioning at administrative level. Gender sensitization cell and women cell works for awareness about gender equality. Women's grievances cell also exist.

Biogas plant and sewage treatment plant exits. Gas generated through Biogas plant is used for cooking and water treated is used for gardening purpose.

Various clubs of students and subsequent activities are promoted in the institute for creating inclusive environment. Students were also encouraged for social activities. However, details of activities not informed by students in meeting with them. The institution observes commemorative days such as Independence Day, Republic Day, Gandhi Jayanthi, Martyr's Day etc. to inculcate value system.

Institute follows faculty advisership and career guidance and Parent Teacher Association(PTA) and alumni support system for institutional empowerment as a best practice. PTA and its activities are on record.

Institute claims that holistic environment and sustainability: a campus initiative is its distinctiveness. Institute has done enough work regarding maintenance of environment and sustainability in the campus. However, many of the institutes does this . The technology related distinctiveness of engineering colleges is expected

Section III:OVERALL ANALYSISbased on Institutional strengths.Weaknesses,Opportunities & Challenges(**SWOC**)(**up to 500 words**)
Overall Analysis

Strength:

1. Adequate infrastructure to conduct existing academic programmes and scope for future development.
2. Recognized research center of the university.
3. Environmentally friendly green campus.
4. Good Alumni activities, international chapters and financial support

Weakness

Weaknesses:

1. Less Number of research publications in standard data base and funded research projects
2. No meaningful interaction with industry
3. Less number of faculty members with Ph.D. qualifications.
4. Latest edition books are not available in the library.
5. Insufficient reading hall capacity and timing of library
6. 17.40 percent of faculty are guest category
7. Poor Placement and higher studies record.

Opportunities:

1. Institute should explore the possibility of autonomous status.
2. Interaction with industry and institutions of national importance.
3. Innovative and collaborative research programme.

Societal activities

Challenges:

1. Fluctuations in market situations and job opportunities
2. Rural area location
3. Committed academic community

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)

- Organised faculty quality improvement programme

- Extensive skill development programme to address employment issue.

- Meaningful interaction with industry

- Update laboratories with equipments commensurate to the prevailing technology

- Reading hall capacity should be increased

- Sports facility should be augmented

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. ANAND BHALERAO	Chairperson	
2	DR. MAHESH CHANDRA	Member Co-ordinator	
3	DR. SUDHEER PREM KUMAR BELLAM	Member	
4	Dr. Priya N	NAAC Co - ordinator	

Place

Date

Sl.No	Name		Signature with date
1	DR. ANAND BHALERAO	Chairperson	
2	DR. MAHESH CHANDRA	Member Co-ordinator	